

THIRD EDITION

CUBED



Decoding. Language. Reading.

MANUAL

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ACKNOWLEDGEMENTS

The CUBED-3 has been a long-term project with its genesis trailing back nearly 20 years. Prior to working as researchers, we were educators in the public school system in several states across the U.S. The CUBED-3 was developed in response to measurement weaknesses that we noted while working with students with and without disabilities. These measurement weaknesses were not subtle. For the most part, the valid assessment of comprehension in the early grades was entirely lacking (as was any accompanying multi-tiered instruction for language). The static measures used to assess reading grossly misidentified many students, especially those who were culturally, linguistically, and economically diverse. Resolving these weaknesses became our mission.

Although just kernels of ideas at the time, our thoughts on how to address these measurement problems have developed over the years, with considerable research, into what is now the CUBED-3 assessment. The research and development of the CUBED-3 could not have been possible without the guidance, collaboration, and cooperation of many individuals. Upon the highest pedestal we place our major professors, Dr. Ronald Gillam and Dr. Timothy Slocum, who guided us through our doctoral programs with overwhelming support and individualized attention. We would also like to express our deepest gratitude to Dr. Kate Kniss, Alisa Therkildsen, Dr. Megan Kirby, Courtney Claar, Shaylee Woods, Camryn Lettich, Devan Dawes, Sakthi Palanivelu, Subha Shanmuga, and Michael Petersen. We also thank Dr. Melissa Allen, and Dr. Janet Tilstra for their contributions to the initial development of draft stories. Special thanks go to Dr. Roger Steeve, Doris Snoozy, Eli Cox, Barb Farley, Dr. Liann Brenneman, Sherri-lyn Harrison, Dr. Stella Nowell, Jerri Rauer, Cate Malone, Jessica Waldron, Lindsay Curran, and the many students, teachers, and administrators, especially from the great states of Wyoming, Utah, and Michigan who supported, endured, and shaped early versions of the CUBED-3.

Our research laboratory teams, comprised of well over two hundred undergraduate and graduate students, deserve special recognition for the countless hours devoted to administering and scoring the CUBED-3 for research and validation purposes. Their work, which continues to this day, has made this assessment possible.

Note: As we are always interested in improving the CUBED-3, we encourage users to conduct their own research. Please share your results, along with any suggestions for improving the CUBED-3, to us in care of Language Dynamics Group, LLC, www.LanguageDynamicsGroup.com.

PREFACE

This manual is for the CUBED-3 assessment, yet the suite of assessments found in the online *Insight* system (www.LDGInsight.com) and available in printed form includes the **CUBED-3**, the **PEARL**, and the **DYMOND**. These assessments have different purposes and target different student populations. The following section provides a brief overview of the *PEARL* and the *DYMOND* so that it is clear how the *CUBED-3* complements them. It is also important to understand that the *CUBED-3* assessment is designed to inform instruction and is a companion to any systematic, explicit, and sequential word recognition program, and is specifically designed to be used with Story Champs, which is a multi-tiered explicit, systematic, and sequential academic language program.

PEARL and DYMOND – The Dynamic Assessment Duo

The *PEARL* and the *DYMOND* include dynamic and processing dependent subtests that have the purpose of quickly and accurately identifying children who struggle learning to decode and/or learning to produce and understand complex academic language. The *PEARL* and *DYMOND* include dynamic assessments of decoding, dynamic assessments of language, rapid automatized naming tasks, and nonword repetition subtests. Preschool and kindergarten students are administered the *PEARL*, and first through eighth grade students can be administered the *DYMOND*.

Students who do poorly on any of the language- or decoding-related subtests of the *CUBED-3* and who also do poorly on the corresponding dynamic assessment and processing dependent measures of the *PEARL* or *DYMOND* very likely have a language disorder or dyslexia. This diagnosis should lead to the immediate provision of intensive interventions specifically focused on a student's profile of needs.

Students who are below benchmark on the *CUBED-3* assessment, yet who do not have a learning disability according to the *PEARL* or *DYMOND* may still need more intensive interventions than their peers who are at benchmark. However, the duration and intensity of those interventions will likely not need to be as high as they will be for students with a learning disability.

Identifying Dyslexia, DLD, and Reading Difficulty, and What to do About It

PEARL

PreK-Kindergarten screener for dyslexia and developmental language disorder (DLD)

PURPOSE: The PEARL is a dyslexia and DLD screener that uses dynamic and static assessment to identify risk.

TIMELINE: Administer to all kindergarten students at the beginning of the school year (or end of final year of preschool).

GRADES: PreK-Kindergarten

DYMOND

Diagnostic assessment for developmental language disorder (DLD) and dyslexia screener

PURPOSE: The DYMOND is a dynamic assessment used to help diagnose DLD. It also includes subtests that help identify dyslexia.

TIMELINE: Can be administered to first to eighth grade students at any time if CUBED results and/or response to intervention indicate concerns.

GRADES: Grades 1-8

CUBED

Universal screening and progress monitoring assessment

PURPOSE: The CUBED-3 includes a suite of universal screening and progress assessments that accurately, reliably, and efficiently measure oral and written language, including language comprehension, word recognition, and their product, reading. The CUBED-3 identifies students performing above, at, or below expectations, monitors progress over time, provides information on specific instruction/intervention targets, helps identify dyslexia and DLD, and aids in program evaluation.

TIMELINE: Universal screening using benchmark assessments three times per school year and progress monitoring assessments throughout the school year.

Benchmark Assessment

Administer to all preschool through eighth grade students during the beginning of year (BOY), middle of year (MOY), and end of the (EOY) year periods.

Progress Monitoring

Monitor progress frequently with students who are performing below benchmark expectations (e.g., every two weeks).

GRADES: PreK-8

ACADEMIC LANGUAGE INSTRUCTION



Multitiered, Systematic, Explicit, and Sequential Academic Language Instruction

PURPOSE: Help all students develop the complex oral and written language necessary for academic success using an evidence-based approach such as Story Champs®.

WORD RECOGNITION INSTRUCTION



Multitiered, Systematic, Explicit, and Sequential Phonics/Word Recognition Instruction

PURPOSE: Help all students learn to decode and recognize words accurately, independently, and automatically using an evidence-based approach.

MTSS ROAD MAP

Timeline for using the CUBED-3, PEARL and DYMOND Assessments & Screeners

GRADES: PREK – K

STEP 1

PEARL 

**PREK-K DYSLEXIA
AND DLD SCREENER**

Administer the PEARL to all kindergarten students at the beginning of the school year (or end of PreK) to screen for dyslexia and DLD.

STEP 3

Story
CHAMPS 

**MULTI-TIERED
INSTRUCTION**

Provide multi-tiered explicit, systematic, and sequential language instruction using **Story Champs®** and **phonics/word recognition** instruction. Use the CUBED-3 and other sources of evidence to inform the focus and intensity of instruction.

STEP 5

CUBED 

**MOY BENCHMARK
ASSESSMENT**

Administer middle of year (MOY) benchmark assessments to all students.

STEP 7

CUBED 

**PROGRESS
MONITORING**

STEP 2

CUBED 

**BOY BENCHMARK
ASSESSMENT**

Administer beginning of year (BOY) benchmark assessments to all students.

STEP 4

CUBED 

**PROGRESS
MONITORING**

Monitor progress frequently for **students receiving Tier-2 and Tier-3** language and/or word recognition intervention.

STEP 6

Story
CHAMPS 

**MULTI-TIERED
INSTRUCTION**

STEP 8

CUBED 

**EOY BENCHMARK
ASSESSMENT**

Administer end of year (EOY) benchmark assessments to all students.

GRADES: 1-8

STEP 1

CUBED 

**BOY BENCHMARK
ASSESSMENT**

Administer beginning of year (BOY) benchmark assessments to all students.

STEP 2

Story
CHAMPS 

**MULTI-TIERED
INSTRUCTION**

Provide multi-tiered explicit, systematic, and sequential language instruction using **Story Champs®** and **phonics/word recognition** instruction. Use the CUBED-3 and other sources of evidence to inform the focus and intensity of instruction.

STEP 4

CUBED 

**MOY BENCHMARK
ASSESSMENT**

Administer middle of year (MOY) benchmark assessments to all students.

STEP 6

CUBED 

**PROGRESS
MONITORING**

STEP 3

CUBED 

**PROGRESS
MONITORING**

STEP 5

Story
CHAMPS 

**MULTI-TIERED
INSTRUCTION**

STEP 7

CUBED 

**EOY BENCHMARK
ASSESSMENT**

Administer end of year (EOY) benchmark assessments to all students.

DYMOND

**DLD ASSESSMENT &
DYSLEXIA SCREENER**

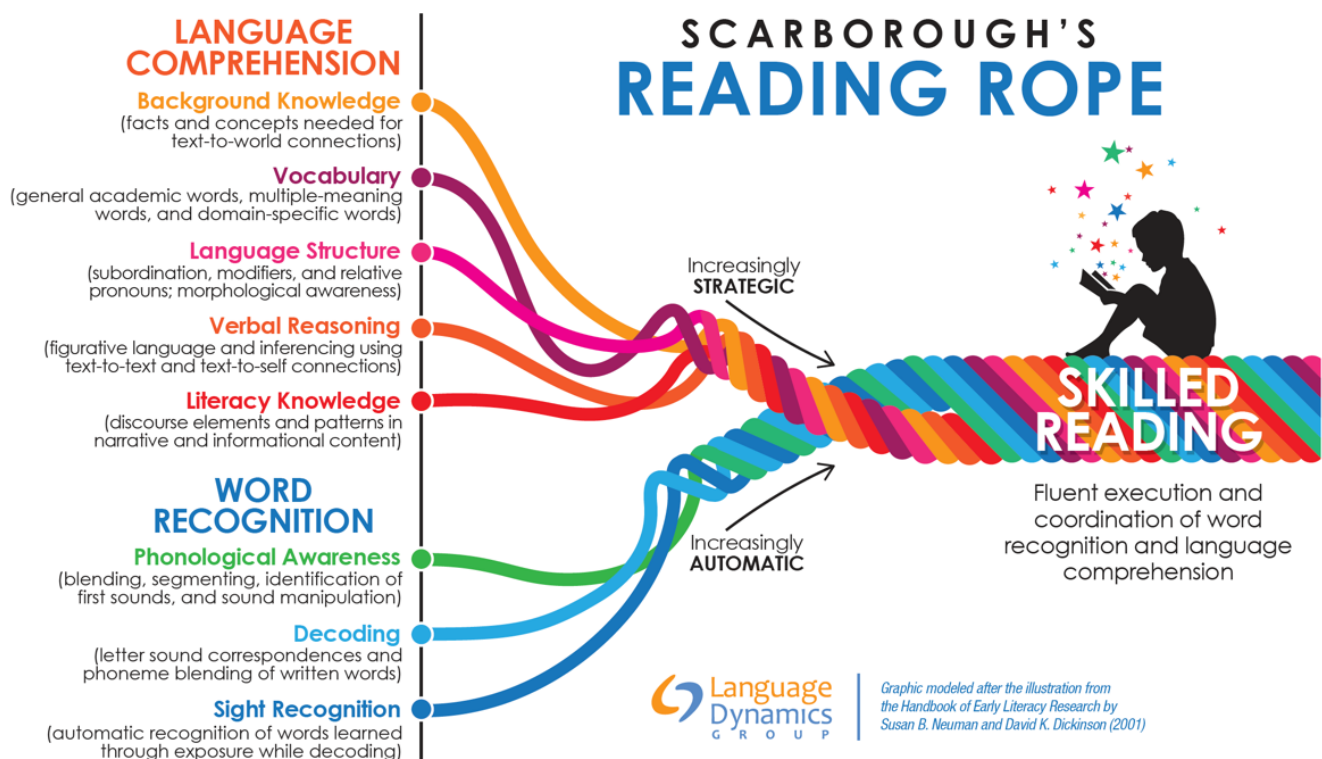
Administer the DYMOND **any time** throughout the school year if you suspect a student is at risk for DLD or dyslexia.

INTRODUCTION TO THE CUBED-3

The CUBED-3 is primarily designed to be a universal screening and progress monitoring assessment of word recognition and language for students in preschool through eighth grade. The CUBED-3 will help identify students who are meeting benchmark expectations and will provide information on progress over time. The results of the CUBED-3 can directly inform word recognition and language instruction and can be used to examine the effectiveness of the school system's instructional supports. The CUBED-3 is best classified as a criterion-referenced general outcome measure (GOM). However, the CUBED-3 can also be used as a norm-referenced assessment with the aid of supplemental materials.

Reading comprehension is mostly dependent on the adequate development of two major constructs: word recognition and oral language comprehension. We used this simple view of reading (Gough and Tunmer, 1986), and Scarborough's (2001) reading model as a general guide in the construction of the CUBED-3. We also used Kamhi's (2009) narrow view of reading, and Catts work on reading comprehension (e.g., Catts et al., 2014) as a frame of reference, which served to remind us of the importance of attending to the measurement of oral language and its constituent parts, and the need to measure *learning* potential.

The CUBED-3 measures **word recognition** and **language comprehension**, the product of which yields **reading comprehension**



The effort required to help a student develop proficient word recognition and oral language comprehension is ultimately dependent upon a student’s learning potential. We use the word *learning* in a very specific, precise way. Learning is the context-independent, long-term occurrence of a particular behavior (Bjork, 2004; Kamhi, 2014). Students who have difficulty learning language, which is an unconstrained communication process that is infinitely generative, have difficulty learning broad-based rules and modifying those rules. Learning broad-based rules is crucial because, as noted by Fey (1988) “language serves too many functions, expresses too many meanings, provides too many lexical and syntactic options, and is formally too complex for us to ‘teach’ everything...” (pg. 278). Similarly, children need to understand the code that is used to express the thousands of words expressed in written form. This too is a broad-based skill that transfers across contexts and that is necessary because, just like language, there are too many written words for us to ‘teach’ every different word to a child. Once the code is broken, any word written in that code can be decoded.

Thus, a GOM for comprehension and word recognition must focus not just on what a student knows, which can be confounded by multiple variables including what a student has been exposed to and taught over time, but also on the ability of a student to learn broad-based skills and to apply those broad-based skills across contexts. Accordingly, the CUBED-3 measures static word recognition proficiency and the *ability to learn* the skill of recognizing words using the *Dynamic Decoding Measures (DDM)*. Through the Narrative Language Measures (NLM) Subtests, the CUBED-3 measures *static* oral and written language comprehension and production, and the *ability* to learn oral and written language comprehension and production. Learning potential is also measured using the *PEARL* and *DYMOND* dynamic assessments.

A Special Note on Measuring Comprehension

Many current general outcome measures used to identify early reading comprehension difficulties in young students have two major flaws; (1) They do not focus on language comprehension at all for young students, which is a major component of the simple view of reading, and (2) They do not sufficiently meet all of the psychometric requirements for general outcome measurement as outlined by Deno (2003), with particular weaknesses in construct validity. These widely used GOMs rely on three approaches to measure reading comprehension: mazing, reading fluency, and number of words retold, which rely “more on code-related skills than on language comprehension skills” (Muijselaar et al., 2017). These approaches do not adequately describe language ability nor inform language instruction (Cao & Kim, 2021).

The CUBED-3 includes the Narrative Language Measures (NLM) subtests, which assess pre-k through eighth grade students’ abilities to understand and use both oral and written academic language. The NLM also directly informs comprehension instruction and meets all of the psychometric requirements of a GOM, filling a major gap found in most reading general outcome measures.

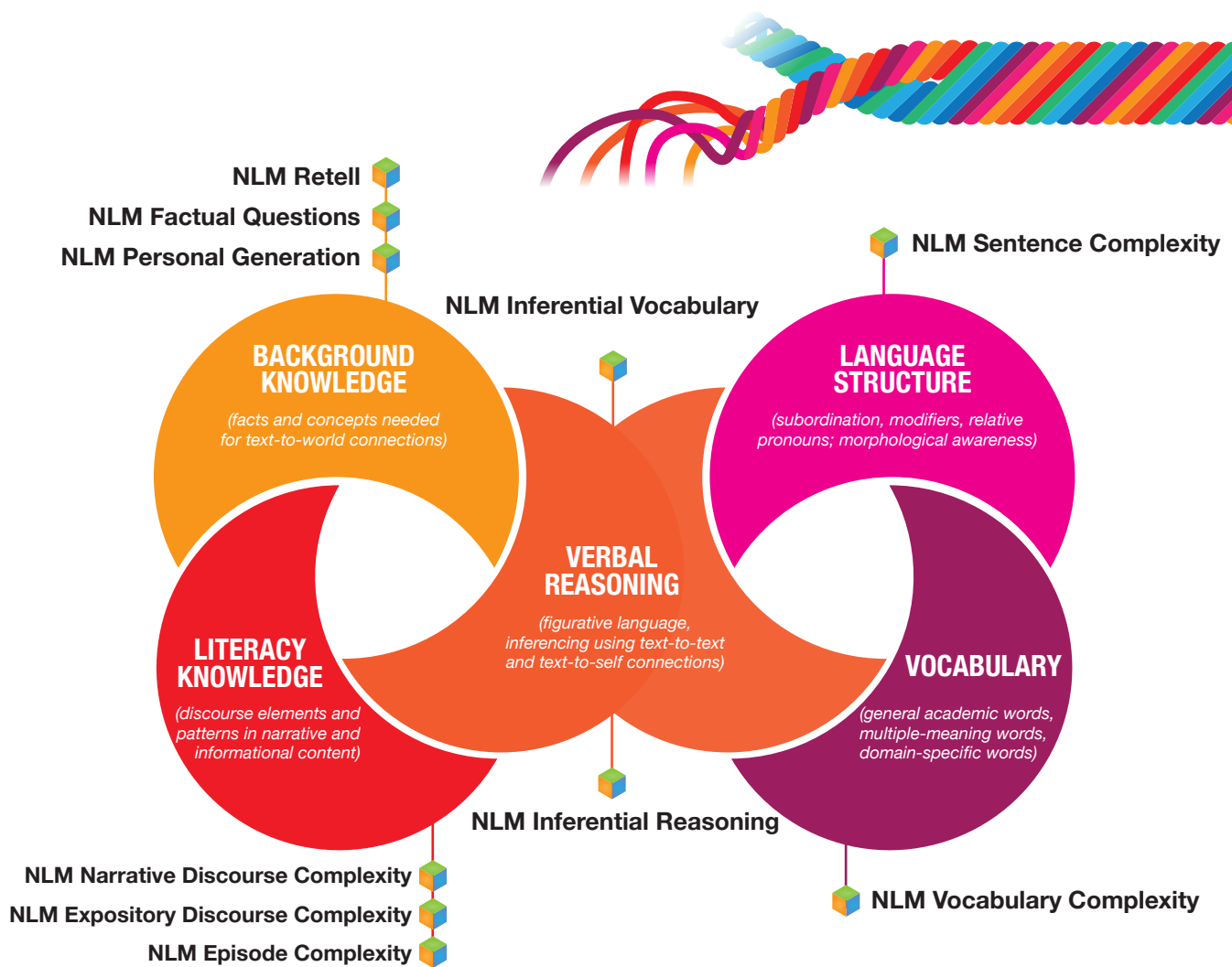
The NLM subtests of the CUBED-3 have three major purposes: 1) benchmark screening, 2) progress monitoring, and 3) intervention planning. The NLM Listening and NLM Reading were designed to accurately identify students whose academic language places them at risk for experiencing other academic problems. NLM Benchmark passages are to be used for universal screening three times per year, which is common in multi-tiered systems of supports (MTSS). For universal screening purposes, the academic language of all students within a district, school, or grade level should be assessed. From the results of this benchmark screening process, two gross interpretations are possible, not at risk or at risk, reflected by scores at and above the cut point or below it. This dichotomous interpretation can be further divided along a continuum of performance ranging from significantly below benchmark expectations for language-related difficulty to highly advanced skills, which may help organize students into instructional groups according to their strengths and needs.

The NLM Listening and NLM Reading were also designed to monitor students’ language growth over time due to instruction and/or supplemental intervention. Progress monitoring refers to the frequent sampling of the behavior of interest and is typically reserved for students who are identified as at-risk during screening and consequently receive intervention. Language progress monitoring helps educators detect whether adequate progress is being made, and to identify what type of instructional modifications are necessary. It is important to monitor progress so that mastery of an objective or achievement of a standard can be detected. Progress monitoring can also be used with students who are in an accelerated program to measure progress associated with specialized language instruction. Decisions about the skill areas and targets to monitor are made at the individual student level. Language progress monitoring can be conducted using grade-level or off-grade-level material, depending on the student’s needs.

The NLM subtests can serve as a basis for intervention planning. The results can provide information on the integration of receptive and expressive language, reading fluency, reading comprehension, use of complex linguistic structures, and the ability to infer the meaning of complex vocabulary in a standardized, efficient, and valid manner. The content of the NLM Listening and NLM Reading is directly related to common curriculum expectations. Decisions regarding the placement of students in intervention, modification of intervention, and when to introduce new targets can be based directly on the results.

Language Comprehension Strands and the CUBED-3 Narrative Language Measures (NLM)

The CUBED-3 uses the *Narrative Language Measures (NLM)* to assess a student's ability to use and understand oral and written academic language. The NLM is comprised of two subtests: the *NLM Listening* and the *NLM Reading*. The *NLM Listening* and *NLM Reading* use parallel narratives with embedded exposition to test the ability to retell complex academic narrative and expository language, to answer factual and inferential questions, to measure writing and personal story generation, and to measure reading fluency and reading comprehension. A brief dynamic assessment of language is used to help identify students who have difficulty learning language.



A Special Note on Measuring Word Recognition

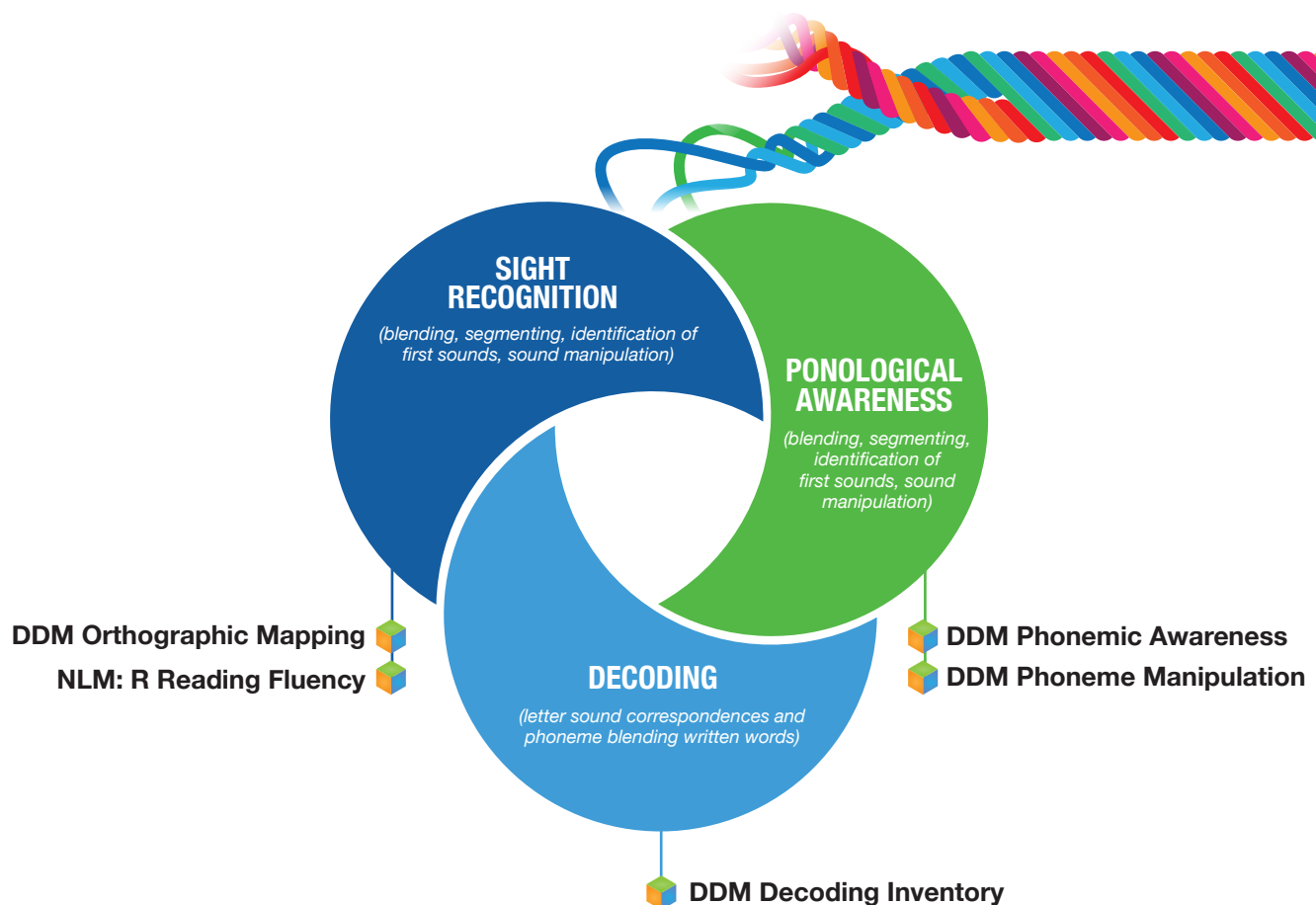
General outcome measures for reading have primarily focused on tasks that measure skills such as phonemic awareness, letter sounds, letter names, nonsense word recoding, and reading fluency. Such GOMs, apart from the fact that they tend to lack valid measures of comprehension, have two additional limitations; (1) They often do not provide sufficient information to inform word recognition instruction, and (2) they rely exclusively on static information, which can be severely confounded by prior exposure and experience, yielding floor effects with young students.

The CUBED-3 includes measures related to word recognition that will likely be familiar to many educators. What is unique about the CUBED-3 is that it provides educators with the opportunity to obtain a more comprehensive inventory of what a student can do if a student is not performing at benchmark on any particular task. For example, the CUBED-3 includes measures of reading fluency (including prosody), and benchmark expectations have been established for that task. Yet reading fluency is an outcome measure that is affected by multiple underlying skills. The DDM subtests of the CUBED-3 provide a way to assess those underlying skills and to determine precisely where deficits lie. Examiners will find multiple measures of phonemic awareness and nonsense word recoding that are engineered to help identify a student's current ability and to pinpoint precisely what needs to be focused on in intervention.

Most static reading measures used to assess young students have poor classification accuracy and significant floor effects (Badian, 1994; Catts, 1991; Jenkins & O'Connor, 2002; Mantzicopoulos & Morrison, 1994; O'Connor & Jenkins, 1999; Scarborough, 1998; Torgesen, 2002a, 2002b; Uhry, 1993; Wilson & Lonigan, 2010). When used to measure the reading abilities of culturally and linguistically diverse (CLD) children just entering the school system at the beginning of kindergarten, static measures demonstrate even lower classification accuracy and even greater floor effects (Donovan & Cross, 2002; Gersten & Dimino, 2006; Klingner & Edwards, 2006; Petersen & Gillam, 2015). When using the CUBED-3 in the Insight system, examiners can administer dynamic assessments of decoding from the PEARL or DYMOND (depending on the student's age) to glean information on a student's ability to learn how to decode in addition to their precise performance on the array of measures in the CUBED-3. This focus on learning potential results in excellent classification accuracy, mitigates floor effects, and reduces bias encountered using traditional static assessments.

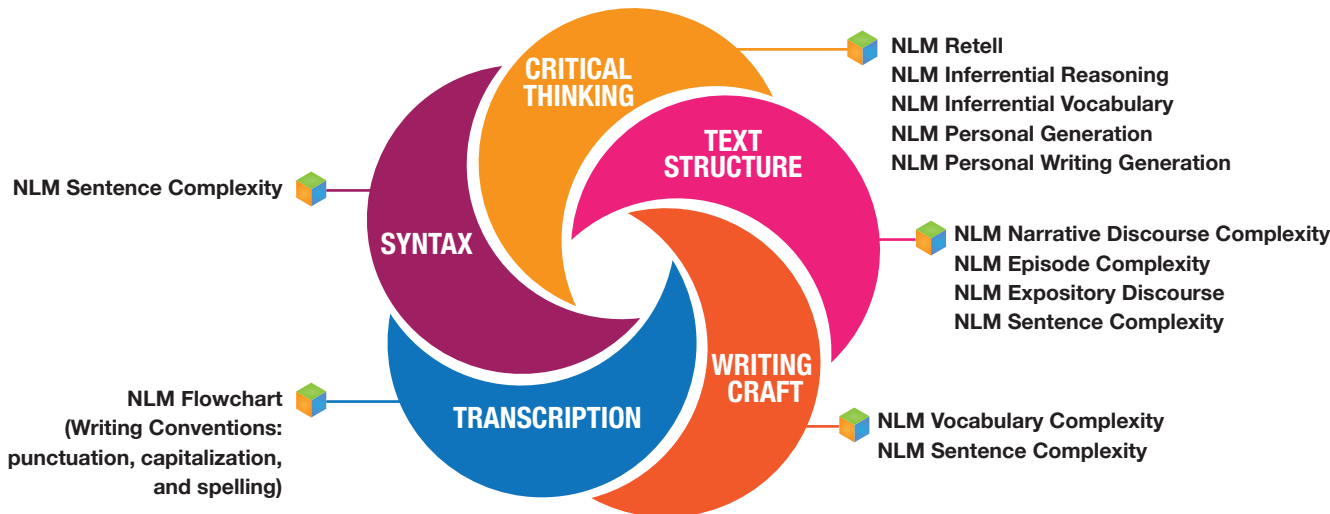
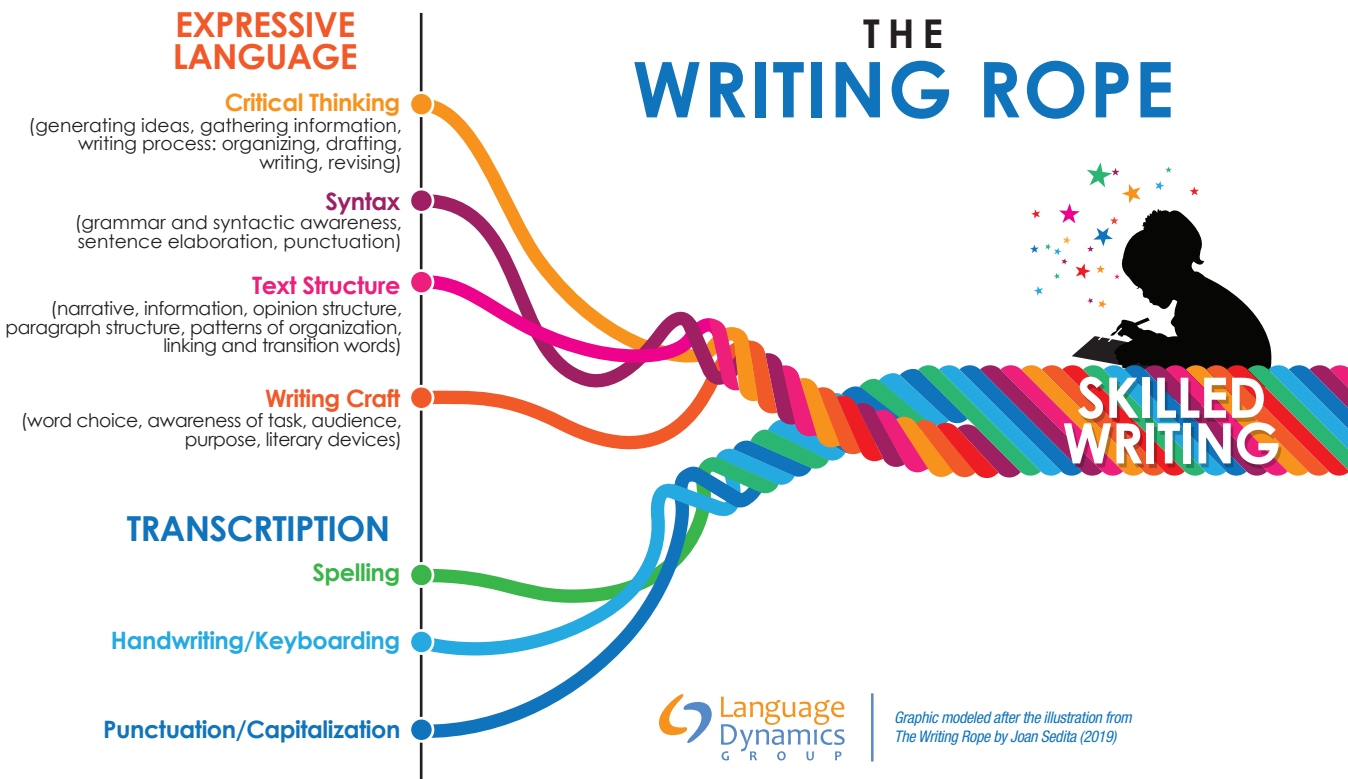
Word Recognition Strands and the CUBED-3

The CUBED-3 uses the *Dynamic Decoding Measures (DDM)* to assess word recognition-related skills. The DDM is comprised of four subtests: *Phonemic Awareness*, *Phoneme Manipulation*, *Orthographic Mapping*, and *Decoding Inventory*. The *NLM Reading* also includes a reading fluency subtest. Each DDM subtest of the CUBED-3 assesses a specific target related to, or reflective of word recognition following a testing the limits dynamic assessment approach. This means that students are administered the more difficult or more mature targets first, and then subsequent targets are assessed until a student's current level of performance is identified. This testing the limits dynamic assessment helps educators pinpoint where intervention should begin.



Writing Strands and the CUBED-3

The CUBED-3 also measures **transcription skills and oral expressive language**, the product of which yields **writing**. Transcription skills are measured through the Personal Writing Generation section of the NLM Reading and expressive language skills are measured using the Personal Oral Generation section of the NLM Listening and the Personal Writing Generation section of the NLM Reading. The NLM Flowcharts are used to score the oral and written language samples students produce.



PURPOSES OF THE CUBED-3

The CUBED-3 is specifically designed to do the following:

a) Universal Benchmark Screening. The CUBED-3 is designed to accurately classify preschool through eighth grade students along a continuum of performance ranging from significantly below to significantly above expectations. This is accomplished through universal benchmark screening. Benchmark screening refers to the assessment of all students within a district, school, or grade usually three times per year. The purpose of benchmark screening is to identify strengths and weaknesses of students, and to organize those students into instructional groups according to their strengths and needs. For this purpose, the CUBED-3 is typically administered at the beginning, middle, and end of each school year.

b) Progress Monitoring. The CUBED-3 is designed to monitor student progress regularly. Progress monitoring refers to the frequent assessment of students who experience, or may be at risk for, difficulty in the skills needed for reading comprehension. Progress monitoring helps educators detect whether adequate progress is being made, and to identify what type of instructional modifications are necessary. Progress monitoring can also be used with students who are in an accelerated program to measure progress associated with specialized instruction. Decisions about the skill areas and targets to monitor are made at the individual student level. Progress monitoring can be conducted using grade-level or off-grade-level material, depending on the student's needs. Thus, the CUBED-3 progress monitoring measures can be administered to students in preschool through high school whenever appropriate.

Benchmark screening and progress monitoring are necessary assessment purposes in a multi-tiered system of support. The CUBED-3 Administration Timeline (Figure 1 on page 18) shows the measures that are typically administered at each benchmark assessment period. Different CUBED-3 measures can be administered at different times to meet the needs at different schools. Therefore, the timeline should only be considered a recommendation. The Administration Flowcharts (see page 19) can help educators determine which specific subtests and targets to administer.

c) Identification of Students Performing Significantly Below Peers. Instead of interpreting the results of the CUBED-3 according to pre-established criteria or expectations (criterion-referencing), the results of the CUBED-3 for preschool through third grade students can also be interpreted according to the normative sample (norm-referencing). An individual student's performance can be compared to his or her normative group. This information can be useful in classification/diagnostic processes.

d) Intervention Planning. The CUBED-3 includes static, dynamic assessment, and processing measures which not only provide examiners with information on what a student already knows, they also provide information on a student's ability to learn and their underlying processing capacity. Because of this, the results of the CUBED-3 can serve as a basis for intervention planning. The format of the CUBED-3 ensures information is gathered in a standardized, efficient, valid manner so that results inform instruction. This content is directly related to common curriculum expectations



and individual student's performance on the CUBED-3 reveals the strengths and weaknesses that can then be specifically addressed in intervention. Decisions regarding the placement of students in intervention, modification of intervention, and when to introduce new targets can be based directly on the CUBED-3 results.

e) Program Evaluation. The CUBED-3 results can be used to examine the extent to which special instructional programs yield the desired outcomes and can help identify how the program can be improved.

The CUBED-3:

- is valid, reliable, and efficient to administer and score
- identifies students who need intensive decoding, language, reading fluency, spelling, or writing intervention
- informs the development of tailored interventions
- evaluates the effectiveness of interventions and monitors students' progress in relation to intervention
- plays an integral role in a multi-tiered system of support focusing on both decoding and language.

CUBED-3 Subtests and Targets

 NLM Narrative Language Measures		 DDM Dynamic Decoding Measures	
READING NLM Retell: <ul style="list-style-type: none"> • Narrative Discourse • Expository Discourse <small>NEW</small> • Episode Complexity • Sentence Complexity • Vocabulary Complexity <small>NEW</small> NLM Questions: <ul style="list-style-type: none"> • Factual • Inferential Vocabulary <small>NEW</small> • Inferential Reasoning <small>NEW</small> Reading Fluency: <ul style="list-style-type: none"> • Decoding Fluency • Accuracy • Prosody Rating Personal Writing Generation	LISTENING NLM Retell: <ul style="list-style-type: none"> • Narrative Discourse • Expository Discourse <small>NEW</small> • Episode Complexity • Sentence Complexity • Vocabulary Complexity <small>NEW</small> NLM Questions: <ul style="list-style-type: none"> • Factual • Inferential Vocabulary <small>NEW</small> • Inferential Reasoning <small>NEW</small> Personal Generation	DECODING INVENTORY <small>NEW</small> <ul style="list-style-type: none"> • Closed Syllables • Vowel-Consonant-E • Basic Affixes • Advanced Affixes • Vowel Teams • Vowel-R-Controlled • Complex Vowels • Advanced Word Forms • Multisyllabic Words in Context 	ORTHOGRAPHIC MAPPING <ul style="list-style-type: none"> • Irregular Words • Letter Sounds • Letter Names
		PHONEMIC AWARENESS <ul style="list-style-type: none"> • Phoneme Segmentation • Phoneme Blending • First Sounds • Continuous Phoneme Blending 	PHONEME MANIPULATION <small>NEW</small> <ul style="list-style-type: none"> • Phoneme Deletion • Phoneme Addition • Episode Substitution

Accommodations

Sometimes standardized administration of the CUBED-3 assessment could result in inaccurate results. In these cases, approved assessment accommodations can be used. Approved accommodations are those that will likely not alter how the assessment functions, thus the benchmark and cut points for risk can still be referenced. These approved accommodations should be reserved for a select number of students who truly need them.

Table 1. *Approved Accommodations*

Approved Accomodations	Students Needing the Accomodations	Appropriate Measures
Enlarged student stimulus materials or larger print	Students with visual impairments	Irregular Words, Letter Sounds, Letter Names, NLM Reading, Decoding Inventory, Rapid Automatized Naming, PEARL, DYMOND
Lighting filters, lighting adjustments, colored overlays	Students with visual impairments	Irregular Words, Letter Sounds, Letter Names, NLM Reading, Decoding Inventory, Rapid Automatized Naming, PEARL, DYMOND
Hearing aids, assistive listening devices, FM systems	Students who are Deaf or who have hearing impairments	All Subtests
A method that can help a student focus on the stimulus materials or that can prevent students from skipping lines of text while reading (e.g., a marker or ruler)		Irregular Words, Letter Sounds, Letter Names, NLM Reading, Decoding Inventory, Rapid Automatized Naming, PEARL, DYMOND

Unapproved Accommodations

Unapproved accommodations could include repeating the story or question, or providing additional prompts. When the purpose of using the CUBED-3 is to determine a student’s performance in comparison to benchmarks or other students’ performances, unapproved accommodations should not be used. However, when a student’s performance is compared to their own performance over time, as in progress monitoring, unapproved accommodations can be used. It is recommended though, that the accommodation is used consistently each time the assessment is administered so that changes in scores can be validly attributed to changes in behavior and not changes in assessment conditions. Unapproved accommodations can be used where they are necessary. For example, a student may have an Individualized Education Program (IEP) that specifies testing with an unapproved accommodation, such as extra time to complete test items or the test directions given in a student’s primary language that is other than English.

Training

The CUBED-3 can be administered by paraprofessional and professional educators and other school-approved personnel as long as they have been appropriately trained on the administration and scoring procedures. The interpretation of the CUBED-3 requires additional training and expertise. It is the organization's and individual's responsibility to ensure that sufficient training has been provided prior to the administration, scoring, and interpretation of the CUBED-3 assessment. Language Dynamics Group (www.languagedynamicsgroup.com) offers several training opportunities and provides video tutorials as supplemental supports. To use scores for educational decisions, the examiner must reliably administer the measures according to the procedures outlined in this manual. A fidelity checklist for each measure is available.

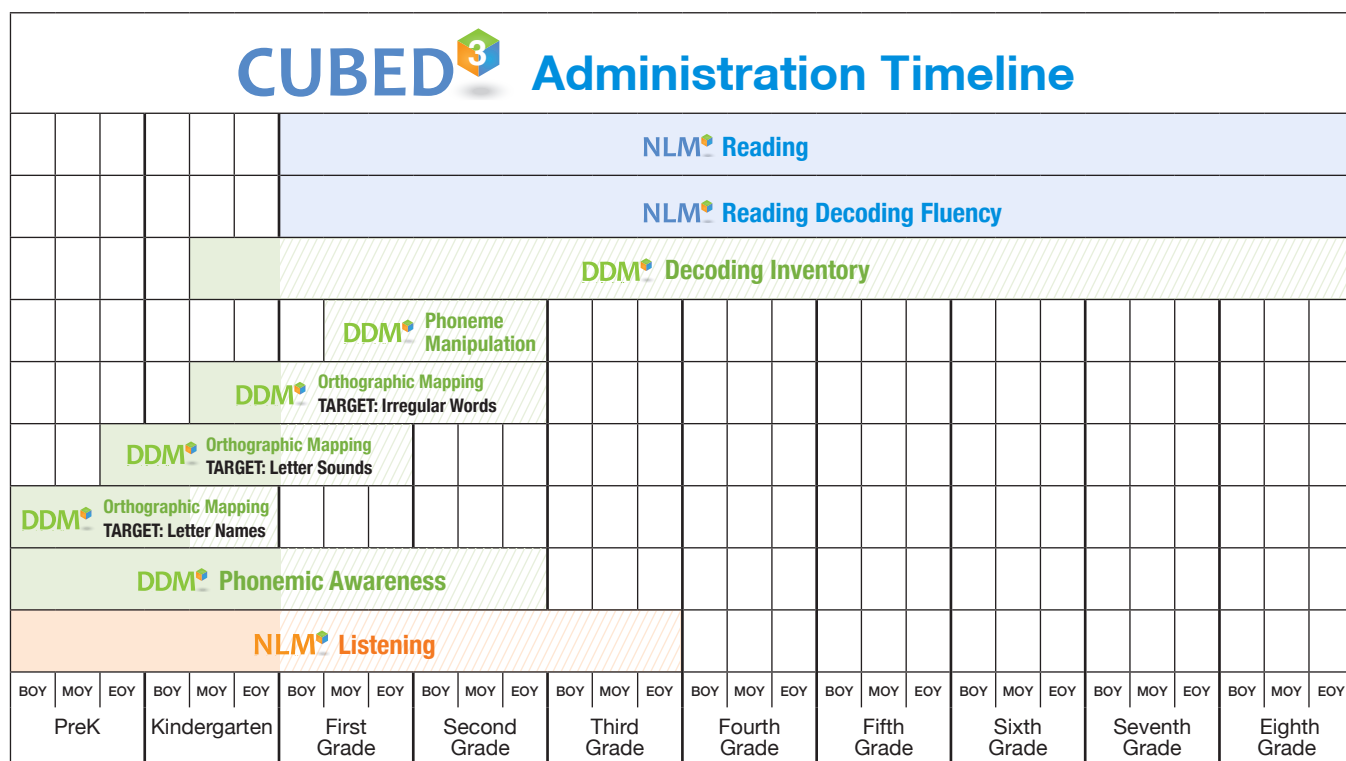
Before administering the CUBED-3, examiners should carefully read this manual and practice administering and scoring the measures until the administration and scoring are performed correctly and fluently. The Insight system can facilitate fidelity of administration and reliability of scoring because discontinue and benchmark parameters are automated.


Standardized administration is an essential part of the CUBED-3. There are scripts for examiners to follow that help to ensure each measure is administered the same every time. If standardization is not followed, it is impossible to determine whether changes in a student's scores are a result of learning or variations in test administrations. Examiners should follow the administration and scoring instructions as directed on the protocols.

Not all CUBED-3 subtests are appropriate or necessary to administer to all students. The CUBED-3 Administration Timeline (Figure 1) provides an overview of when the CUBED-3 subtests or targets are typically administered. Keep in mind that these are only general guidelines, and that your organization may have different needs. The Administration Flowcharts (see page 19) can be used to determine when and how many of the CUBED-3 subtests and targets should be administered. Those areas that are emphasized in the curriculum will drive the assessment process, and mastery or benchmark level will determine whether certain subtests and targets are required.

 Recommended subtest/targets

 Benchmark scores and cut points for risk available, yet administration is contingent on below benchmark performance on core subtest/target

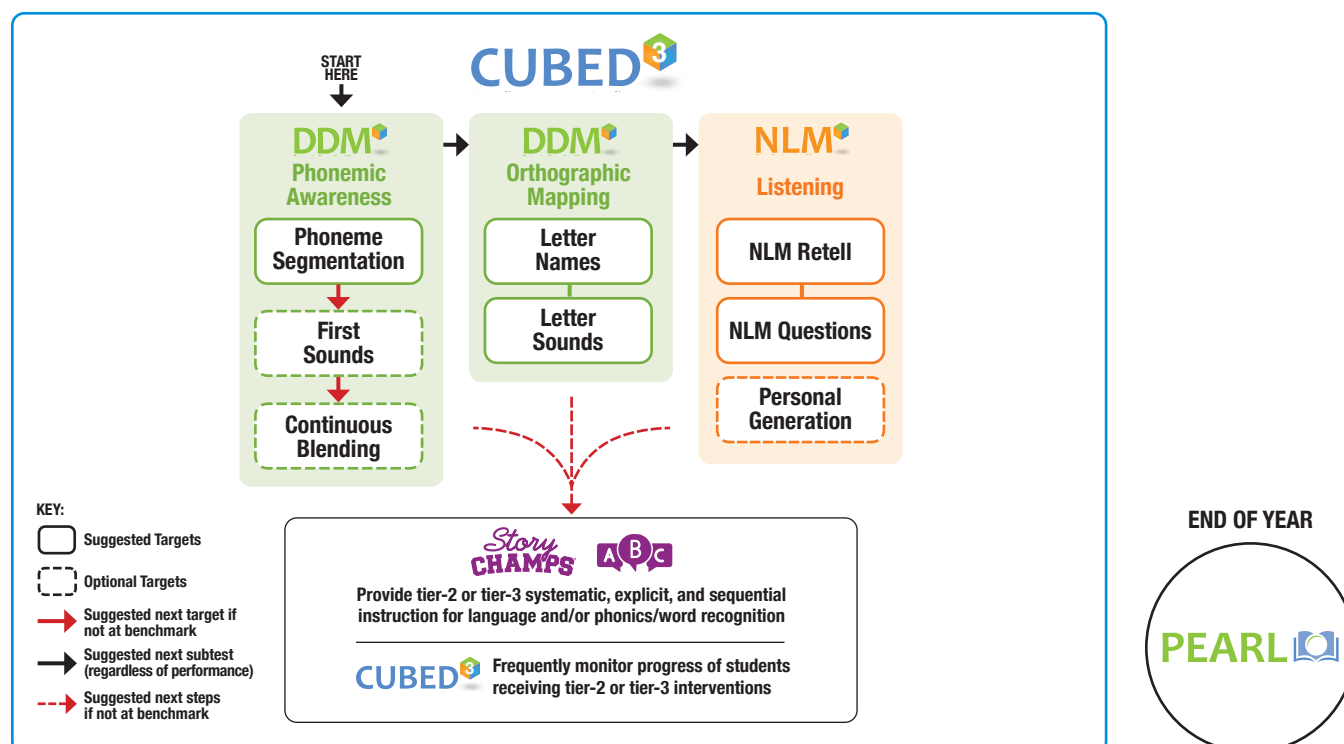


<div>PEARL</div> <ul style="list-style-type: none">• Dynamic Assessment of Language• Rapid Automatized Naming• Dynamic Assessment of Decoding• Nonword Repetition							<div>DYMOND</div> <ul style="list-style-type: none">• Dynamic Assessment of Language• Rapid Automatized Naming• Dynamic Assessment of Decoding (basic) and *Dynamic Assessment of Decoding (advanced) *COMING SOON• Nonword Repetition																											
							← Administer at any time if CUBED-3 results and/or response to intervention indicate concerns →																											
BOY	MOY	EOY	BOY	MOY	EOY		BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY				
PreK			Kindergarten				First Grade			Second Grade			Third Grade			Fourth Grade			Fifth Grade			Sixth Grade			Seventh Grade			Eighth Grade						

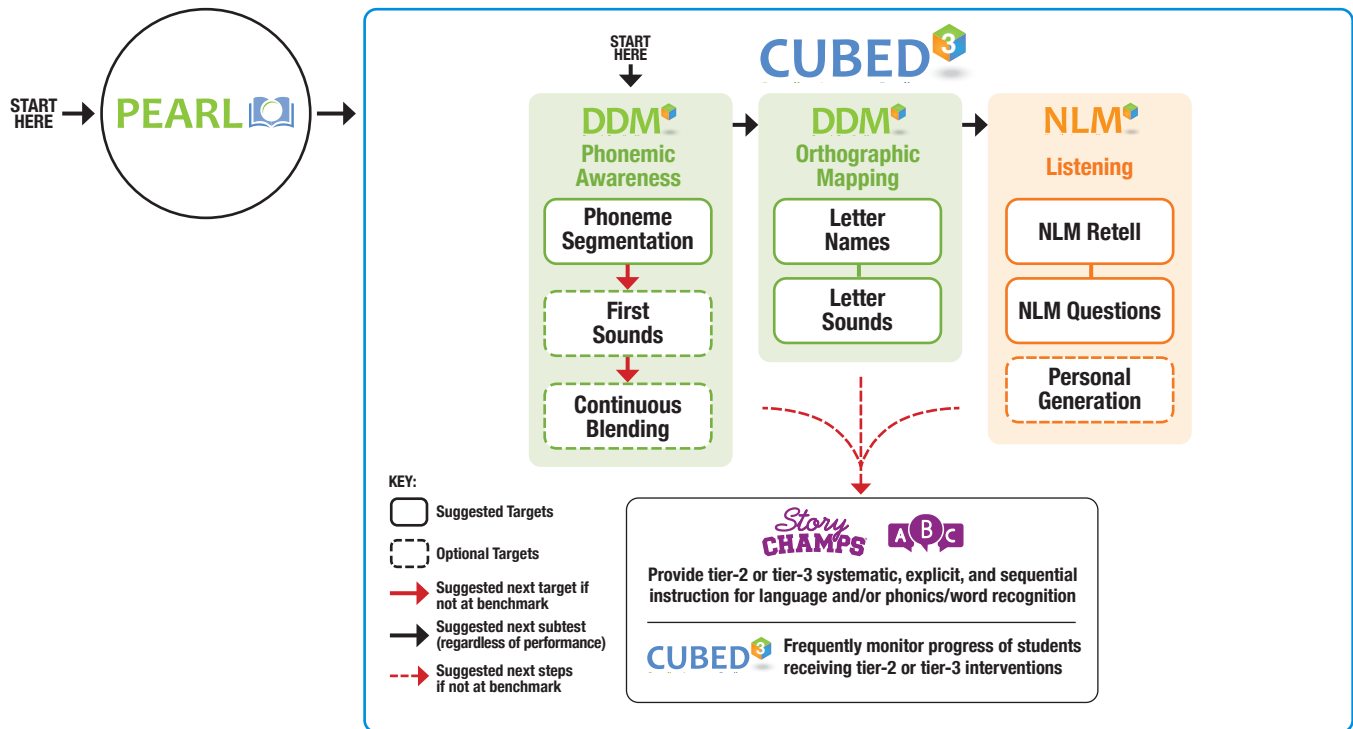
ADMINISTRATION FLOWCHARTS

The Administration Flowcharts are designed to maximize efficiency while maintaining validity. Examiners first administer the subtest in the column on the left side of the flowchart and work down the column, following the arrows and boxes as directed by the key. After administering the appropriate subtests or targets in the first column, examiners then administer the next subtests and targets in the column to the right, again following the directions indicated by the key. The administration of many of the subtests and targets is contingent on how a student performs. For example, note that for first grade students at BOY, the NLM Reading benchmark is the first recommended subtest. The Decoding Fluency, NLM Retell, and NLM Questions from that subtest are the suggested targets. If a student is at benchmark on the Decoding Fluency and NLM Retell, no additional testing is recommended. This is because the first grade BOY Decoding Fluency subtest includes a decodable section which measures a first grader's ability to decode words with closed syllables and basic affixes, and the NLM Retell provides considerable information on how well a student can understand and produce complex academic language. If a student is not at benchmark on either of those targets, then the examiner is directed to administer additional subtests and targets to better identify specific needs. This logic is applied to all grades, making the CUBED very efficient yet also very powerful. Educators may wish to administer subtests that are not recommended in the flowchart, and the CUBED provides the flexibility to accommodate specific organizational/student needs.

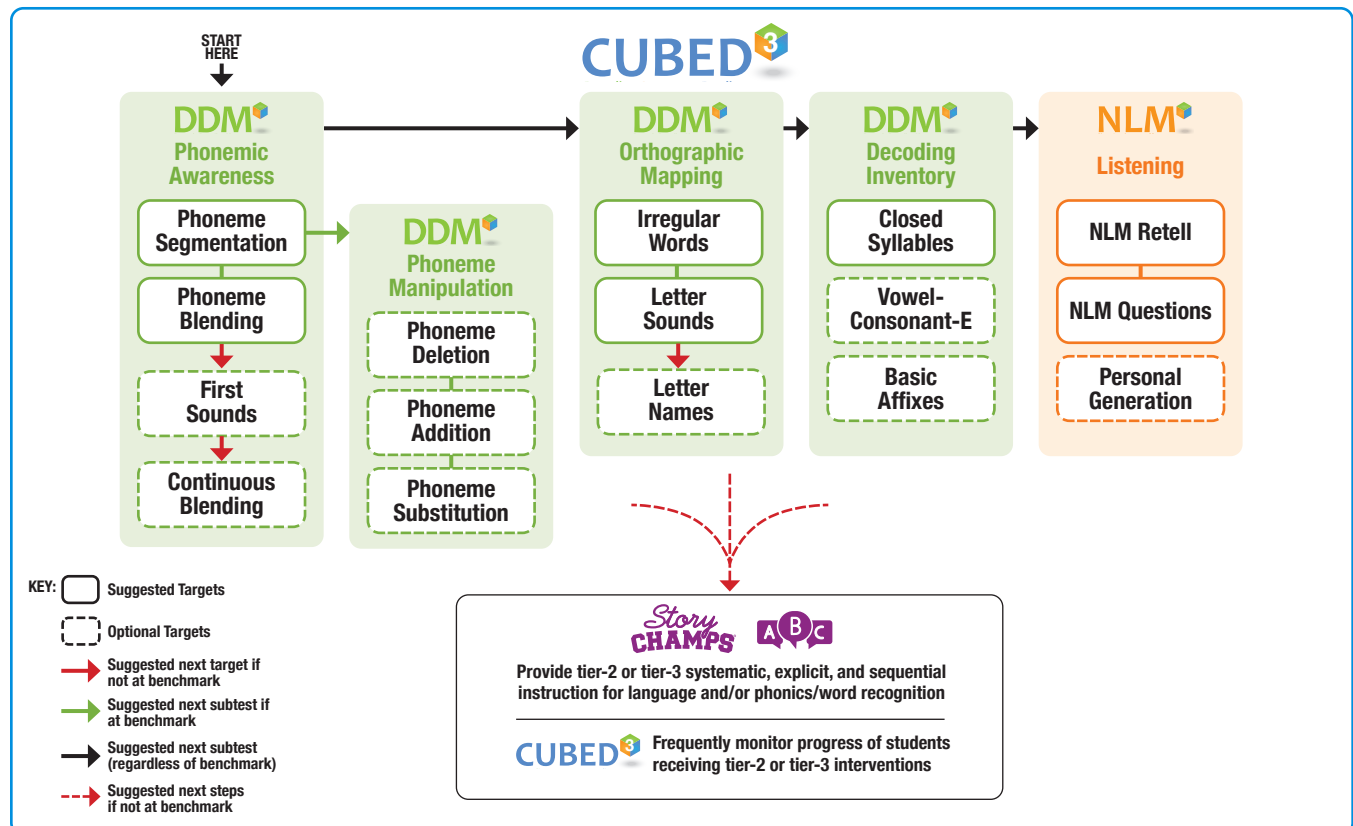
PRESCHOOL: BOY / MOY / EOY



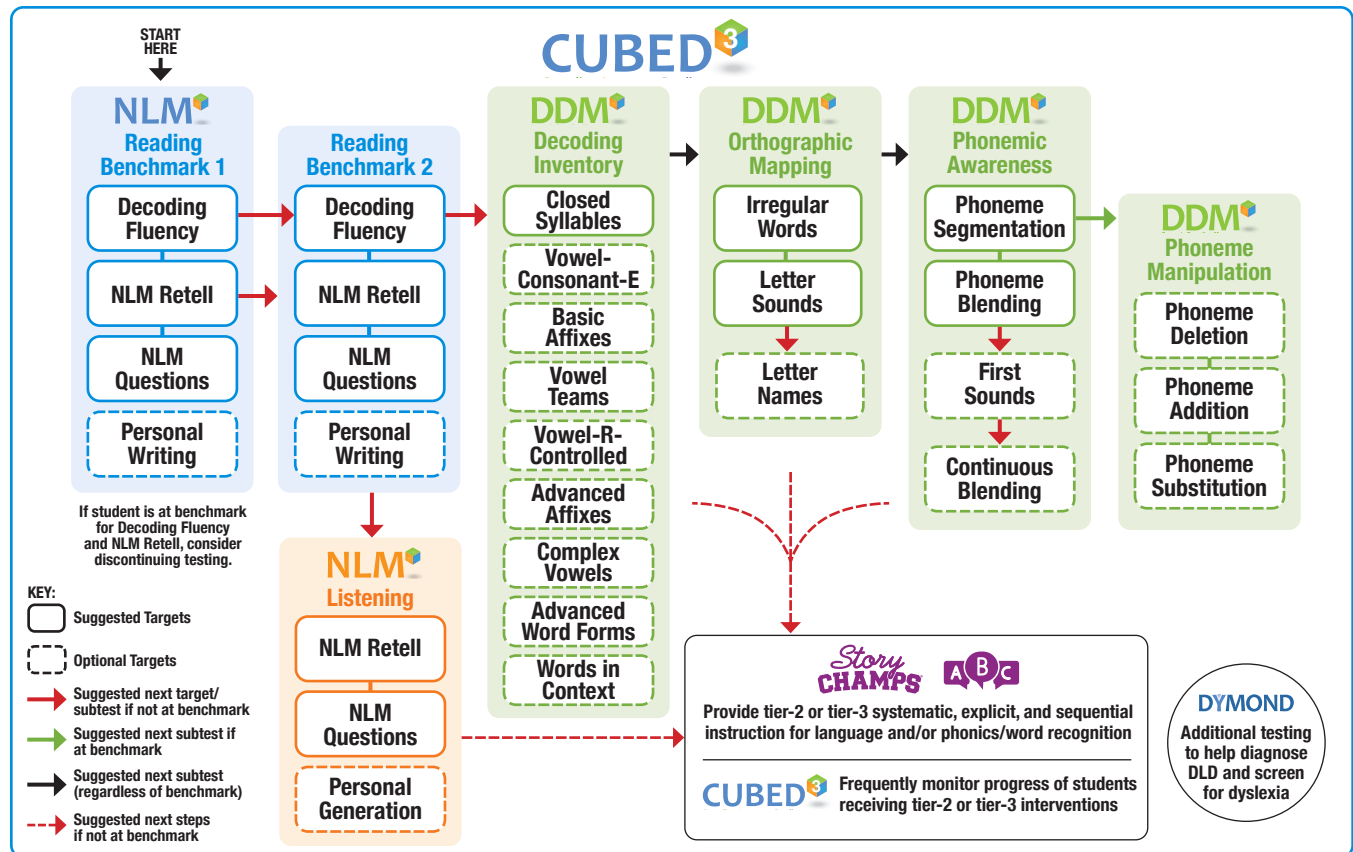
KINDERGARTEN: BOY



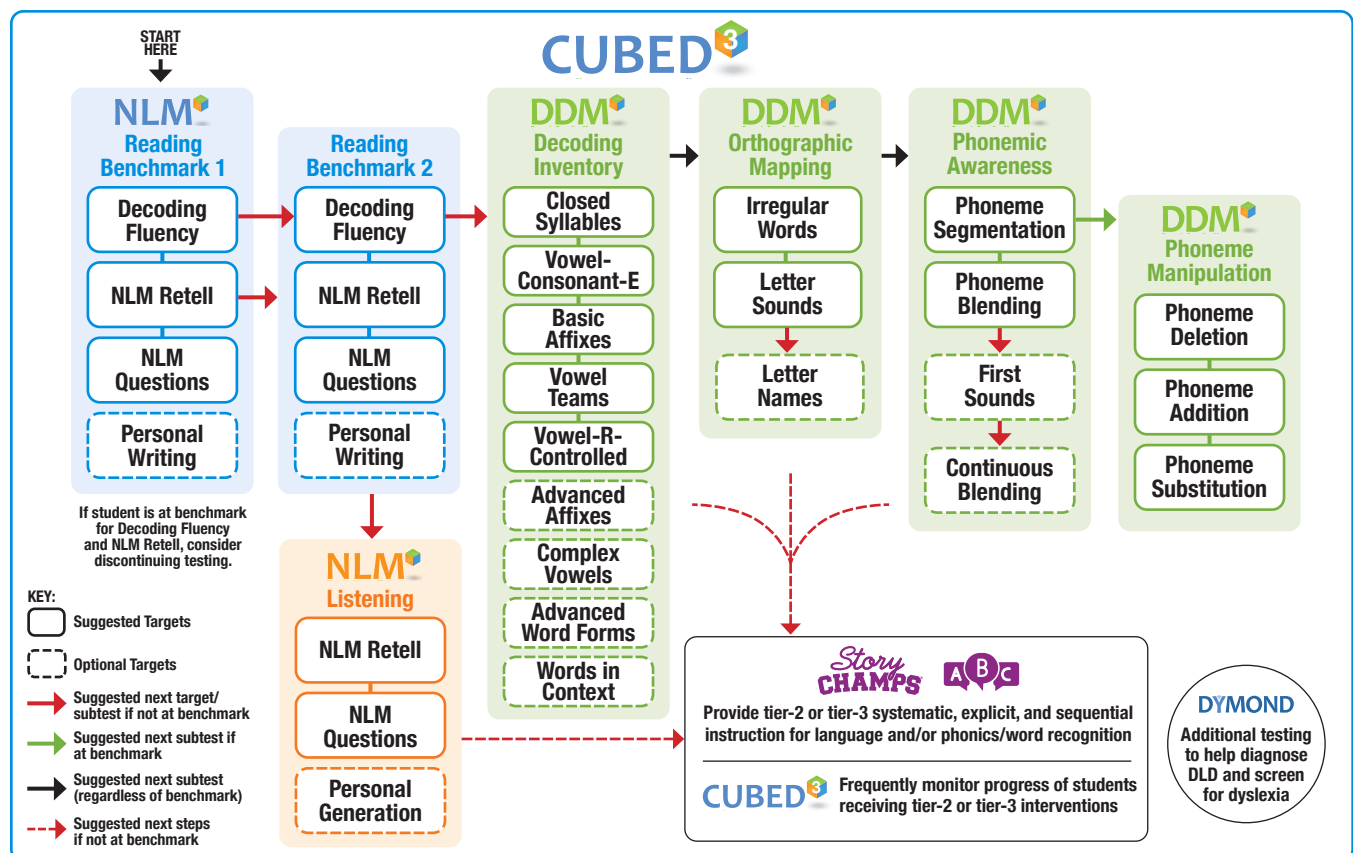
KINDERGARTEN: MOY / EOY



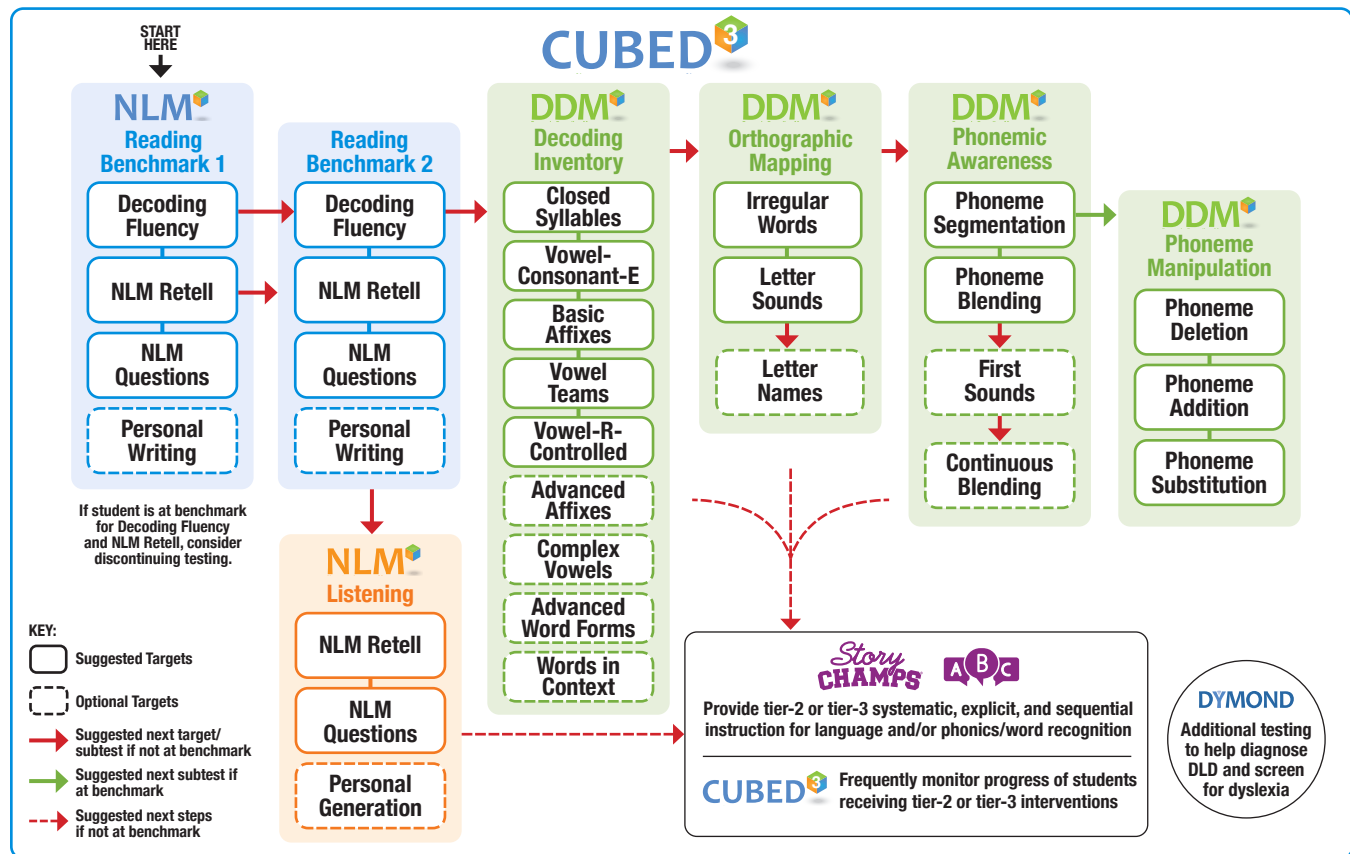
FIRST GRADE: BOY



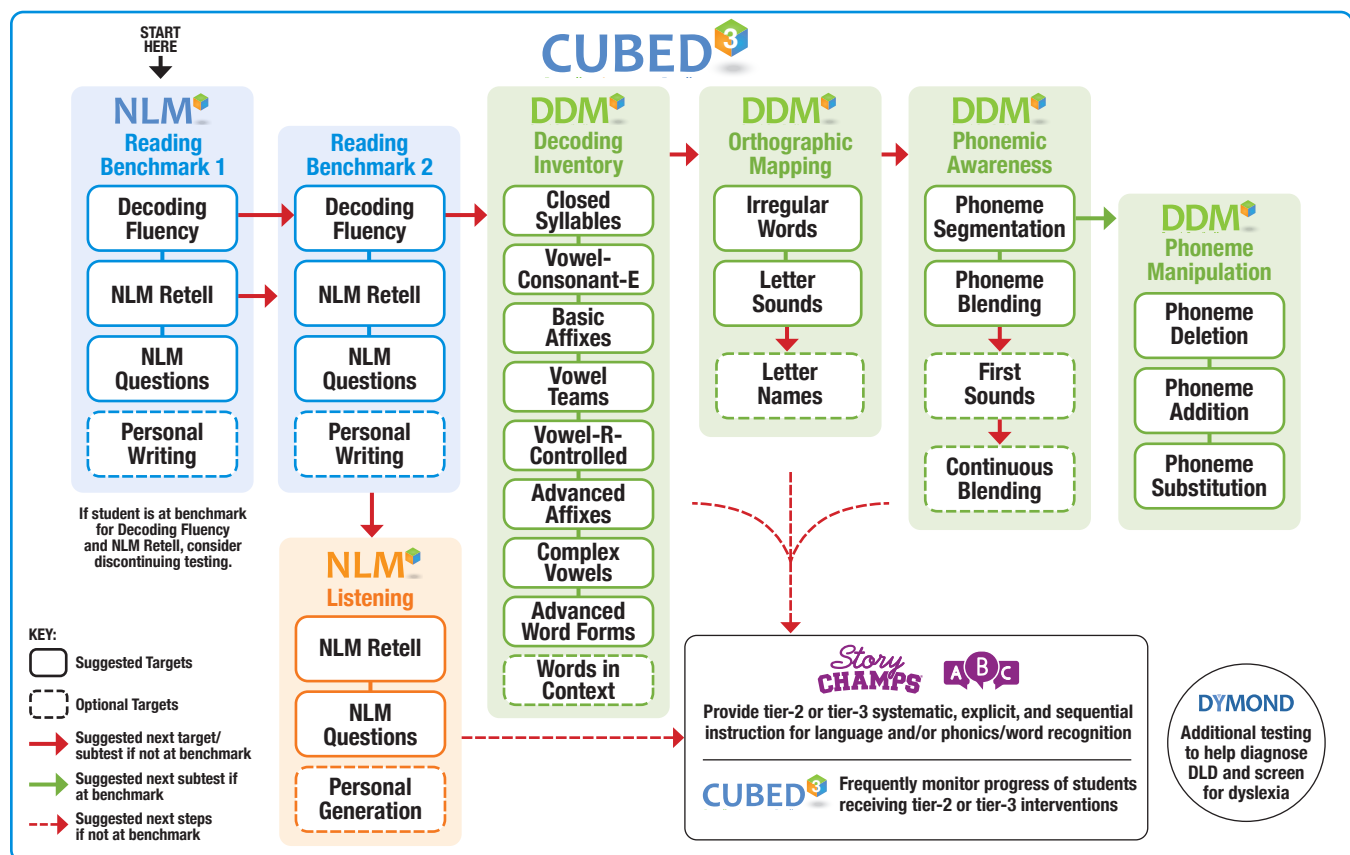
FIRST GRADE: MOY / EOY



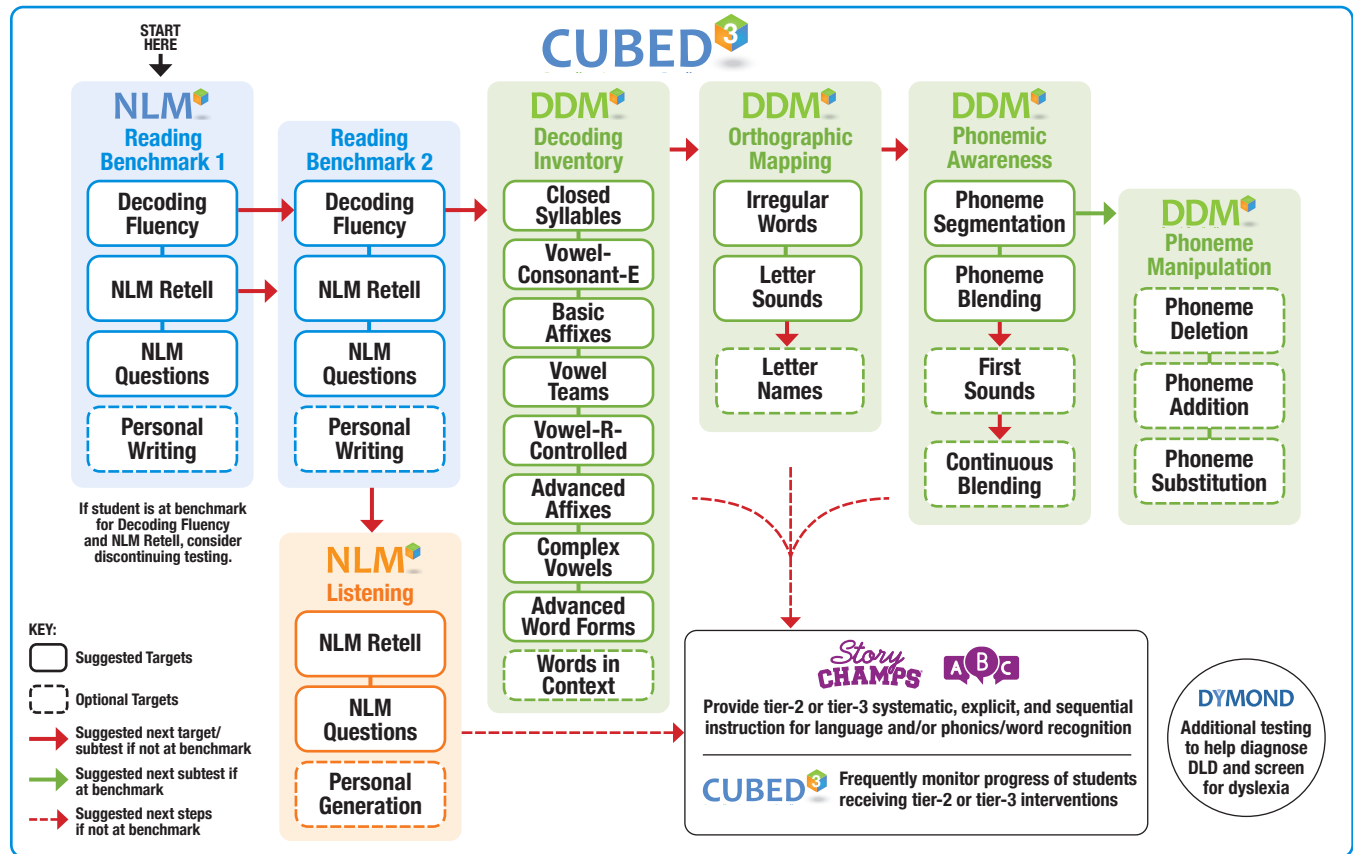
SECOND GRADE: BOY



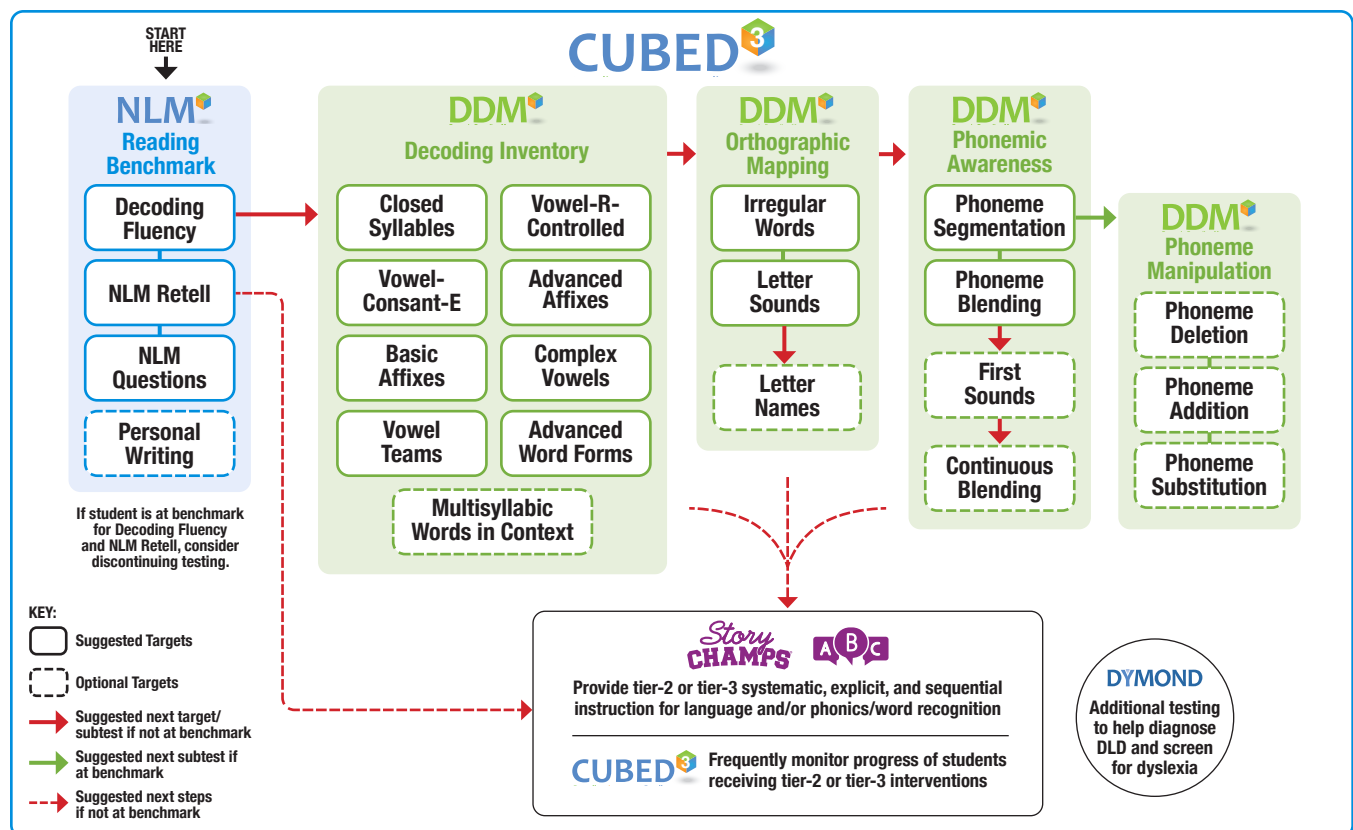
SECOND GRADE: MOY / EOY



THIRD GRADE: BOY / MOY / EOY



FOURTH-EIGHTH GRADE: BOY / MOY / EOY



ADMINISTRATION & SCORING

Selecting a Grade Level

The NLM benchmark screening measures are grade-specific, but the DDM benchmarking measures are not grade-specific. Students should be administered the DDM assessments corresponding to the benchmark recommendations (see Figures 1 and 2), or whenever there is a particular concern in a given area. If a student reaches benchmark or mastery on any given target of the DDM at an early age, that target area may not need to be re-administered in subsequent testing sessions.

The NLM benchmarks should be administered at the grade level corresponding to the student's grade. For students who can read, we recommend that the NLM Reading be administered first, and then if comprehension is below expectations, the NLM Listening should be administered.

For NLM progress monitoring, it is generally recommended to use grade level materials, yet if the grade level passages are too complex for progress monitoring a student's language, then a lower grade level should be considered. Keep in mind that the purpose of the benchmark assessments is to compare students to a grade criterion, but the progress monitoring assessments are designed to show an individual student's decoding, language, and reading growth over time.

Materials and Setting

The examiner should sit with an individual student in a quiet place. If the examiner is right-handed, the student should sit on the left side of the examiner. Most examiners prefer to have a printed copy of the student stimulus materials even when administering the CUBED-3 using Insight (www.LDGInsight.com), yet an additional electronic device (e.g., tablet or laptop) can be used to display the student stimulus materials. If the examiner is using the Insight system, the printed record forms are not needed because scoring takes place on a digital device. Insight requires a tablet, laptop, or some other electronic device and an Internet connection. Examiners should ensure that Insight is fully functional and compatible with their operating system, internet browser, and can be accessed past their organization's firewall prior to administering the CUBED-3. If Insight is not being used, examiners will need a pen/pencil, the printed record forms upon which student scores are recorded, and the printed student stimulus materials to which the student refers.

Student stimulus materials are required for some of the DDM Orthographic Mapping and Decoding Inventory measures. For the NLM Reading, the examiner will need the student stimulus materials that contains the stories the student will read. It is highly recommended to audio record the administration of the NLM assessments so scores that were assigned in real-time can be reviewed and edited. The student should wear a lapel microphone when they are being recorded. Examiners may wish to use a speech to text program to transcribe the retell and then check the transcript to review and edit the real-time scoring.

Rapport

It is important that the examiner builds rapport with each student before administering the assessment. Young students may not be accustomed to the assessment procedures and are generally more cautious with strangers. Keep in mind that the testing situation may be unusual and a little uncomfortable for young students. The examiner should spend time getting to know the student or have a brief conversation before beginning the assessment procedures. Once the student is familiar with the process and the examiner, less rapport building is necessary.

Picture Support

The preschool NLM Listening stories have been illustrated to support the story retelling of students who cannot otherwise retell a scoreable story. For example, 3-year-old students or students with disabilities may have significant challenges retelling stories. To reduce the cognitive and memory demands for these students, examiners can choose to use the picture booklet. However, it is important to understand that pictures are not a permanent part of the NLM Listening. We encourage the use of pictures temporarily for students whose language is monitored regularly and who receive intervention. When student's language improves sufficiently, the pictures should be withdrawn.

Administration Time

Administration time can vary greatly depending on the subtests administered and the performance of the student. The DDM can be a very quick assessment, especially if a student meets benchmark expectations on the highest targets assessed. Other times, the DDM can take up to 15 minutes if a student struggles with each target in each measure. Each NLM Listening and NLM Reading benchmark and progress monitoring assessment takes less than 5 minutes to administer, yet administration time depends on grade level and the student's fluency. Scoring can be done in real-time while the student is retelling the story to the examiner. Scoring can also be done by listening to an audio recording or by referencing a transcript of the student's story. Because the CUBED-3 provides information that can directly inform instruction, additional assessments may not need to be administered prior to differentiated instruction. This can save educators considerable time.

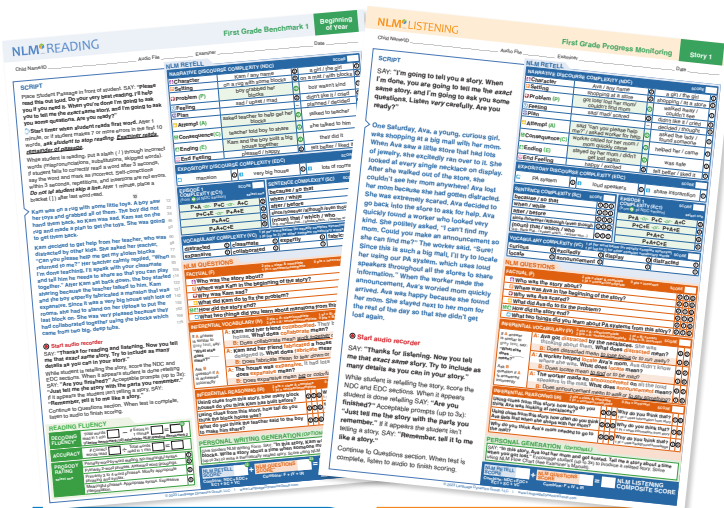
NLM and ELM Flowchart

Personal oral and written stories and expository language samples elicited using the NLM Listening and NLM Reading are scored using the NLM Flowchart (Appendix A) or the ELM Flowchart (Appendix B). In addition, any story or expository language sample elicited from a child can be scored using the flowcharts (e.g., a retell from a children's story book, a personal story recorded in an exchange with a peer, a written story from a teacher prompt, an explanation on how to build something). The NLM and ELM Flowcharts use a flow chart approach to assign a numerical score that quantify the extent to which oral and written stories and exposition are comprised of essential features. The flowcharts are detailed and designed to measure subtle changes in children's expressive language over time. Examiners begin at the top of the flowchart for each element measured, and then move downward answering yes/no questions until they reach the student's present level of performance. We specifically selected the flowchart items based on their relevance to the state educational standards, their relevance to narration and exposition, and their relevance to academic language, which is necessary for academic success.

NLM NARRATIVE LANGUAGE MEASURES

A literal interpretation of the simple view of reading and subsequently exploded views of that model will reveal that the measurement of reading comprehension requires the measurement of language comprehension. The assessment of oral language – including the ability to understand and produce complex, academic language, is not dependent upon a student's ability to decode, and can therefore be measured at an early age.

The Narrative Language Measures (NLM) Listening and NLM Reading subtests assess five core behaviors derived from a thorough review of the extant research. Those five behaviors are 1) *retelling narratives with embedded complex academic language and expository information*, which allows for the assessment of the comprehension and production of narrative discourse complexity, expository complexity, sentence complexity, and vocabulary complexity, 2) *the comprehension of factual discourse structure information*, primarily assessing receptive language, 3) *inferential word learning and vocabulary use*, which allows for the assessment of the ability to infer the meaning of unfamiliar words through context and the ability to use advanced vocabulary, 4) the ability to make *within-text and elaborative inferences*, and 5) *oral and written personal narrative generation*, which facilitates the examination of transcription and oral and written expressive language across different modalities. The Narrative language measures also uses a very brief dynamic assessment of language that can be administered to students who are not meeting benchmark expectations. This dynamic assessment of language helps examiners determine whether poor performance on the NLM is due to a language learning difficulty or an extraneous factor.



NLM READING

NLM Retell:

- Narrative Discourse
- Expository Discourse
- Episode Complexity
- Sentence Complexity
- Vocabulary Complexity

NLM Questions:

- Factual
- Inferential Vocabulary
- Inferential Reasoning

Reading Fluency:

- Decoding Fluency
- Accuracy
- Prosody Rating

Personal Writing Generation

NLM LISTENING

NLM Retell:

- Narrative Discourse
- Expository Discourse
- Episode Complexity
- Sentence Complexity
- Vocabulary Complexity

NLM Questions:

- Factual
- Inferential Vocabulary
- Inferential Reasoning

Personal Generation

Administration and scoring for all but the personal generation subtests of the NLM can be done in real-time, either by hand, or via a digital device using the Insight system. NLM Listening forms have six different levels of complexity: preschool, kindergarten, first, second, and third grade. NLM Reading forms are written for eight different levels (first, second, third, fourth, fifth, sixth, seventh, and eighth grade). To the extent possible, these levels are based on developmental patterns and curriculum expectations for narrative structure, language complexity, and decoding skills.

First and second grade NLM Reading passages include an initial decodable section that allows for the measurement of decoding fluency using syllable types, temporarily and permanently irregularly spelled words, and affixes most often taught prior to that particular period of time in the school year. Because these sections are decodable, examiners can infer that if a student meets benchmark expectations for decoding fluency (CWPM) and accuracy, that student can decode most words with the syllable types and patterns taught to most students prior to that time point in the school year. This means that it may not be necessary to administer additional measures related to word recognition if those benchmarks are met (e.g., Decoding Inventory, Phonemic Awareness, Letter Sounds, Irregular Words etc.). Because of this careful engineering of passages, the CUBED-3 assessment can be very efficient for those students who meet benchmark expectations on Decoding Fluency and Accuracy. The guidelines in tables 2-7 were used to write the decodable sections for first grade NLM Reading (~ first 50 words) and second grade NLM Reading (~ first 90 words).

For benchmark assessments, students are administered the NLM grade level that corresponds with their grade. For progress monitoring, any grade level can be administered to any student according to their current level of performance.

Stories used in the administration of the NLM Listening and NLM Reading are realistic fiction focusing on themes that are personally relatable to young students. We have chosen the context of personal-themed narrative discourse to assess language development. Personal narration is typically used to communicate with others about past events, and it is one of the more complex forms of discourse. We expect young students to tell far less organized and less linguistically complex stories than older students, and students who have language difficulty tend to have significant difficulty with narration. The developmental nature of narration, its ability to tax a student's language system, and the fact that most students across many cultures commonly use narration to communicate make it quite useful for language assessment. Our choice to use personal-themed narratives has much to do with their ubiquity in children's functional daily communication, their utility for standardized elicitation, and their potential to reflect culturally universal themes. Each narrative also includes a main idea and two supporting details that creates a hybrid narrative/expository passage, allowing for a basic measurement of the comprehension and production of expository language.

In addition to the personal nature of NLM stories, their design has been strategically grounded in curriculum-based measurement conventions. To inform educational decisions regarding children's language needs, it is imperative that their language is sampled repeatedly over time in a standardized format. This means that several alternate forms of the assessment need to be available. NLM stories undergo extensive scrutiny to ensure that they have consistent lengths, story structure, sentence complexity, and vocabulary complexity. The stories are an essential feature of the NLM and promote a standardized, reliable, and valid assessment of language comprehension and production. The following is an overview of the NLM sections.

Table 2. Beginning of Year (BOY) First Grade Decodable Parameters with Decoding Inventory Subtest Items and BOY Benchmark 1 and BOY Benchmark 2 Examples

FIRST GRADE (BOY) Decodable Parameters (red font)	
BOY Benchmark 1 Decodable Section (50 words) Kam was on a rug with some little toys. A boy saw her toys and grabbed all of them. The boy did not hand them back, so Kam was sad. Kam sat on the rug and made a plan to get the toys. She was going to get them back.	
BOY Benchmark 2 Decodable Section (49 words) Last week, Jen sat on the grass with a rose bush that her mom got at a shop. Jen's mom told her to plant the bush, but it began to make her itch. Then her face started to get red, and she had to rub her nose a lot.	
Closed Syllables	min sal jom vun quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff Additional Sounds/Spellings Allowed in BOY First Grade Decodable Sections: ng (going), y (yes), th (them)
Vowel-Consonant-E	naze gude mepe sule wonkide atane jime tebe goke fene vome rame sove
Basic Affixes	hezes pafed senest bruful temness premiv foting unron repog miver dutless giply
Vowel Teams	feep naig touv keat heag goupaik zay loak zoon soud wook poig shaw hieb roef zow bewk pauk
Vowel-R-Controlled	klar ner foarp mour lare lirparg tor wir ploor rark zair kear zur theer glier searc lourt vour slore
Advanced Affixes	mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub uniuquin virupt
Complex Vowels	vind nild zough keigh glaught kighdost vost groid figh pight wought pough klaugh
Advanced Word Forms	wecent smink lomb glistle ohong grombacent brism grunk mank ghosl futle
Words in Context	tembog stodrun groupaik lirparg kighdost ungobers bimudgeic poughtigild grombacent ponerate lirmarves
Initial and final Blends	ploor, glier, slore, trizom, plut, klar, groid, glaught, glaugh, virupt, senest, wecent, smink, brism, grunk, mank, glistle, ohong, groupaik, kighdost, poughtigild, grombacent,
Basic Consonant Digraphs	shil, zick, chom, thuz, quim, whav, whaw, theer
Double Consonants	vill, cass, noff
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniuin *Can be pronounced with a short or long vowel
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb, ghosl, eigh, glistle, futle, pight, wought, glaught, poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion tu for ch: gopture Soft/hard c & g: wecent, grombacent k/ck zick, ge/dge bimudgeic, ch/tch variant plurals: lirmarves

Table 3. Beginning of Year (MOY) First Grade Decodable Parameters with Decoding Inventory Subtest Items and MOY Benchmark 1 and MOY Benchmark 2 Examples

FIRST GRADE (MOY) Decodable Parameters (red font)	
BOY Benchmark 1 Decodable Section (49 words) One day, Jack was in his room. He was getting ready to go swim in his big pool. When Jack was ready to go, his mom, who was strict, stopped him. She said he could not swim because he had not picked up his toys yet. Jack was upset.	
BOY Benchmark 2 Decodable Section (49 words) One day, Ron was with his dad at a fun park. He wanted to go on all the fun rides. He stopped at a tall ride that was fast and spun a lot. He went on it. But at the end of the ride, he started to feel sick.	
Closed Syllables	min sal jom vun quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff
Vowel-Consonant-E	naze gude mepe sule wonkide atane jime tebe goke fene vome rame sove
Basic Affixes	hezes pafed senest bruful temness premiv foting unron repog miver dutless giply
Vowel Teams	feep naig touv keat heag goupai zay loak zoon soud wook poig shaw hieb roef zow bewk pauk
Vowel-R-Controlled	klar ner foarp mour lare lirparg tor wir ploor rark zair kear zur theer glier searc lourt vour slore
Advanced Affixes	mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub uniuquin virupt
Complex Vowels	vind nild zough keigh glaught kighdost vost groid figh pight wought pough klaugh
Advanced Word Forms	wecent smink lomb glistle ohong grombacent brism grunk mank ghosl futle
Words in Context	tembog stodrun groupaik lirparg kighdost ungobers bimudgeic poughtigild grombacent ponerate lirmarves
Initial and final Blends	ploor, glier, slore, trizom, plut, klar, groid, glaught, glaugh, virupt, senest, wecent, smink, brism, grunk, mank, glistle, ohong, groupaik, kighdost, poughtigild, grombacent,
Basic Consonant Digraphs	shil, zick, chom, thuz, quim, whav, whaw, theer
Double Consonants	vill, cass, noff
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniuin *Can be pronounced with a short or long vowel
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb, ghosl, eigh, glistle, futle, pight, wought, glaught, poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion tu for ch: gopture Soft/hard c & g: wecent, grombacent k/ck zick, ge/dge bimudgeic, ch/tch variant plurals: lirmarves

Table 4. Beginning of Year (EOY) First Grade Decodable Parameters with Decoding Inventory Subtest Items and EOY Benchmark 1 and EOY Benchmark 2 Examples

FIRST GRADE (EOY) Decodable Parameters (red font)	
BOY Benchmark 1 Decodable Section (49 words) One day, Owen was out playing in the rain. After he jumped in a big puddle, Owen got water in his new shoes. His shoes were not very tall, so they got wet. Owen was sad because his feet were very wet and cold. He knew he needed to get help.	
BOY Benchmark 2 Decodable Section (49 words) Last week, Ben was at his dad's house. It was late and he was watching TV. His dad told him it was time to brush his teeth and go to bed. Ben was upset because he did not want to go to bed. After Ben brushed his teeth, he made a plan.	
Closed Syllables	min sal jom vun quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff
Vowel-Consonant-E	naze gude mepe sule wonkide atane jime tebe goke fene vome rame sove
Basic Affixes	hezes pafed senest bruful temness premiv foting unron repog miver dutless giply
Vowel Teams	feep naig touv keat heag goupaik zay loak zoon soud wook poig shaw hieb roef zow bewk pauk oy
Vowel-R-Controlled	klar ner foarp mour lare lirparg tor wir ploor rark zair kear zur theer glier searc lourt vour slore
Advanced Affixes	mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub uniuquin virupt in- ex-
Complex Vowels	vind nild zough keigh glaught kighdost vost groid figh pight wought pough klaugh
Advanced Word Forms	wecent smink lomb glistle ohong grombacent brism grunk mank ghosl futle
Words in Context	tembog stodrun groupaik lirparg kighdost ungobers bimudgeic poughtigild grombacent ponerate lirmarves
Initial and final Blends	ploor, glier, slore, trizom, plut, klar, groid, glaught, glaugh, virupt, senest, wecent, smink, brism, grunk, mank, glistle, ohong, groupaik, kighdost, poughtigild, grombacent,
Basic Consonant Digraphs	shil, zick, chom, thuz, quim, whav, whaw, theer wr
Double Consonants	vill, cass, noff, pp, bb, tt, dd, cc, gg, zz, mm, rr
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniuquin *Can be pronounced with a short or long vowel
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb, ghosl, eigh, glistle, futle, pight, wought, glaught, poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion tu for ch: gopture Soft/hard c & g: wecent, grombacent k/ck zick, ge/dge bimudgeic, ch/tch variant plurals: lirmarves /j/=j, g, ge y = cry, yes, candy, gym

Table 5. Beginning of Year (BOY) Second Grade Decodable Parameters with Decoding Inventory Subtest Items and BOY Benchmark 1 and BOY Benchmark 2 Examples

SECOND GRADE (BOY) Decodable Parameters (red font)	
BOY Benchmark 1 Decodable Section (92 words) Yesterday , Marta and her mom were shopping at a store. She needed to get a gift for her friend. She was upset because she didn't have much time. Marta was thinking about getting a game. Her friend had a new computer with lots of RAM, which helps it run fast and open many things all at the same time. She dug through the bin of games and finally found a great game. But sadly, she didn't have the money to buy it. Marta felt bad because she still didn't have a gift.	
BOY Benchmark 2 Decodable Section (86 words) Last week , Cora was exploring a theme park. She wanted to go on all the big rides, but she was not able to because she was too short. Even though Cora was upset, she hoped to find other rides that were fun. After she looked for a while, Cora found a thrilling ride that was shaped like a giant snake, and it went really fast. But when she tried to get on it, a man, who wore a uniform, sadly told Cora she was too short.	
Closed Syllables	min sal jom vun quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff
Vowel-Consonant-E	naze gude mepe sule wonkide atane jime tebe goke fene vome rame sove
Basic Affixes	hezes pafed senest bruful temness premiv foting unron repog miver dutless giply
Vowel Teams	feep naig touv keat heag goupaik zay loak zoon soud wook poig shaw hieb roef zow bewk pauk oy
Vowel-R-Controlled	klar ner foarp mour lare lirparg tor wir ploor rark zair kear zur theer glier searc lourt vour slore
Advanced Affixes	mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub uniuquin virupt in- ex-
Complex Vowels	vind nild zough keigh glaught kighdost vost grolld figh pight wought pough klaugh
Advanced Word Forms	wecent smink lomb glistle ohong grombacent brism grunk mank ghosl futle
Words in Context	tembog stodrun groupaik lirparg kighdost ungobers bimudgeic poughtigild grombacent ponerate lirmarves
Initial and final Blends	ploor, glier, slore, trizom, plut, klar, grolld, glaught, glaugh, virupt, senest, wecent, smink, brism, grunk, mank, glistle, ohong, groupaik, kighdost, poughtigild, grombacent,
Basic Consonant Digraphs	shil, zick, chom, thuz, quim, whav, whaw, theer wr
Double Consonants	vill, cass, noff, pp, bb, tt, dd, cc, gg, zz, mm, rr
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniuquin *Can be pronounced with a short or long vowel
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb, ghosl, eigh, glistle, futle, pight, wought, glaught, poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion variant plurals: lirmarves tu for ch: gopture /j/=j, g, ge Soft/hard c & g: wecent, grombacent y = cry, yes, candy, gym k/ck zick, ge/dge bimudgeic, ch/tch

Table 6. Beginning of Year (MOY) Second Grade Decodable Parameters with Decoding Inventory Subtest Items and MOY Benchmark 1 and MOY Benchmark 2 Examples

SECOND GRADE (MOY) Decodable Parameters (red font)	
BOY Benchmark 1 Decodable Section (87 words) One day , Daniel was in his art class making a small clay pot . When he was done , he went to pick up the pot, but it was stuck to the table , which made him nervous. Daniel decided to try to gently lift it off the table so that he wouldn't ruin it . But Daniel's pot was really stuck . Daniel was sad and put his head on the table . Finally , Daniel decided to get help . Daniel said to his teacher "My pot is stuck!" Daniel's teacher kindly said ,	
BOY Benchmark 2 Decodable Section (85 words) On Sunday , Fiona, a very shy girl , was in the car with her family . They slowly pulled into her grandpa's big driveway. She saw lots of cars parked at her grandpa's house. Fiona was upset because she didn't know there would be so many people visiting her grandpa. Fiona decided to stick close to her outgoing, older brother . She held his hand so that she would feel better. But Fiona still felt uneasy . Even though she loved her grandpa, she didn't like big crowds.	
Closed Syllables	min sal jom vun quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff
Vowel-Consonant-E	naze gude mepe sule wonkide atane jime tebe goke fene vome rame sove
Basic Affixes	hezes pafed senest bruful temness premiv foting unron repog miver dutless giply
Vowel Teams	feep naig touv keat heag goupaik zay loak zoon soud wook poig shaw hieb roef zow bewk pauk oy
Vowel-R-Controlled	klar ner foarp mour lare lirparg tor wir ploor rark zair kear zur theer glier searc lourt vour slore
Advanced Affixes	mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub uniquin virupt in- ex-
Complex Vowels	vind nild zough keigh glaught kighdost vost groid figh pight wought pough klaugh
Advanced Word Forms	wecent smink lomb glistle ohong grombacent brism grunk mank ghosl futle
Words in Context	tembog stodrun groupaik lirparg kighdost ungobers bimudgeic poughtigild grombacent ponerate lirmarves
Initial and final Blends	ploor, glier, slore, trizom, plut, klar, groid, glaught, glaugh, virupt, senest, wecent, smink, brism, grunk, mank, glistle, ohong, groupaik, kighdost, poughtigild, grombacent,
Basic Consonant Digraphs	shil, zick, chom, thuz, quim, whav, whaw, theer, wr, ph, gh, sch (school), ch (machine)
Double Consonants	vill, cass, noff, pp, bb, tt, dd, cc, gg, zz, mm, rr
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniquin *Can be pronounced with a short or long vowel
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb, ghosl, eigh, glistle, futle, pight, wought, glaught, poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion tu for ch: gopture Soft/hard c & g: wecent, grombacent k/ck zick, ge/dge bimudgeic, ch/tch variant plurals: lirmarves /j/=j, g, ge y = cry, yes, candy, gym

Table 7. Beginning of Year (EOY) Second Grade Decodable Parameters with Decoding Inventory Subtest Items and EOY Benchmark 1 and EOY Benchmark 2 Examples

SECOND GRADE (EOY) Decodable Parameters (red font)	
BOY Benchmark 1 Decodable Section (88 words) On Saturday, Jacob, who loved the outdoors, was fishing with his grandpa at a nearby river delta. The triangle-shaped piece of land, which formed when the fresh water of the river flowed into the salty water of the ocean, was their favorite place to fish. Jacob tried to cast the line into the brackish water, but his line snagged in a tree behind him. Jacob panicked and thought he could just pull the line free. But when Jacob whipped the line hard, it got caught even worse!	
BOY Benchmark 2 Decodable Section (84 words) Last week, Luiz went outside to feed his pet goats. His goats, which are called Fainting goats, are very friendly. However, when they get scared, their legs get stiff, and they fall over. When Luiz poured some grain into their feeder, he noticed there was only one goat in the pen. The other goat had escaped and was eating some thick, overgrown bushes in the backyard. Luiz felt worried because he didn't know how he would catch the goat that always ran from him.	
Closed Syllables	min sal jom vun quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff
Vowel-Consonant-E	naze gude mepe sule wonkide atane jime tebe goke fene vome rame sove
Basic Affixes	hezes pafed senest bruful temness premiv foting unron repog miver dutless giply
Vowel Teams	feep naig touv keat heag goupaik zay loak zoon soud wook poig shaw hieb roef zow bewk pauk oy
Vowel-R-Controlled	klar ner foarp mour lare lirparg tor wir ploor rark zair kear zur theer glier searc lourt vour slore
Advanced Affixes	mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub uniuquin virupt
Complex Vowels	vind nild zough keigh glaught kighdost vost groid figh pight wought pougk klaugh
Advanced Word Forms	wecent smink lomb glistle ohong grombacent brism grunk mank ghosl futle
Words in Context	tembog stodrun groupaik lirparg kighdost ungobers bimudgeic poughtigild grombacent ponerate lirmarves
Initial and final Blends	ploor, glier, slore, trizom, plut, klar, groid, glaught, glaugh, virupt, senest, wecent, smink, brism, grunk, mank, glistle, ohong, groupaik, kighdost, poughtigild, grombacent,
Basic Consonant Digraphs	shil, zick, chom, thuz, quim, whav, whaw, theer, wr, ph, gh, sch (school), ch (machine)
Double Consonants	vill, cass, noff, pp, bb, tt, dd, cc, gg, zz, mm, rr
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniuin *Can be pronounced with a short or long vowel
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb, ghosl, eigh, glistle, futle, pight, wought, glaught, poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion variant plurals: lirmarves tu for ch: gopture /j/=j, g, ge Soft/hard c & g: wecent, grombacent y = cry, yes, candy, gym k/ck zick, ge/dge bimudgeic, ch/tch

NLM Reading

Reading Fluency

READING FLUENCY

DECODING
FLUENCY*

Total words read in 1 min — # Errors in 1 minute = ¹⁰
**If below benchmark (10) administer NLM Reading Benchmark 2*

ACCURACY

Correct words read ÷ Total words read in 1 min =

PROSODY
RATING

select one

- | | |
|--|---|
| Primarily word-by-word reading. No meaningful syntax. | ① |
| Primarily 2-word phrases. Awkward word groupings. | ② |
| Primarily 3 to 4 word phrases. Mostly appropriate phrasing and syntax. | ③ |
| Meaningful phrases. Appropriate syntax. Expressive interpretation. | ④ |

houses do you think Kam

Using clues from this stor
think the block house was

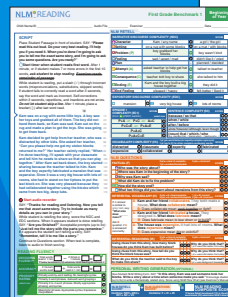
What do you think the tea
to make him share?

PERSONAL WRITING

Give Student NLM Writing Form
blocks. Write a story about
(up to 3x) to write a thematically

NLM RETELL
SCORE*

Combine: NDC+EDC+
EC1+ SC + VC



Construct Measured	<p>Direct Measure of: Decoding, Word Recognition</p> <p>Indirect Measure of: Reading Comprehension</p> <p>This subtest primarily relates to the word recognition strand in Scarborough's reading model and reflects the Decoding and Sight Recognition subskills. Fluency, particularly prosody, can be an indicator of how well a student understands the text.</p>
Construct Significance	<ul style="list-style-type: none"> • Fluency is necessary, but not sufficient, for understanding the meaning of text "When children read too slowly or haltingly, the text devolves into a broken string of words and/or phrases; it's a struggle just to remember what's been read, much less extract its meaning. So it's important that teachers determine if their students' fluency is at a level appropriate for their grade." -Jan Hasbrouck • Fluent readers can focus their attention on what the text means Fluent readers can decode with automaticity, converting the written code to language. Consequently, if the student can understand the language being decoded, then reading comprehension happens. • Less fluent readers must focus more of their attention on decoding, leaving them less attention for understanding the meaning of text
Construct Connections	<ul style="list-style-type: none"> • Primarily relates to decoding and word recognition "The relationship between correct words per minute and comprehension has been found to be stronger in the elementary and junior high grades than in older students" (Fuchs et al., 2001)
Assessment Schedule	<p>Benchmark Expectations for:</p> <p>BOY First Grade to EOY Eighth Grade</p>
Time	<p>1 minute. This is a timed test.</p>
Prompts	<ul style="list-style-type: none"> • "Please read this out loud. Do your very best reading. I'll help you if you need it. When you're done I'm going to ask you to tell me the exact same story, and I'm going to ask you some questions. Are you ready?" • Corrective Prompt: Do not let the student skip a line.

Scoring Overview**Paper/Pencil:**

While student is reading, put a slash (/) through incorrect words (mispronunciations, substitutions, skipped words). If student fails to correctly read a word after 3 seconds, say the word and mark as incorrect. Self-corrections within 3 seconds, repetitions, and insertions are not errors. Do not let student skip a line. After 1 minute, place a bracket () after last word read.

After the student is finished reading, complete the Reading Fluency scoring section:

Insight:

While student is reading, click on incorrect words (mispronunciations, substitutions, skipped words). If student fails to correctly read a word after 3 seconds, say the word and mark as incorrect. Self-corrections within 3 seconds, repetitions, and insertions are not errors. Do not let student skip a line. After 1 minute, click on the last word read.

After the student is finished reading, insight will calculate Decoding Fluency and Accuracy automatically.

The examiner will need to complete the Prosody Rating scale.

Last week, Carla, who loved dressing up, was painting her ¹⁰ nails at the new kitchen counter. She had some glittery, pink nail polish. When she inadvertently knocked over the small bottle, she was worried because she didn't want to stain the counter. It was quickly spilling everywhere, so she swiftly picked up the messy bottle. She decided to

READING FLUENCY

DECODING FLUENCY*	Total words read in 1 min 48 — # Errors in 1 minute 5 = 43 ⁷³ *If below benchmark (73) administer NLM Reading Benchmark 2								
ACCURACY	# Correct words read 43 ÷ Total words read in 1 min 48 = 89.6%								
PROSODY RATING select one	<table border="1"> <tr> <td>Primarily word-by-word reading. No meaningful syntax.</td> <td>①</td> </tr> <tr> <td>Primarily 2-word phrases. Awkward word groupings.</td> <td>②</td> </tr> <tr> <td>Primarily 3 to 4 word phrases. Mostly appropriate phrasing and syntax.</td> <td>③</td> </tr> <tr> <td>Meaningful phrases. Appropriate syntax. Expressive interpretation.</td> <td>④</td> </tr> </table>	Primarily word-by-word reading. No meaningful syntax.	①	Primarily 2-word phrases. Awkward word groupings.	②	Primarily 3 to 4 word phrases. Mostly appropriate phrasing and syntax.	③	Meaningful phrases. Appropriate syntax. Expressive interpretation.	④
Primarily word-by-word reading. No meaningful syntax.	①								
Primarily 2-word phrases. Awkward word groupings.	②								
Primarily 3 to 4 word phrases. Mostly appropriate phrasing and syntax.	③								
Meaningful phrases. Appropriate syntax. Expressive interpretation.	④								

Last week, Carla, who loved dressing up, was painting her nails at the new kitchen counter. She had some glittery, pink nail polish. When she inadvertently knocked over the small bottle, she was worried because she didn't want to stain the counter. It was quickly spilling everywhere, so she swiftly picked up the messy bottle. She decided to get a rag. Although Carla tried to clean it up, the rag didn't work. She

DECODING FLUENCY*	
Total words read in 1 min	48
# Errors in 1 minute	5
Total words read in 1 min - Errors in 1 minute = 43	
*If below benchmark (73) administer NLM Reading Benchmark 2	
ACCURACY	
# Correct words read	43
Total words read in 1 min	48
Correct words read ÷ Total words read in 1 min = 89.6%	

PROSODY RATING select one	
Primarily word-by-word reading. No meaningful syntax.	1
Primarily 2-word phrases. Awkward word groupings.	2
Primarily 3 to 4 word phrases. Mostly appropriate phrasing and syntax.	3
Meaningful phrases. Appropriate syntax. Expressive interpretation.	4

Wait Rule

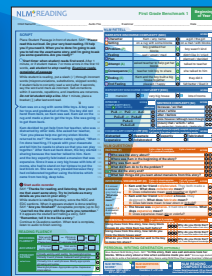
If student fails to correctly read a word after 3 seconds, say the word and mark as incorrect.

Discontinue Rule	<ul style="list-style-type: none"> Have student stop reading after 1 minute. Place a bracket after the last word read. Examiner reads the remainder of the passage. If student makes 7 or more errors in the first 10 words, ask student to stop reading. Examiner reads the entire passage from the beginning.
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> BOY first grade to EOY eighth grade, this is usually the first subtest administered. <p>After:</p> <ul style="list-style-type: none"> Administer the <i>NLM Reading Retell</i> and <i>NLM Questions</i>, and if desired, the <i>NLM Personal Writing Generation</i> (optional). If student is not at benchmark on <i>Decoding Fluency</i> (number of words read correct in one minute), administer the second <i>NLM Reading</i>. Examiners can choose to only administer the 1 minute reading fluency section on the <i>NLM Reading</i> second benchmark subtest if the <i>NLM Reading Retell</i> and <i>NLM Questions</i> were at benchmark on the first <i>NLM Reading Benchmark</i> subtest. <i>DDM Decoding</i> subtests can be administered to obtain additional information on a student's word identification-related skills. The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. This is a timed test. Student has 1 minute to read a part of the passage. Count 3 seconds (e.g., one one thousand, two one thousand, three one thousand) in your mind when waiting for a student to read a word. After 3 seconds, say the word for the student. After 1 minute, ask the student to stop reading. Read the remainder of the passage, starting at the beginning of the last sentence read. Do not let the student skip a row. If student begins to read from top to bottom, or points randomly, say, "Go this way" and move your finger from left to right along the row. This reminder can only be given one time. If a student stops and it appears that they are not certain if they should continue, say "keep going". Say as often as necessary. If student loses their place, point to where they left off to help them find their place in the row. Do this as often as necessary. Benchmark expectations are available in this manual. If a student is not at benchmark on the first decoding fluency passage, administer a second decoding fluency passage. Only score the words read up to the 1 minute mark. Record Response Patterns and take additional notes as needed. Schwa sound (the 'uh' sound) are not counted as errors. Self-corrections within 3 seconds are not counted as errors. Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

NLM Reading and NLM Listening

NLM Retell

NLM RETELL			
NARRATIVE DISCOURSE COMPLEXITY (NDC)		SCORE	
Character	Jen / any name	2	a girl / the girl
Setting	walked into the kitchen	2	walked in / kitchen
Problem (P)	needed help cooking breakfast	2	needed help
Feeling	sad / mad / disappointed	2	didn't like it / cried
Plan (PL)	decided to cook it herself	2	decided to try
Attempt (A)	got the recipe	2	tried it
Consequence / Complication (CP)	couldn't understand recipe / still wanted to make breakfast	2	was confused / wanted it
Feeling-2	sad / mad / frustrated	2	didn't like it / cried
Plan-2 (PL2)	decided to ask her sister for help	2	decided to ask
Attempt-2 (A2)	whispered "can you help me?"	2	asked her
Consequence (C)	they cooked the breakfast / she learned how to cook it	2	did it / made it
Ending (E)	her mom loved it	2	it was good
End Feeling	happy / relieved	2	liked it / smiled
EXPOSITORY DISCOURSE COMPLEXITY (EDC)		SCORE	
popovers	fluffy rolls baked in muffin tins	1	made with eggs and butter
EPISODE 1 COMPLEXITY (EC1)		SCORE	
(from 1 pt NDC section)		select one	
P+PL	-or- PL+CP	-or-	2
P+A	-or- P+CP	-or-	2
P+A+CP	-or- P+PL+CP	-or-	4
EPISODE 2 COMPLEXITY (EC2)		SCORE	
(from 1 pt NDC section)		select one	
P/CP+PL2	-or- P/CP+A2	-or-	2
P/CP+C	-or- P/A2+C	-or-	2
P/CP+C+E	-or- P/CP+A2+E	-or-	3
P/CP+A2+C	-or- P/CP+PL2+C	-or-	4
P/CP+A2+C+E	-or- P/CP+PL2+C+E	-or-	5
SENTENCE COMPLEXITY (SC)		SCORE	
because / so that		1 1 1	
when / while		1 1 1	
after / before		1 1 1	
since / however / although / even though		1 1 1	
(noun) that / which / who (e.g., rolls that... / popovers which... / sister who...)		1 1 1	
VOCABULARY COMPLEXITY (VC)		SCORE	
1 pt per word below (or equally complex synonym)			
1 pt (up to 2) for other complex vocabulary words			
delicious		1	hesitantly
fluffy		1	fatigued
independently		1	prepare
convoluted		1	
fabulous		1	



Construct Measured	<p>Reading Comprehension, Listening Comprehension, Integration of Receptive and Expressive Language, Writing, Sentence Complexity, Vocabulary</p> <p>This subtest primarily relates to the Language Comprehension strand in Scarborough's reading model and reflects the Background Knowledge and Literacy Knowledge strands.</p>
Construct Significance	<ul style="list-style-type: none"> Language samples are considered the gold standard for measuring language ability Narrative language samples represent linguistic performance in an academically relevant context. Narrative retelling requires integration of all language domains (morphology, syntax, semantics, and pragmatics). Retelling is correlated with reading comprehension Literal information is often retold more frequently than inferential information.
Construct Connections	<ul style="list-style-type: none"> Gough & Tunmer (1986) presented the simple view of reading, which has been presented in a more deconstructed manner several times (see Scarborough, 2001; Duke & Cartwright, 2021). Yet it still holds that the majority of variance in reading is accounted for by the product of word recognition and language comprehension. Over 40 years of research indicate that there is a strong relationship between receptive language and reading comprehension. "It can be reasonably argued that learning to read enables a person to comprehend written language to the same level he or she comprehends spoken language." (Rayner et al, 2001, p. 42).
Assessment Schedule	<p>Benchmark Expectations for NLM Reading Retell Score: BOY First Grade to EOY Eighth Grade</p> <p>Benchmark Expectations for NLM Listening Retell Score: BOY Preschool to EOY Third Grade</p>
Time	Varies by student response. Approximately 1-3 minutes.

Prompts	<ul style="list-style-type: none"> NLM Reading: “Thanks for reading and listening. Now you tell me that exact same story. Try to include as many details as you can in your story.” NLM Listening*: “Thanks for listening. Now you tell me that exact same story. Try to include as many details as you can in your story.” <i>*If the NLM Reading was not administered prior to the NLM Listening, administer the primer story provided on each NLM Listening form. Say, “I’m going to tell you a story. When I’m done, I’m going to ask you to tell me the entire story. I’m also going to ask you some questions, so please listen very carefully. Are you ready?”</i> Then read the primer story to the student. After reading the primer story, say, “Thanks for listening. Now you tell me that exact same story. Try to include as many details as you can in your story.” This retell is not scored. After the student retells the story, ask the factual and inferential questions provided (e.g., “How did Pablo fix the problem?” “What do you think the weather was like?” “Why?”). The examiner should give the student the answer to these questions if they answer them incorrectly or incompletely. After the primer story has been retold and the student has answered the questions, say, “Now I’m going to tell you an even longer story. When I’m done, I’m going to ask you to tell me the entire story. I’m also going to ask you some questions, so please listen very carefully. Are you ready?” Prompt: When it appears student is done retelling, say, “Are you finished?” Corrective Prompt (as often as necessary): “Just tell me the story with the parts you remember.” Corrective Prompt (one time): If it appears the student isn’t telling a story, say, “Remember, tell it to me like a story.”
Scoring Overview	<p>Scoring Instructions:</p> <ul style="list-style-type: none"> While student is retelling the story, score the Narrative Discourse Complexity (story grammar; NDC) and the Expository Discourse Complexity (EDC) sections in real-time. Some examiners may be able to score the Sentence Complexity and Vocabulary Complexity sections in real-time, while the student is retelling, but many examiners choose to rely on an audio recording to score those parts of the subtest. Student receives 2 points for complete and clear inclusion of the story grammar elements, 1 point for unclear or poorly specified elements, and 0 points for omitting an element. Students also receive 1 point for the main idea and 1 points each for the two supporting details from the expository information embedded in the narrative. When student is done retelling, continue to NLM Questions section. When NLM Retell and NLM Questions subtests have been administered, listen to audio to review real-time scores for the NDC and EDC sections and use the audio recording to score the Sentence Complexity and Vocabulary Complexity sections. Students receive 1 point for the inclusion of the sentence complexity targets listed on the scoring form (e.g., because), up to three points for each target. Students receive 1 point for the inclusion of the tier-2 vocabulary words listed on the scoring form, plus up to 2 additional points for the use of tier-2 vocabulary words not listed. Calculate the Episode Complexity scores. Insight (see below) will calculate those scores for you.

Scoring Overview

Paper/Pencil: NLM RETELL

Episode 1 is shaded green and Episode 2 is shaded blue (for ease of paper/pencil scoring Episode Complexity below)

Student retold a 2-point problem and a 2-point complication

Student retold a 2-point complication, a 2-point Consequence and a 2-point Ending

At bottom of scoring form, combine all the scores for NLM Retell Score

NARRATIVE DISCOURSE COMPLEXITY (NDC)				SCORE	15
Character	Jen / any name	1	a girl / the girl	1	1
Setting	walked into the kitchen	2	walked in / kitchen	1	1
Problem (P)	needed help cooking breakfast	2	needed help	1	1
Feeling	sad / mad / disappointed	2	didn't like it / cried	1	1
Plan (PL)	decided to cook it herself	2	decided to try	1	1
Attempt (A)	got the recipe	2	tried it	1	1
Consequence / Complication (CP)	couldn't understand recipe / still wanted to make breakfast	2	was confused / wanted it	1	1
Feeling-2	sad / mad / frustrated	2	didn't like it / cried	1	1
Plan-2 (PL2)	decided to ask her sister for help	2	decided to ask	1	1
Attempt-2 (A2)	whispered "can you help me?"	2	asked her	1	1
Consequence (C)	they cooked the breakfast / she learned how to cook it	2	did it / made it	1	1
Ending (E)	her mom loved it	2	it was good	1	1
End Feeling	happy / relieved	2	liked it / smiled	1	1

EXPOSITORY DISCOURSE COMPLEXITY (EDC)				SCORE	2
popovers	fluffy rolls baked in muffin tins	1	made with eggs and butter	1	1

EPISODE 1 COMPLEXITY (EC1) (from 2 pt NDC section)				SCORE	2
P+PL	-or-	PL+CP	-or-	A+CP	1
P+A	-or-	P+CP	-or-	P+PL+CP	4

EPISODE 2 COMPLEXITY (EC2) (from 2 pt NDC section)				SCORE	3
P/CP+PL2	-or-	P/CP+A2	-or-	P/A2+C	2
P/CP+C+E	-or-	P/CP+A2+E	-or-	P/CP+PL2+C	4
P/CP+A2+C+E	-or-	P/CP+PL2+C+E	-or-		5

SENTENCE COMPLEXITY (SC)				SCORE	3
because / so that	when / while	after / before	since/however/although/even though	(noun) that / which / who	1

VOCABULARY COMPLEXITY (VC) SCORE				3
1 pt per word below (or equally complex synonym) 1 pt (up to 2) for other complex vocabulary words				
delicious	hesitantly	fluffy	fatigued	1
independently	prepare	convoluted	FAMISHED	1
fabulous				1

Student only stated the location

Students do not need to say exactly what is provided in the examples

Student said "because" two times in retell

Student said "famished", which was considered a complex vocabulary word and was written in by the examiner

3x) to write a thematically related story. Score using NLM Flow Chart (see Examiner's Manual).

NLM RETELL SCORE: 28	NLM QUESTIONS SCORE: 30	NLM READING COMPOSITE SCORE
Combine: NDC + EDC + EC1 + EC2 + SC + VC	Combine: F + IV + IR	

If below Retell benchmark (25) or Questions benchmark (30) administer NLM Listening

NARRATIVE DISCOURSE COMPLEXITY (NDC)					
Character	Jen / any name	2	a girl / the girl	1	0
Setting	walked into the kitchen	2	walked in / kitchen	1	0
Problem (P)	needed help cooking breakfast	2	needed help	1	0
Feeling	sad / mad / disappointed	2	didn't like it / cried	1	0
Plan (PL)	decided to cook it herself	2	decided to try	1	0
Attempt (A)	got the recipe	2	tried it	1	0
Consequence / Complication (CP)	couldn't understand recipe / still wanted to make breakfast	2	was confused / wanted it	1	0
Feeling-2	sad / mad / frustrated	2	didn't like it / cried	1	0
Plan-2 (PL2)	decided to ask her sister for help	2	decided to ask	1	0
Attempt-2 (A2)	whispered "can you help me?"	2	asked her	1	0
Consequence (C)	they cooked the breakfast / she learned how to cook it	2	did it / made it	1	0
Ending (E)	her mom loved it	2	it was good	1	0
End Feeling	happy / relieved	2	liked it / smiled	1	0
NDC SCORE =				15/26	

EXPOSITORY DISCOURSE COMPLEXITY (EDC)					
popovers	0	1	fluffy rolls baked in muffin tins	0	1
			made with eggs and butter	0	1
EDC SCORE =				2/3	

Student only stated the location

Students do not need to say exactly what is provided in the examples

It is not necessary to click on 0 if story grammar elements omitted from story. No score will be calculated as '0'.

Insight:

Episode 1 is shaded green and Episode 2 is shaded blue (for ease of paper/pencil scoring Episode Complexity below)

	<p>Insight:</p> <p>Episode 1 Complexity and Episode 2 complexity are automatically scored based off what is clicked on in in Narrative Discourse Complexity (NDC) above</p> <div> <div> <p>EPISODE 1 COMPLEXITY (EC1) (from 2 pt NDC section)</p> <p>P + PL -or- PL + CP -or- P + A -or- P + CP -or- A + CP</p> <p>2</p> <p>P + A + CP -or- P + PL + CP</p> <p>4</p> <p>EPISODE ONE SCORE = 2/4</p> </div> <div> <p>EPISODE 2 COMPLEXITY (EC2) (from 2 pt NDC section)</p> <p>P/CP + PL2 -or- P/CP + A2 -or- P/CP + C -or- P/A2 + C</p> <p>2</p> <p>P/CP + C + E -or- P/CP + A2 + E</p> <p>3</p> <p>P/CP + A2 + C -or- P/CP + PL2 + C</p> <p>4</p> <p>P/CP + A2 + C + E -or- P/CP + PL2 + C + E</p> <p>5</p> <p>EPISODE TWO SCORE = 3/5</p> </div> <div> <p>SENTENCE COMPLEXITY (SC)</p> <table border="1"> <thead> <tr> <th>Word</th> <th>Times Used</th> </tr> </thead> <tbody> <tr> <td>because / so that</td> <td>0 1 2 3+</td> </tr> <tr> <td>when / while</td> <td>0 1 2 3+</td> </tr> <tr> <td>after / before</td> <td>0 1 2 3+</td> </tr> <tr> <td>since / however / although / even though</td> <td>0 1 2 3+</td> </tr> <tr> <td>(noun) that / which / who (e.g., rolls that... / popovers which... / sister who...)</td> <td>0 1 2 3+</td> </tr> </tbody> </table> <p>SC SCORE = 3/15</p> </div> <div> <p>VOCABULARY COMPLEXITY (VC) 1 pt per word below (or equally complex synonym) 1 pt (up to 2) for other complex vocabulary words</p> <table border="1"> <tbody> <tr> <td>delicious</td> <td>0 1</td> </tr> <tr> <td>fluffy</td> <td>0 1</td> </tr> <tr> <td>independently</td> <td>0 1</td> </tr> <tr> <td>convoluted</td> <td>0 1</td> </tr> <tr> <td>fabulous</td> <td>0 1</td> </tr> <tr> <td>hesitantly</td> <td>0 1</td> </tr> <tr> <td>fatigued</td> <td>0 1</td> </tr> <tr> <td>prepare</td> <td>0 1</td> </tr> <tr> <td>Famished</td> <td>0 1</td> </tr> <tr> <td></td> <td>0 1</td> </tr> <tr> <td></td> <td>0 1</td> </tr> </tbody> </table> <p>VC SCORE = 3/10</p> </div> </div> <p>Student said “because” two times in retell</p> <p>Student said “famished”, which was considered a complex vocabulary word and was typed in by the examiner</p>	Word	Times Used	because / so that	0 1 2 3+	when / while	0 1 2 3+	after / before	0 1 2 3+	since / however / although / even though	0 1 2 3+	(noun) that / which / who (e.g., rolls that... / popovers which... / sister who...)	0 1 2 3+	delicious	0 1	fluffy	0 1	independently	0 1	convoluted	0 1	fabulous	0 1	hesitantly	0 1	fatigued	0 1	prepare	0 1	Famished	0 1		0 1		0 1
Word	Times Used																																		
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hesitantly	0 1																																		
fatigued	0 1																																		
prepare	0 1																																		
Famished	0 1																																		
	0 1																																		
	0 1																																		
<p>Discontinue Rule</p>	<ul style="list-style-type: none"> When it appears the student is done retelling the story, the examiner says, “Are you finished?” Prompts: Neutral comments to help motivate (e.g., “Wow!” “Oh!”; “Uhhh”; “OK”). Be engaged with the student as they are retelling the story. Pay attention and create an authentic storytelling context. Do not ask specific questions such as “Why did he do that?” or “What did he do?” or “What happened next?” Acceptable prompt: “Just tell me the story with the parts your remember.” Acceptable prompt*: If the student doesn’t appear to be telling a story, say, “Remember, tell it to me like a story.” <p><i>*For example, some students will start their retell by saying something like “He was mad and he got hurt so he got...” The examiner should interrupt the student and say “Remember, tell it to me like a story.”</i></p>																																		
<p>What is Administered Before and After?</p>	<p>Before:</p> <ul style="list-style-type: none"> NLM Reading: <i>Decoding Fluency</i> is typically administered prior to the <i>Reading Retell</i>. NLM Listening: For first grade and higher, the <i>NLM Reading</i> is typically administered prior to the administration of the <i>NLM Listening</i>. <p>After:</p> <ul style="list-style-type: none"> The <i>NLM Questions (Factual (F), Inferential Vocabulary (IV), and Inferential Reasoning (IR))</i> are administered after the retell. <i>Personal Writing Generation</i> should be probed at intervals. If student is not at benchmark on the first <i>NLM Reading Retell</i> benchmark form, administer the second <i>NLM Reading Retell</i> benchmark form. If the student is still not at benchmark after administration of the second <i>NLM Reading Retell</i>, administer the <i>NLM Listening Benchmark</i>. If there are concerns that a student has a language disorder, administer the narrative language subtest of the <i>PEARL</i> (for preschool and kindergarten students) or the <i>DYMOND</i> (for first grade and older students) 																																		

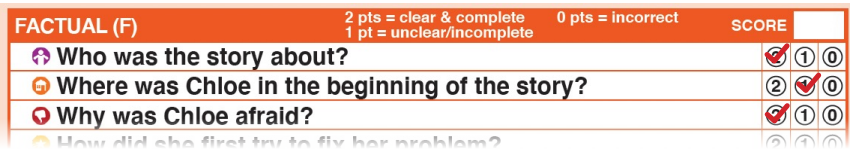
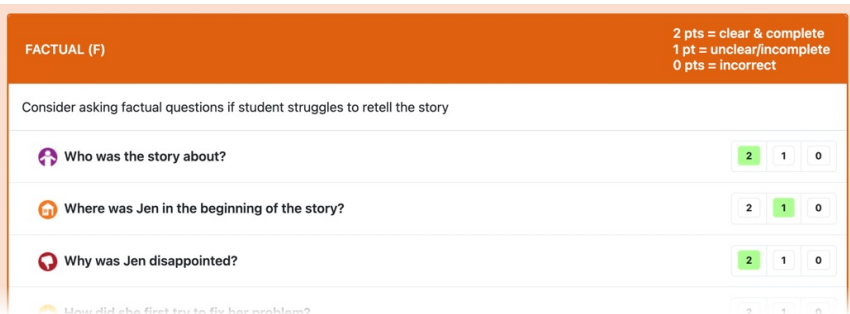
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • AI transcription and scoring can be used. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • Examiner may not repeat the story or any part of it, but can repeat the directions and provide encouragement as needed. • (If pictures are used for preschool students) Examiner lays out the picture book on the table in front of the child. Examiner points to each picture in sequence while reading the story. Examiner leaves pictures in front of student while the student is retelling the story. • Examiner reads the selected story word for word in a moderate pace with normal inflection. • When the student is reading the passage, if the character's name is read incorrectly, tell the student the name of the character the first time they read it incorrectly. Count the first incorrect character name as a word read incorrectly. If the student continues to read the character name incorrectly, count it as an error. • When administering the Reading Retell, be sure to remove the student passage when the student is retelling the story and answering questions about the story. • This is not a timed subtest (the preceding Reading Fluency section is timed). • Benchmark expectations are available in this manual. • If a student is not at benchmark on the first and second Reading Retell, administer an <i>NLM Listening Retell</i>. • Take additional notes as needed. • Use the audio recording to check for accuracy and to score any items that were not scored in real-time. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.
Specific Scoring Guidelines for the NLM Retell	<p>Specific NLM Retell scoring information</p> <ul style="list-style-type: none"> • To be scored, the child's utterances do not need to match the samples in the scoring block word for word; however, they should contain the same amount of correct information. The sample utterances were drawn directly from the stories themselves and from transcripts of students who have retold those stories previously. When in doubt, examiners should reference the general scoring guidelines and use clinical judgment to assign the best score. <p>Narrative Discourse Complexity (NDC) scoring information</p> <ul style="list-style-type: none"> • To earn 2 points, the utterance should be able to stand-alone. The scorer should not need to have shared knowledge of the story to correctly interpret the utterance. If inference is necessary to know what the student meant, the score should not be a 2. Students are awarded 2 points for Character even if they use an incorrect character name. This is the only story grammar element that is awarded 2 points when the information is incorrect. All other story grammar elements should be accurate, complete, and clear to be awarded full points. • 1 point responses are scored when students have some key words or a phrase, but it is not specific and clear enough to stand-alone. • When students do not include a story grammar component in their retell, that category receives 0 points. Sometimes students will include false information that they use to embellish the story. If the embellishments did not occur in the story and change the meaning of the story content, then 0 points should be awarded.

Specific Scoring Guidelines for the NLM Retell		2 POINTS	1 POINT	0 POINTS
	Character	main character's name / any proper name used to identify the main character	generic character description (boy, sister) NOT pronouns	only pronouns or generic secondary character (e.g. family, mom, sister, friend)
	Setting	setting activity AND location	location OR setting activity	no information about the setting
	Problem (P)	complete AND clear problem	incomplete OR unclear problem	no problem
	Feeling	specific emotion related to problem	general emotion or behavior related to problem (e.g., didn't like it, cried)	no emotion or emotion behavior
	Plan (PL)	cognitive verb is used along with a specific plan of action	cognitive verb is used (e.g., decided)	no cognitive verb
	Attempt (A)	specific attempt by main character to fix the problem using dialogue or brief description of their action (asking someone for help)	general attempt to fix the problem without dialogue or a description of action	no attempt to fix the problem
	Consequence/ Complication (CP)	complete AND clear problem stated again	incomplete OR unclear problem stated again	no problem restated
	Feeling-2	specific emotion related to problem stated again	general emotion or behavior related to problem stated again (e.g., didn't like it, cried)	no second emotion or emotion behavior
	Plan-2 (PL2)	cognitive verb used again with a specific plan of action	cognitive verb used again (e.g., decided)	no second cognitive verb
	Attempt-2 (A2)	second, specific attempt by main character to fix the problem using dialogue or brief description of action (asking someone for help)	second general attempt to fix the problem without dialogue or a description of action	no second attempt to fix the problem
	Consequence (C)	second complete AND clear description of the direct result of the second attempt / what the secondary character does to help the main character	a second incomplete OR unclear description of the direct result of the second attempt	no description of the result of the second attempt
	Ending (E)	complete OR clear events after solving problem	incomplete OR unclear events after solving problem	no description events after solving problem
	Ending Feeling	specific emotion related to ending or consequence	general emotion or behavior related to ending or consequence (e.g., didn't like it, cried)	no emotion or emotion behavior

NLM Reading and NLM Listening

NLM Questions

<div><div>33 39 7 26 35 41 48 51 70 80 86</div><div><div><div>P/CP+A2+C+E -or- P/CP+PL2+C+E ⑤</div><div><div>Independently ① convoluted ① fabulous ①</div><div><div>prepare ① 1 1</div></div></div><div><div>NLM QUESTIONS</div><div><div>2 pts = clear & complete 1 pt = unclear/incomplete</div><div>0 pts = incorrect</div><div>SCORE</div></div><div><div>FACTUAL (F)</div><div>Who was the story about? Where was Jen in the beginning of the story? Why was Jen disappointed? How did she first try to fix her problem? Why did she talk to her sister? How did the story end? What two things did you learn about popovers from this story?</div><div><div>② ① ① ② ① ① ② ① ① ② ① ① ② ① ① ② ① ① ② ① ①</div></div><div><div>INFERENTIAL VOCABULARY (IV)</div><div>3 pts = A: clear/complete 2 pts = A: unclear/incomplete</div><div>1 pt = B: correct 0 pts = B: incorrect</div><div>SCORE</div></div><div><div>If A answer is similar to grey text, say: "What else does mean?" Ask B question if A is answered incorrectly</div><div><div>A: Jen couldn't bake the popovers independently. She got her sister. What does independently mean? B: Does independently mean <i>very well</i> or <i>on your own</i>? A: Jen's sister was fatigued. It was early in the morning. What does fatigued mean? B: Does fatigued mean <i>angry</i> or <i>tired</i>? A: The instructions were convoluted. Jen couldn't understand them. What does convoluted mean? B: Does convoluted mean <i>complicated</i> or <i>old</i>?</div><div><div>③ ② ① ① ③ ② ① ① ③ ② ① ①</div></div></div><div><div>INFERENTIAL REASONING (IR)</div><div>2 pts = clear & complete 1 pt = unclear/incomplete</div><div>0 pts = incorrect</div><div>SCORE</div></div><div><div>Using clues from this story, how many times do you think Jen has made popovers? Using clues from this story, why do you think Jen's sister immediately agreed to help? Why do you think Jen's dad was in a hurry?</div><div><div>② ① ① ② ① ① ② ① ①</div><div><div>Why do you think that? 1 pt = uses information from story Why do you think that? 1 pt = uses information from story Why do you think that? 1 pt = uses background knowledge</div></div></div><div><div>PERSONAL WRITING GENERATION (OPTIONAL)</div><div>Give Student NLM Writing Form. SAY: "In this story, Jen was sad she couldn't make breakfast. Write a story about a time when you couldn't do something." Encourage student to use...</div></div></div></div></div></div></div></div></div>	<div><div>Construct Measured</div><div>Reading Comprehension, Listening Comprehension, Inferencing, Writing.</div><div>This subtest primarily relates to the Language Comprehension strand in Scarborough's reading model and reflects the Background Knowledge and Verbal Reasoning strands.</div></div>
<div><div>Construct Significance</div><div><div><div><div>• The NLM Questions section measures several distinct skills; the ability to recall factual information, the ability to infer the meaning of unfamiliar words from context, and the ability to draw inferences from text and from background knowledge.</div><div><div>• Language sampling analysis through retelling can tell us a lot about a student's receptive and expressive language, but it doesn't cover everything.</div><div><div>• Students learn the meanings of most words indirectly, through inference "Most students acquire vocabulary incidentally through indirect exposure to words at home and at school—by listening and talking, by listening to books read aloud to them, and by reading widely on their own." -Cunningham and Stanovich (1998)</div><div><div>• Previous research has shown that children with comprehension difficulties are poor at inference making (e.g., Cain & Oakhill, 1999; Oakhill, 1982, 1984).</div><div><div>• Text-to-Text and Elaborative Inferencing are necessary for higher-order thinking and are needed across the curriculum Inference making is regarded as a central component of skilled reading. Less skilled readers do not generate as many inferences as more skilled readers do.</div><div><div>• Text-to-text and elaborative inferencing are conceptually distinct and serve different functions in the construction of a text representation Poor comprehenders have difficulty generating both types of inference, relative to their skilled peers.</div></div></div></div></div></div></div></div></div></div>	

Construct Connections	<ul style="list-style-type: none"> • Vocabulary directly affects reading comprehension. Students who have a more limited vocabulary tend to have low comprehension. • Students with low vocabulary scores tend to have low comprehension and students with satisfactory or high vocabulary scores tend to have satisfactory or high comprehension scores.” <p>Vocabulary plays a fundamental role in the reading process, and contributes greatly to a reader’s comprehension. A reader cannot understand a text without knowing what most of the words mean.</p> <ul style="list-style-type: none"> • Making inferences during reading is a critical standards-based skill and is important for reading comprehension. <p>Students with higher levels of inference skill score higher on tests of reading comprehension than do students with low levels of inference skill.</p>
Assessment Schedule	BOY Preschool to EOY Eighth Grade
Time	Varies by student response. Approximately 3-4 minutes to administer <i>Factual Questions</i> , <i>Inferential Vocabulary</i> , and <i>Inferential Reasoning</i> .
Prompts	The question can be repeated one time if necessary. Do not wait longer than 10 seconds for a student to respond before asking them if they would like the sentence repeated.
Scoring Overview	<p>Factual (F):</p> <ul style="list-style-type: none"> • Ask the students the questions word for word as written on the NLM form. • Students receive 2 points for complete and clear answers and 1 point for incomplete or incorrect answers, following the same scoring guidelines used for the <i>Narrative Discourse Complexity</i> and <i>Expository Discourse Complexity</i> sections scored for the student’s retell. • If the student received 2 points on any of the narrative discourse elements during their retell, specific questions about those elements do not need to be asked in the Factual Questions section, and 2 points should be awarded for those questions. <p>For example, if a student retold the story and included the character’s name (2 points for Character) and included a complete and clear problem (2 points for Problem), then the factual question “Who was the story about?” and the factual question “Why was [character name and their emotion]?” do not need to be asked and the student should be given 2 points for each of those questions. Insight will automatically assign those scores in the Factual Questions section for the examiner.</p> <p>Paper/Pencil:</p>  <p>Insight:</p> 

Dynamic Assessment Procedures NLM Questions: Factual (F)																																								
Construct Measured	<p>Language Learning Ability</p> <p>This subtest primarily relates to the Language Comprehension strand in Scarborough’s reading model and reflects underlying language learning ability, which affects all aspects of the strands.</p>																																							
Construct Significance	<p>The ability to learn language can be used a general outcome measure that will help assess a student’s ability to understand and produce complex academic language across multiple contexts.</p>																																							
Construct Connections	<p>First Grade through Third Grade NLM Reading Benchmark 2 – BOY, MOY, and EOY. This dynamic assessment is typically only administered to students who do not meet benchmark expectations on the first NLM Reading Benchmark Retell and who are consequently administered the second NLM Reading benchmark.</p> <p>This dynamic assessment task is automated in the Insight system.</p>																																							
Time	<p>Varies by student response. Approximately 3 minutes to administer the <i>Factual (F)</i> section with the teaching phases.</p>																																							
Prompt	<p>For each question that the student receives a 0 or 1 score, story-specific prompts are followed word for word. The first model sentence can be repeated if the student requests.</p>																																							
Scoring	<p>The student’s ability to repeat the model sentences is not scored, yet examiners can take notes if desired. After the <i>Factual Questions with the teaching script</i> has been administered, the examiner completes a Responsiveness scale to characterize the student’s ability to learn language. This responsiveness scale provides scores for this dynamic assessment. This rating scale requires the examiner to reflect on the student’s behavior during the teaching scripts and to make an overall judgment of the student’s ability to learn language. After the Responsiveness scoring has been completed, the examiner administers the <i>Inferential Vocabulary</i> and <i>Inferential Reasoning</i> sections.</p> <div><p>LANGUAGE RESPONSIVENESS</p><table><tr><td></td><td>NONE</td><td>FEW</td><td>SOME</td><td>MANY</td></tr><tr><td>Sentence Repetition Errors</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Language Errors</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></table></div> <div><p>LANGUAGE LEARNING SCORE</p><table><tr><td>POINTS</td><td>VERY EASY</td><td>4</td><td>3.5</td><td>3</td><td>2.5</td><td>2</td><td>1.5</td><td>1</td><td>0.5</td><td>0</td><td>VERY DIFFICULT</td></tr><tr><td></td><td></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td></td></tr></table></div>		NONE	FEW	SOME	MANY	Sentence Repetition Errors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Language Errors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	POINTS	VERY EASY	4	3.5	3	2.5	2	1.5	1	0.5	0	VERY DIFFICULT			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
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Discontinue Rule	<p>N/A</p>																																							
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none">Only students who are not at benchmark on the NLM Reading Benchmark 1 Retell are administered the NLM Reading Benchmark 2, which includes the Factual Questions with the teaching phases. This is an optional section of the subtest. <p>After:</p> <ul style="list-style-type: none">Administer the <i>Inferential Vocabulary</i>, and <i>Inferential Reasoning</i> sections, then administer an NLM Listening Retell and the NLM Listening Questions.Administer the language subtest of the <i>DYMOND</i> if there are concerns for language disorder.																																							

Reminders	<ul style="list-style-type: none">• Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry.• Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time.• This is not a timed portion of the test.• The modifiability rating must be completed.• Take additional notes as needed.• Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.
Scripts	See pages that follow for individual grade and benchmark scripts

Dynamic Assessment Script: NLM Reading – First Grade Benchmark 2 – BOY

First Grade Benchmark 2

Beginning
of Year

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Jen in the beginning of the story?	2	1	0
Why was Jen upset?	2	1	0
What did Jen do to fix the problem?	2	1	0
How did the story end?	2	1	0
What two things did you learn about allergies from this story?	2	1	0

QUESTION 1:
“Who was the
story about?”

(There is no teaching script for question 1)

QUESTION 2:
“Where was Jen
in the beginning
of the story?”

(adverbial, relative,
tier-2)

If student receives a 0 or 1 point:

- SAY: “While Jen was sitting in the grass, she was planting a rose bush that her mom had purchased.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘while Jen was sitting in the grass she was planting a rose bush that her mom had purchased.’ When you tell a story, it is really important to say *who* the character is in the beginning of the story, *where* they are, and *what* they are doing. That helps us understand the story better.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 3:
“Why was Jen
upset?”

(adverbial, relative,
tier-2)

If student receives a 0 or 1 point:

- SAY: “Jen was upset because her eyes, which were red and swollen, were itching.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Jen was upset because her eyes, which were red and swollen, were itching.’ It is really important to say *how* the character feels in a story and to say *why* the character feels that way.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 4:
“What did Jen
do to fix the
problem?”

(tier-2, relative,
object compliment)

If student receives a 0 or 1 point:

- SAY: “Jen frantically told her mom, who was in the kitchen, that her eyes were itching.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Jen frantically told her mom, who was in the kitchen, that her eyes were itching.’ It is really important to tell me how the character fixed her problem. It is also important to include details in the story so I can understand clearly what happened.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 5:
“How did the
story end?”

(adverbial, adverb,
object compliment)

If student receives a 0 or 1 point:

- SAY: “Because her mom gently put eye drops in her eyes, Jen could help her mom plant the roses.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Because her mom gently put eye drops in her eyes, Jen could help her mom plant the roses.’ It is so helpful when you say how the story ended so I can understand what happened.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

Dynamic Assessment Script: NLM Reading – First Grade Benchmark 2 – MOY

First Grade Benchmark 2

Middle
of Year

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Ron in the beginning of the story?	2	1	0
Why was Ron scared?	2	1	0
What did he do to fix the problem?	2	1	0
How did the story end?	2	1	0
What two things did you learn about motion sickness from this story?	2	1	0

QUESTION 1:
“Who was the story about?”

(There is no teaching script for question 1)

QUESTION 2:
“Where was Ron in the beginning of the story?”

(adverbial, relative, tier-2)

If student receives a 0 or 1 point:

- SAY: “When Ron was at the park with his dad, he wanted to go on all the rides that looked exciting.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘When Ron was at the park with his dad, he wanted to go on all the rides that looked exciting.’ When you tell a story it is really important to say *who* the character is in the beginning of the story, *where* they are, and *what* they are doing. That helps us understand the story better.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 3:
“Why was Ron scared?”

(adverbial, relative, tier-2)

If student receives a 0 or 1 point:

- SAY: “Ron was scared because he went on a ride that made his stomach feel uneasy.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Ron was scared because he went on a ride that made his stomach feel uneasy.’ It is really important to say how the character feels in a story and to say *why* the character feels that way.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise

QUESTION 4:
“What did he do to fix the problem?”

(tier-2, relative, object compliment)

If student receives a 0 or 1 point:

- SAY: “Ron *urgently* told his dad, who was nearby, that he might throw up.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “That’s right, ‘Ron *urgently* told his dad, who was nearby, that he might throw up.’ It is really important to tell me how the character fixed his problem. It is also important to include details in the story so I can understand clearly what happened.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 5:
“How did the story end?”

(adverbial, adverb, object compliment)

If student receives a 0 or 1 point:

- SAY: “Ron’s dad told him to sit down on a bench, which helped him recover.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “That’s right, ‘Ron’s dad told him to sit down on a bench, which helped him recover.’ It is so helpful when you say how the story ended so I can understand what happened.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

Dynamic Assessment Script: NLM Reading – First Grade Benchmark 2 – EOY

First Grade Benchmark 2

End of Year

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Ben in the beginning of the story?	2	1	0
Why was Ben upset?	2	1	0
What did Ben do to fix the problem?	2	1	0
How did the story end?	2	1	0
What two things did you learn about chapter books from this story?	2	1	0

QUESTION 1:
“Who was the story about?”

(There is no teaching script for question 1)

QUESTION 2:
“Where was Ben in the beginning of the story?”

(relative, tier-2)

If student receives a 0 or 1 point:

- SAY: “Ben was at his dad’s house, mesmerized by a TV show that was on late at night.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Ben was at his dad’s house mesmerized by a TV show that was on late at night.’ When you tell a story it is really important to say who the character is in the beginning of the story, where they are, and what they are doing. That helps us understand the story better.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 3:
“Why was Ben upset?”

(tier-2, adverbial, relative)

If student receives a 0 or 1 point:

- SAY: “Ben was upset because he did not want to go to bed.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Ben was upset because he did not want to go to bed.’ It is really important to say how the character feels in a story and to say why the character feels that way.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 4:
“What did he do to fix the problem?”

(tier-2, object compliment, relative)

If student receives a 0 or 1 point:

- SAY: “Ben asked his dad if he would be willing to read a story to him.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Ben asked his dad if he would be willing to read a story to him.’ It is really important to tell me how the character fixed their problem. It is also important to include details in the story so I can understand clearly what happened.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

QUESTION 5:
“How did the story end?”

(object compliment, relative, adverbial)

If student receives a 0 or 1 point:

- SAY: Ben’s dad, who made funny voices when he was reading, told him he would read some of the book.”
- SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.]
- If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time.
- SAY: “In this story, ‘Ben’s dad, who made funny voices when he was reading, told him he would read some of the book.’ It is so helpful when you say how the story ended so I can understand what happened.”
- SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

Dynamic Assessment Script: NLM Reading – Second Grade Benchmark 2 – EOY		NLM QUESTIONS 2 pts = clear & complete 1 pt = unclear/incomplete 0 pts = incorrect SCORE	
QUESTION 1: “Who was the story about?”	(There is no teaching script for question 1)	Who was the story about? Where was Cora in the beginning of the story? Why was Cora upset? How did she first try to fix her problem? Why did she talk to the worker? How did the story end? What two things did you learn about safety regulations from this story?	2 1 0 2 1 0 2 1 0 2 1 0 2 1 0 2 1 0 2 1 0
QUESTION 2: “Where was Cora in the beginning of the story?” (adverbial, relative, tier-2)	If student receives a 0 or 1 point: <ul style="list-style-type: none"> SAY: “While Cora was at a theme park, she wanted to go on all the rides that looked thrilling.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘While Cora was at a theme park, she wanted to go on all the rides that looked thrilling.’ When you tell a story it is really important to say <i>who</i> the character is in the beginning of the story, <i>where</i> they are, and <i>what</i> they are doing. That helps us understand the story better.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 3: “Why was Cora upset?” (adverbial, object complement, relative)	If student receives a 0 or 1 point: <ul style="list-style-type: none"> SAY: “Cora was upset because she realized that she was too short to go on a lot of the rides that were at the park.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Cora was upset because she realized that she was too short to go on a lot of the rides that were at the park.’ It is really important to say how the character feels in a story and to say why the character feels that way.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 4: “How did she first try to fix her problem?” (adverbial, tier-2, relative)	If student receives a 0 or 1 point: <ul style="list-style-type: none"> SAY: “After Cora looked around, she found a thrilling ride that was shaped like a giant snake.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘After Cora looked around, she found a thrilling ride that was shaped like a giant snake.’ It is really important to tell me how the character first tried to fix her problem. It is also important to include details in the story so I can understand clearly what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 5: “Why did she talk to the worker?” (adverbial, relative, object complement)	If student receives a 0 or 1 point: <ul style="list-style-type: none"> SAY: “When Cora tried to get on the snake ride, a man who was wearing a uniform told her that she was too short.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘When Cora tried to get on the snake ride, a man who was wearing a uniform told her that she was too short.’ She first tried to get on a really fast snake ride, but that didn’t work. She needed to do something different to fix her problem. It is really important to remember when a character in a story tries to fix their problem more than one time.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 6: “How did the story end?” (adverbial, tier-2, adverbial)	If student receives a 0 or 1 point: <ul style="list-style-type: none"> SAY: “After the man showed Cora the Ferris wheel, Cora was elated because she found a ride that she could go on.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “That’s right, ‘After the man showed Cora the Ferris wheel, Cora was elated because she found a ride that she could go on.’ It is so helpful when you say how the story ended so I can understand what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		

Dynamic Assessment Script: NLM Reading – Second Grade Benchmark 2 – MOY	
QUESTION 1: “Who was the story about?”	(There is no teaching script for question 1)
QUESTION 2: Where was Fiona in the beginning of the story? (relative, adverbial, tier-2)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Fiona, who was a shy girl, was in the car because she was traveling to her grandpa’s house.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Fiona, who was a shy girl, was in the car because she was traveling to her grandpa’s house.’ When you tell a story it is really important to say <i>who</i> the character is in the beginning of the story, <i>where</i> they are, and <i>what</i> they are doing. That helps us understand the story better.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 3: Why was Fiona upset? (tier-2, adverbial, nominal)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Fiona was <i>distracted</i> because she didn’t know that there would be so many people visiting her grandpa.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Fiona was <i>distracted</i> because she didn’t know that there would be so many people visiting her grandpa.’ It is really important to say how the character feels in a story and to say <i>why</i> the character feels that way.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 4: “How did she first try to fix her problem?” (relative, tier-2, adverbial)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Fiona held her older brother’s hand, who was very outgoing, so that she would feel better.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Fiona held her older brother’s hand, who was very outgoing, so that she would feel better.’ It is really important to tell me how the character first tried to fix her problem. It is also important to include details in the story so I can understand clearly what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 5: “Why did she talk to her brother?” (object complement, adverbial, tier-2)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Fiona told her brother she needed to find a quiet place because she still felt uneasy.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Fiona told her brother she needed to find a quiet place because she still felt uneasy.’ She tried to fix her problem by holding her brother’s hand, but that didn’t work. She needed to do something different to fix her problem. It is really important to remember when a character in a story tries to fix their problem more than one time.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 6: “How did the story end?” (adverbial, tier-2, relative)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Because Fiona was overwhelmed, she went to her grandpa’s special room that was nice and quiet and read some books.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Because Fiona was overwhelmed, she went to her grandpa’s special room that was nice and quiet and read some books.’ It is so helpful when you say how the story ended so I can understand what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Fiona in the beginning of the story?	2	1	0
Why was Fiona upset?	2	1	0
How did she first try to fix her problem?	2	1	0
Why did she talk to her brother?	2	1	0
How did the story end?	2	1	0
What two things did you learn about a den from this story?	2	1	0

Dynamic Assessment Script: NLM Reading – Second Grade Benchmark 2 – EOY		NLM QUESTIONS	
		FACTUAL (F)	SCORE
		2 pts = clear & complete 1 pt = unclear/incomplete 0 pts = incorrect	
		Who was the story about?	2 1 0
		Where was Luiz in the beginning of the story?	2 1 0
		Why was Luiz worried?	2 1 0
		How did he first try to fix his problem?	2 1 0
		Why did he talk to his dad?	2 1 0
		How did the story end?	2 1 0
		What two things did you learn about Fainting goats from this story?	2 1 0
QUESTION 1: “Who was the story about?”	(There is no teaching script for question 1)		
QUESTION 2: Where was Luiz in the beginning of the story? (relative, tier-2, relative)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Luiz went outside to feed his goats, which were unique because they fainted a lot.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Luiz went outside to feed his goats, which were unique because they fainted a lot.’ When you tell a story it is really important to say <i>who</i> the character is in the beginning of the story, <i>where</i> they are, and <i>what</i> they are doing. That helps us understand the story better.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 3: Why was Luiz worried? (adverbial, object complement, relative)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Luiz was worried because he knew that the goat which had escaped always ran from him.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Luiz was worried because he knew that the goat which had escaped always ran from him.’ It is really important to say how the character feels in a story and to say why the character feels that way.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 4: “How did he first try to fix his problem?” (relative, tier-2, adverbial)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Luiz tried to slowly approach the goat, which was very skittish, so that he could catch it.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Luiz tried to slowly approach the goat, which was very skittish, so that he could catch it.’ It is really important to tell me how the character first tried to fix his problem. It is also important to include details in the story so I can understand clearly what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 5: “Why did he talk to his dad?” (adverbial, object complement, tier-2)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Luiz talked to his dad because he was frustrated that the goat kept bounding away from him.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Luiz talked to his dad because he was frustrated that the goat kept bounding away from him.’ He tried to first fix his problem by trying to catch the goat, but that didn’t work. He needed to do something different to fix his problem. It is really important to remember when a character in a story tries to fix their problem more than one time.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		
QUESTION 6: “How did the story end?” (nominal, tier-2, relative)	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Luiz did what his dad suggested, which was to put grain in his hand and hold it out to the goat.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Luiz did what his dad suggested, which was to put grain in his hand and hold it out to the goat.’ It is so helpful when you say how the story ended so I can understand what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise. 		

Dynamic Assessment Script: NLM Reading – Third Grade Benchmark 2 – BOY	
QUESTION 1: “Who was the story about?”	<p>(There is no teaching script for question 1)</p>
QUESTION 2: “Where was Molly in the beginning of the story?” <i>(relative, double adj, adverbial)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Molly and her family went to a park that had beautiful rolling hills so that they could ride their bikes.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Molly and her family went to a park that had beautiful rolling hills so that they could ride their bikes.’ When you tell a story it is really important to say <i>who</i> the character is in the beginning of the story, <i>where</i> they are, and <i>what</i> they are doing. That helps us understand the story better.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 3: “Why was Molly worried?” <i>(adverbial, tier-2, object complement)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Molly was <i>worried because</i> she noticed that the chain on her neglected bike had fallen off.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Molly was <i>worried because</i> she noticed that the chain on her neglected bike had fallen off.’ It is really important to say how the character feels in a story and to say why the character feels that way.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 4: “How did she first try to fix her problem?” <i>(adverbial, relative, tier-2)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Even though her bike didn’t have a chain, Molly, who was determined, tried to ride it without the chain.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Even though her bike didn’t have a chain, Molly, who was determined, tried to ride it without the chain.’ It is really important to tell me how the character first tried to fix her problem. It is also important to include details in the story so I can understand clearly what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 5: “Why did she talk to her dad?” <i>(relative, adverbial, nominal)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Molly talked to her dad, who was an avid bike rider, because she was frustrated that her bike still wasn’t working.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Molly talked to her dad, who was an avid bike rider, because she was frustrated that her bike still wasn’t working.’ She tried to fix her problem by just riding her bike without a chain, but that didn’t work. She needed to do something different to fix her problem. It is really important to remember when a character in a story tries to fix their problem more than one time.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 6: “How did the story end?” <i>(nominal, tier-2, relative)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Molly’s dad, who was always prepared, fixed the bike chain, which just needed to be tightened.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Molly’s dad, who was always prepared, fixed the bike chain, which just needed to be tightened.’ It is so helpful when you say how the story ended so I can understand what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Molly in the beginning of the story?	2	1	0
Why was Molly worried?	2	1	0
How did she first try to fix her problem?	2	1	0
Why did she talk to her dad?	2	1	0
How did the story end?	2	1	0
What two things did you learn about bike chains from this story?	2	1	0

Dynamic Assessment Script: NLM Reading – Third Grade Benchmark 2 – MOY	
QUESTION 1: “Who was the story about?”	<p>(There is no teaching script for question 1)</p>
QUESTION 2: “Where was Cody in the beginning of the story?” <i>(relative, tier-2)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Cody was at home looking for his homework, which had taken him several hours to complete.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Cody was at home looking for his homework, which had taken him several hours to complete.’ When you tell a story it is really important to say <i>who</i> the character is in the beginning of the story, <i>where</i> they are, and <i>what</i> they are doing. That helps us understand the story better.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 3: “Why was Cody devastated?” <i>(adverbial, tier-2, object complement)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Cody felt <i>devastated</i> because he realized that his homework was not in his backpack or anywhere in the house.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Cody felt <i>devastated</i> because he realized that his homework was not in his backpack or anywhere in the house.’ It is really important to say how the character feels in a story and to say <i>why</i> the character feels that way.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 4: “How did he first try to fix his problem?” <i>(tier-2, adverbial, relative)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Cody desperately searched the car so that he could hand in his homework to his teacher, who was very stern.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Cody desperately searched the car so that he could hand in his homework to his teacher, who was very stern.’ It is really important to tell me how the character first tried to fix his problem. It is also important to include details in the story so I can understand clearly what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 5: “Why did he talk to his mom?” <i>(tier-2, adverbial, relative)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Cody urgently talked to his mom because his homework, which was very important to him, was not in the car.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Cody urgently talked to his mom because his homework, which was very important to him, was not in the car.’ He tried to fix his problem by searching the car for his homework, but that didn’t work. He needed to do something different to fix his problem. It is really important to remember when a character in a story tries to fix their problem more than one time.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 6: “How did the story end?” <i>(object complement, relative, tier-2)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Cody’s mom told him that she might have thrown away his homework, which Cody promptly recovered from the grimy trash.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Cody’s mom told him that she might have thrown away his homework, which Cody promptly recovered from the grimy trash.’ It is so helpful when you say how the story ended so I can understand what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Cody in the beginning of the story?	2	1	0
Why was Cody devastated?	2	1	0
How did he first try to fix his problem?	2	1	0
Why did he talk to his mom?	2	1	0
How did the story end?	2	1	0
What two things did you learn about glaciers from this story?	2	1	0

Dynamic Assessment Script: NLM Reading – Third Grade Benchmark 2 – EOY	
QUESTION 1: “Who was the story about?”	<p>(There is no teaching script for question 1)</p>
QUESTION 2: “Where was Megan in the beginning of the story?” <i>(adverbial, relative)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Megan was counting her allowance in her room because she wanted to spend the money she had been saving on a new camera.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Megan was counting her allowance in her room because she wanted to spend the money she had been saving on a new camera.’ When you tell a story it is really important to say <i>who</i> the character is in the beginning of the story, <i>where</i> they are, and <i>what</i> they are doing. That helps us understand the story better.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 3: “Why was Megan unhappy?” <i>(relative, tier-2, adverbial)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Megan, who <i>desperately wanted</i> to buy a new camera, was unhappy because her mom wasn’t home to drive her to the store.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Megan, who <i>desperately wanted</i> to buy a new camera, was unhappy because her mom wasn’t home to drive her to the store.’ It is really important to say <i>how</i> the character feels in a story and to say <i>why</i> the character feels that way.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 4: “How did she first try to fix her problem?” <i>(tier-2, relative, adverbial)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Megan impatiently asked her older brother, who just got his license, if he would drive her.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Megan impatiently asked her older brother, who just got his license, if he would drive her.’ It is really important to tell me <i>how</i> the character first tried to fix her problem. It is also important to include details in the story so I can understand clearly what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 5: “Why did she call her mom?” <i>(tier-2, adverbial, relative)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Megan’s brother couldn’t drive her because his truck, which was really old, was out of commission.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Megan’s brother couldn’t drive her because his truck, which was really old, was out of commission.’ She tried to fix her problem by asking her brother to drive her to the store, but that didn’t work. She needed to do something different to fix her problem. It is really important to remember when a character in a story tries to fix their problem more than one time.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.
QUESTION 6: “How did the story end?” <i>(object complement, relative, tier-2)</i>	<p>If student receives a 0 or 1 point:</p> <ul style="list-style-type: none"> SAY: “Megan’s mom told her that after she cleaned her room she would gladly take her to the store to buy the camera.” SAY: “You say that.” [Student should repeat the sentence, if student requests to hear the sentence again, say the sentence one more time.] If the student does not repeat the sentence accurately, model the sentence again and have the student repeat the sentence one more time. SAY: “In this story, ‘Megan’s mom told her that after she cleaned her room she would gladly take her to the store to buy the camera.’ It is so helpful when you say <i>how</i> the story ended so I can understand what happened.” SAY: “Tell me that part of the story again just like I taught you.” [student should attempt to say the same sentence again]. Praise.

NLM QUESTIONS

FACTUAL (F)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE
Who was the story about?	2	1	0
Where was Megan in the beginning of the story?	2	1	0
Why was Megan unhappy?	2	1	0
How did she first try to fix her problem?	2	1	0
Why did she call her mom?	2	1	0
How did the story end?	2	1	0
What two things did you learn about instant cameras from this story?	2	1	0

Scoring Overview

Inferential Vocabulary (IV):

There are A and B questions that can be asked. The examiner always asks Question A (e.g., “The woman was attentive. She knew where her class was. What does attentive mean?”). Question B is asked if the student gets Question A wrong.

- If a student answers Question A clearly and completely, they are awarded 3 points.
- If the student answers Question A unclearly or incompletely (but is generally correct or gets the general idea), then they are awarded 2 points.
- Some of the text in Question A is a grey color. This should **not** be omitted from the question. If a student answers Question A using wording similar to what is in grey text, say “What else does _____ mean?”
- If the student answers Question A incorrectly, then they are asked Question B, and are awarded 1 or 0 points according to whether they answered correctly or not.
- Students cannot receive points for Question A **and** Question B.

Paper/Pencil:

INFERENTIAL VOCABULARY (IV)		3 pts = A: clear/complete 2 pts = A: unclear/incomplete	1 pt = B: correct 0 pts = B: incorrect	SCORE
If A answer is similar to grey text, say: “What else does _____ mean?” Ask B question if A is answered incorrectly	A: The woman was attentive . She knew where her class was. What does attentive mean?			3
	B: Does attentive mean <i>watchful</i> or <i>well-paid</i> ?			1 0
	A: Chloe found her class in the snake exhibit . It was full of snakes. What is an exhibit ?			3 2
	B: Does exhibit mean a <i>display</i> or a <i>pool</i> ?			1 0
	A: Chloe was reunited with her class. She finally found them. What does reunite mean?			3 2
	B: Does reunite mean to <i>use again</i> or <i>to join</i> ?			1 0

Insight:

INFERENTIAL VOCABULARY (IV)		3 pts = A: clear/complete 2 pts = A: unclear/incomplete 1 pt = B: correct 0 pts = B: incorrect
If A answer is similar to grey text, say: “What else does _____ mean?” Ask B question if A is answered incorrectly		
1	A: Jen couldn’t bake the popovers independently . She got her sister. What does independently mean?	3 2
	B: Does independently mean <i>very well</i> or <i>by herself</i> ?	1 0
2	A: Jen’s sister was fatigued . It was early in the morning. What does fatigued mean?	3 2
	B: Does fatigued mean <i>angry</i> or <i>tired</i> ?	1 0
3	A: The instructions were convoluted . Jen couldn’t understand them. What does convoluted mean?	3 2
	B: Does convoluted mean <i>complicated</i> or <i>old</i> ?	1 0
IV SCORE =		6/9

Specific Guidelines for Scoring the NLM Questions Inferential Vocabulary (IV) Section

The following pages contain scoring examples of some of the benchmark assessments for the NLM Listening and NLM Reading. These general guidelines can be used to help guide the scoring of all NLM Listening and NLM Reading benchmark and progress monitoring assessments.

Kindergarten BOY – Benchmark (NLM Listening)

A: Scott was tumbling off his skateboard. He kept getting hurt. What does tumble mean?	3 POINTS • fall • trip	2 POINT • slide • to not be good
B: Does tumble mean to ride or <u>to fall</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Scott's brother told him to clasp his hand. Then he didn't fall. What does clasp mean?	3 POINTS • hold • grab	2 POINT • touch • reach for
B: Does clasp mean <u>to hold</u> or to hit?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Scott diligently practiced. He finally learned to ride a skateboard. What does diligent mean?	3 POINTS • try hard / keep trying • to do a lot	2 POINT • to want to do it • a lot of time
B: Does diligent mean <u>to work hard</u> or to stop?	1 POINT • underlined word	0 POINTS • Incorrect answer

Kindergarten MOY – Benchmark (NLM Listening)

A: The game wasn't completed. Jessie wanted to win. What does completed mean?	3 POINTS • over • to beat	2 POINT • just started • losing
B: Does completed mean boring or <u>finished</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Jessie was permitted to play. Her mom said it was OK. What does permit mean?	3 POINTS • allowed • she got permission	2 POINT • her mom was nice • she got her way
B: Does clasp mean <u>to hold</u> or to hit?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Jessie was pleasant so her mom let her finish playing. What does pleasant mean?	3 POINTS • kind • nice / polite	2 POINT • she was calm • to smile
B: Does pleasant mean <u>nice</u> or angry?	1 POINT • underlined word	0 POINTS • Incorrect answer

Kindergarten EOY – Benchmark (Listening)

A: Alex saw his dad devouring apples. They were gone. What does devour mean?	3 POINTS • eating • eat a lot	2 POINT • to have a lot • to keep them all
B: Does devour mean <u>to eat fast</u> or to throw away?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The apples had vanished, but Alex wanted more. What does vanish mean?	3 POINTS • disappear • all gone	2 POINT • look for them • somewhere else
B: Does vanish mean to go bad or <u>to disappear</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: His dad divvied up the apples. Alex got some. What does divvy up mean?	3 POINTS • divide / split • share	2 POINT • cut up • give away
B: Does divvy up mean <u>to share</u> or to eat?	1 POINT • underlined word	0 POINTS • Incorrect answer

FIRST GRADE BOY (NLM Reading)

Benchmark 1 Examples			Benchmark 2 Examples		
A: Kam and her friend collaborated. They both made a house. What does collaborate mean?	3 POINTS • work together • be a team	2 POINT • to share • to play nice	A: The itching wouldn't cease. She needed her mom's help. What does cease mean?	3 POINTS • stop • end	2 POINT • turn off • pause
B: Does collaborate mean <u>work together</u> or fight?	1 POINT • underlined word	0 POINTS • incorrect answer	B: Does cease mean <u>to stop</u> or to grow?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Kam and her friend fabricated a house. They designed it. What does fabricate mean?	3 POINTS • build • make	2 POINT • to draw • plan	A: The flowers irritated Jen's eyes. She had to drop the rose. What does irritate mean?	3 POINTS • bother • itchy	2 POINT • scratched • felt funny
B: Does fabricate mean to tear down or <u>to build</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer	B: Does irritate mean <u>to annoy</u> or to be colorful?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The house was expansive. It had lots of rooms. What does expansive mean?	3 POINTS • big / giant • lots of space	2 POINT • got bigger • grew	A: The eye drops were calming. Her eyes stopped itching. What does calming mean?	3 POINTS • make feel better • to heal	2 POINT • cool / cold • felt nice
B: Does expansive mean <u>big</u> or colorful?	1 POINT • underlined word	0 POINTS • incorrect answer	B: Does calming mean small or <u>to make feel better</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

FIRST GRADE MOY (NLM Reading)

Benchmark 1 Examples			Benchmark 2 Examples		
A: Jack had some tasks to do. He needed to clean his room. What are tasks?	3 POINTS • work • jobs	2 POINT • things • homework	A: He was on a ride that rotated. He needed a calm, relaxing place to rest. What does rotate mean?	3 POINTS • spin / go around • twirl	2 POINT • moves so you get sick
B: Are tasks games or <u>work</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer	B: Does rotate mean <u>to spin</u> or to go high?	1 POINT • underlined word	0 POINTS • incorrect answer
A: His room looked stunning. Jack did a good job. What does stunning mean?	3 POINTS • clean • beautiful	2 POINT • mom liked it	A: Ron's stomach was uneasy. He didn't want to throw up. What does uneasy mean?	3 POINTS • felt sick • felt funny	2 POINT • not good
B: Does stunning mean <u>beautiful</u> or small?	1 POINT • underlined word	0 POINTS • incorrect answer	B: Does uneasy mean <u>sick</u> or empty?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Jack's mom was satisfied because Jack finished cleaning his room. What does satisfied mean?	3 POINTS • happy / liked it • what she wanted	2 POINT • she let him swim • he did good	A: Ron blissfully rode the new ride. He didn't feel sick anymore. What does blissfully mean?	3 POINTS • happy • excited	2 POINT • calm
B: Does satisfied mean <u>happy</u> or worried?	1 POINT • underlined word	0 POINTS • incorrect answer	B: Does blissfully mean quickly or <u>happily</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

FIRST GRADE EOY (NLM Reading)

Benchmark 1	Examples	
A: Owen was completely drenched. He had been playing in the rain. What does drenched mean?	3 POINTS • very wet • soaked	2 POINT • need to get dry
B: Does drenched mean really wet or really funny?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Owen's mom struggled to get his boots on. They were old. What does struggle mean?	3 POINTS • hard to do • not easy	2 POINT • couldn't do it
B: Does struggle mean to wish or to try hard?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Owen frolickED in the puddles again. He had his boots on. What does frolic mean?	3 POINTS • played • jumped	2 POINT • liked them
B: Does frolic mean to play or to swim?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: Ben timidly asked his dad to read a book. It was really late. What does timidly mean?	3 POINTS • quietly / nervous • shyly / scared	2 POINT • like a mouse
B: Does timidly mean to be loud or to be shy?	1 POINT • underlined word	0 POINTS • incorrect answer
A: His dad dramatically read the book. He used lots of voices. What does dramatically mean?	3 POINTS • to act out • excitedly	2 POINT • loudly • yelled
B: Does dramatically mean slowly or in an interesting way?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Ben had a vivid imagination. He could picture what was in the story. What does vivid mean?	3 POINTS • clear • realistic	2 POINT • colorful • big
B: Does vivid mean clear or scary?	1 POINT • underlined word	0 POINTS • incorrect answer

SECOND GRADE BOY (NLM Reading)

Benchmark 1	Examples	
A: Marta urgently had to get a present. She didn't have a lot of time. What does urgent mean?	3 POINTS • quickly • fast / rush	2 POINT • to go • really wanted to
B: Does urgent mean to be fun or needs to happen now?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Marta needed guidance. She talked to her mom. What does guidance mean?	3 POINTS • help / support • counselling	2 POINT • a path • hints
B: Does guidance mean money or advice?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Her friend loved the personalized gift. It wasn't from the store. What does personalized mean?	3 POINTS • handcrafted • homemade / authentic	2 POINT • made by a person
B: Does personalized mean special or strong?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: It seemed like Cora would never find a suitable ride. She was disappointed. What does suitable mean?	3 POINTS • good fit • perfect	2 POINT • favorite • fun
B: Does suitable mean acceptable or boring?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The man had to enforce the safety regulations. Cora was too short to go on the ride. What does enforce mean?	3 POINTS • make follow rules	2 POINT • police • yell
B: Does enforce mean to make someone obey or to ignore?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Cora found a thrilling ride. It was shaped like a giant snake. What does thrilling mean?	3 POINTS • exciting • fun	2 POINT • scary • fast
B: Does thrilling mean old or exciting?	1 POINT • underlined word	0 POINTS • incorrect answer

SECOND GRADE MOY (NLM Reading)

Benchmark 1	Examples	
A: Daniel's teacher deftly removed the pot with wire. She had done it before. What does deftly mean?	3 POINTS • expertly • precisely / perfectly	2 POINT • carefully • slowly
B: Does deftly mean slowly or <u>skillfully</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The teacher illustrated how to remove the clay pot. Daniel watched her. What does illustrate mean?	3 POINTS • demonstrate • showed	2 POINT • to be watched
B: Does illustrate mean to spell or <u>to show</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Clay won't adhere to canvas. It will come off easily. What does adhere mean?	3 POINTS • stick • glued down	2 POINT • not slip off
B: Does adhere mean <u>stick</u> or slide?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: Her brother was outgoing. The crowd didn't bother him. What does outgoing mean?	3 POINTS • not shy • friendly / social	2 POINT • talkative
B: Does outgoing mean <u>talkative</u> or tall?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Crowds can feel overwhelming. Fiona wanted to be alone. What does overwhelming mean?	3 POINTS • too busy • too much	2 POINT • too big
B: Does overwhelming mean <u>scary</u> or boring?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Fiona sat on a cozy chair. She felt relieved. What does cozy mean?	3 POINTS • comfortable • soft	2 POINT • warm • squeezed
B: Does cozy mean old or <u>comfortable</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

SECOND GRADE EOY (NLM Reading)

Benchmark 1	Examples	
A: The river water was brackish. It was close to the ocean. What does brackish mean?	3 POINTS • salty • not fresh	2 POINT • can't drink it
B: Does brackish mean shallow or <u>salty</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Jacob whipped the line. It was caught on a tree. What does whip mean?	3 POINTS • throw hard • pull fast	2 POINT • threw • let go
B: Does whip mean to let go of or <u>to tug fast</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Jacob felt elated. He caught a huge fish. What does elated mean?	3 POINTS • happy • excited	2 POINT • good • laugh
B: Does elated mean <u>happy</u> or worried?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: Luiz tried to capture the goat. It had escaped out of the pen. What does capture mean?	3 POINTS • to catch	2 POINT • find
B: Does capture mean <u>to catch</u> or to follow?	1 POINT • underlined word	0 POINTS • incorrect answer
A: His dad said goats can't resist food. The goat quickly followed Luiz into the pen. What does resist mean?	3 POINTS • refuse • keep from doing • stop • try not to	2 POINT • go away • run from
B: Does resist mean <u>to refuse</u> or to be scared?	1 POINT • underlined word	0 POINTS • incorrect answer
A: He decided to slowly approach the goat. He tried to catch it. What does approach mean?	3 POINTS • walk up to • get close	2 POINT • be with • call to it
B: Does approach mean to feed or <u>to get close</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

THIRD GRADE BOY (NLM Reading)

Benchmark 1	Examples	
A: Carla inadvertently spilled it. She made a mess. What does inadvertently mean?	3 POINTS • accidentally • by mistake	2 POINT • knocked over • clumsy
B: Does inadvertently mean <u>accidently</u> or easily?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The rag just smeared the stubborn stain. It didn't work. What does stubborn mean?	3 POINTS • hard to remove • permanent	2 POINT • stuck • forever
B: Does stubborn mean bright or <u>permanent</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Her mom resolved the problem. Carla was happy. What does resolve mean?	3 POINTS • fixed	2 POINT • clean
B: Does resolve mean to find a <u>solution</u> or to ignore?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: Her dad was an avid bike-rider. He knew how to fix her chain. What does avid mean?	3 POINTS • expert • rides his bike a lot	2 POINT • smart • likes it
B: Does avid mean to be nice or to <u>do something a lot</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Molly didn't have a functioning bike chain. Her bike wouldn't move. What does functioning mean?	3 POINTS • working • unbroken	2 POINT • good
B: Does functioning mean <u>working</u> or shiny?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Molly traversed the park trails all day. The bike didn't break. What does traverse mean?	3 POINTS • rode • to go	2 POINT • finished
B: Does traverse mean to look at or to <u>ride across</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

THIRD GRADE MOY (NLM Reading)

Benchmark 1	Examples	
A: Jen couldn't bake the popovers independently. She got her sister. What does independently mean?	3 POINTS • by herself • to do alone	2 POINT • couldn't follow recipe • hadn't done it before
B: Does independently mean very well or <u>on your own</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Jen's sister was fatigued. It was early in the morning. What does fatigued mean?	3 POINTS • tired • sleepy	2 POINT • up all night
B: Does fatigued mean angry or <u>tired</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The instructions were convoluted. Jen couldn't understand them. What does convoluted mean?	3 POINTS • hard • complicated / confusing	2 POINT • silly
B: Does convoluted mean <u>complicated</u> or old?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: Cody was hysterical. He couldn't find his report. What does hysterical mean?	3 POINTS • upset	2 POINT • crying • scared
B: Does hysterical mean <u>panicked</u> or lost?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Cody vowed to always put his homework away. He felt devastated when he lost it. What does vowed mean?	3 POINTS • promised • swore	2 POINT • decided • thought / planned
B: Does to vow mean to <u>promise</u> or to feel sorry?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Cody recovered the report. He could finally turn it in. What does recovered mean?	3 POINTS • found • removed	2 POINT • took out • got it
B: Does recovered mean to drop or to <u>find</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

THIRD GRADE EOY (NLM Reading)

Benchmark 1	Examples	
A: Jake guzzled the water. His mouth was burning. What does guzzle mean?	3 POINTS • drink fast • chugged	2 POINT • swallowed • drank
B: Does guzzle mean <u>to drink quickly</u> or to spit?	1 POINT • underlined word	0 POINTS • incorrect answer
A: He deliberately drank some milk. It took him a long time to drink it. What does deliberately mean?	3 POINTS • carefully / cautiously • slowly	2 POINT • planned
B: Does deliberately mean <u>slowly</u> or angrily?	1 POINT • underlined word	0 POINTS • incorrect answer
A: The intolerable pain was gone. The pepper had burned him. What does intolerable mean?	3 POINTS • really bad / terrible • couldn't handle	2 POINT • spicy • made him cry
B: Does intolerable mean funny or <u>bad</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer

Benchmark 2	Examples	
A: Her brother's truck was out of commission. He couldn't take her. What does out of commission mean?	3 POINTS • broken • run down	2 POINT • old
B: Does out-of-commission mean rusty or <u>not working</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Her mom willingly gave her a ride after she inspected her room. What does willingly mean?	3 POINTS • gladly • wanted to	2 POINT • kindly
B: Does willingly mean slowly or <u>cheerfully</u> ?	1 POINT • underlined word	0 POINTS • incorrect answer
A: Megan finally got to purchase the camera. She started taking pictures. What does purchase mean?	3 POINTS • buy	2 POINT • get
B: Does purchase mean <u>to buy</u> or to use?	1 POINT • underlined word	0 POINTS • incorrect answer

<div>Scoring Overview</div>	<div>Inferential Reasoning (IR):</div> <p>Ask the students the questions word for word as written on the NLM form. Always ask the follow up question “Why do you think that?” The first two questions for kindergarten through third grade require inferencing from information provided in the narrative (within the text).</p> <ul style="list-style-type: none">Students are awarded 2 points if they make a clear and complete logical inference that should have been derived from the specific story. The stories are designed to prompts specific inferences. Students are awarded 1 point if the inference is clear and complete, but not necessary the more obvious, logical inference that should be derived from the clues in the story.The follow up question “Why do you think that?” should be answered using information from the story. Students are awarded 1 point for referencing information from the text to support their inference.There is a scoring guide under Specific Scoring Procedures (below) that can guide the Inferential Reasoning scoring. The possible answers provided in the guide are not comprehensive, and examiners should use personal judgement as to whether the student has made a logical inference.The final inferential question for kindergarten through third grade is an elaborative inferencing question that requires a student to use their background knowledge to answer the question. <div>Paper/Pencil:</div> <table><tr><th>INFERENTIAL REASONING (IR)</th><th>2 pts = clear & complete 1 pt = unclear/incomplete</th><th>0 pts = incorrect</th><th>SCORE</th></tr><tr><td>Using clues from this story, how long do you think Chloe was watching the monkey?</td><td>210</td><td>Why do you think that? 1 pt = uses information from story</td><td>10</td></tr><tr><td>Using clues from this story, how often do you think the employee helps other lost people at the zoo?</td><td>210</td><td>Why do you think that? 1 pt = uses information from story</td><td>10</td></tr><tr><td>How do you think Chloe knew the woman worked at the zoo?</td><td>210</td><td>Why do you think that? 1 pt = uses background knowledge</td><td>10</td></tr></table> <div>Insight:</div> <table><tr><th>INFERENTIAL REASONING (IR)</th><th>2 pts = clear & complete 1 pt = unclear/incomplete 0 pts = incorrect</th></tr><tr><td>Using clues from this story, how many times do you think Jen has made popovers?</td><td>210</td></tr><tr><td>Using clues from this story, why do you think Jen’s sister immediately agreed to help?</td><td>210</td></tr><tr><td>Why do you think Jen’s dad was in a hurry?</td><td>210</td></tr><tr><td colspan="2">IR SCORE = 4/9</td></tr></table>	INFERENTIAL REASONING (IR)	2 pts = clear & complete 1 pt = unclear/incomplete	0 pts = incorrect	SCORE	Using clues from this story, how long do you think Chloe was watching the monkey?	210	Why do you think that? 1 pt = uses information from story	10	Using clues from this story, how often do you think the employee helps other lost people at the zoo?	210	Why do you think that? 1 pt = uses information from story	10	How do you think Chloe knew the woman worked at the zoo?	210	Why do you think that? 1 pt = uses background knowledge	10	INFERENTIAL REASONING (IR)	2 pts = clear & complete 1 pt = unclear/incomplete 0 pts = incorrect	Using clues from this story, how many times do you think Jen has made popovers?	210	Using clues from this story, why do you think Jen’s sister immediately agreed to help?	210	Why do you think Jen’s dad was in a hurry?	210	IR SCORE = 4/9	
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IR SCORE = 4/9																											
<div>Discontinue Rule</div>	<div>N/A</div>																										
<div>What is Administered Before and After?</div>	<div>Before:</div> <ul style="list-style-type: none">NLM Retell is typically administered prior to the NLM Questions section. <div>After:</div> <ul style="list-style-type: none">If student is not at benchmark on both NLM Reading Retells and/or both NLM Reading Questions, administer an NLM Listening Retell and the NLM Listening Questions.Administer the language subtest of the PEARL or the DYMOND if there are concerns for language disorder.																										

Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed portion of the test but keep the assessment moving forward. Do not wait excessively long for answers (<10 seconds). • There are benchmarks for the <i>NLM Questions</i>. • Take additional notes as needed. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English. 												
Specific Scoring Guidelines	<p>Specific Guidelines for Scoring the NLM Listening Inferential Reasoning Section</p> <p>EXAMPLE 1: NLM Listening – Kindergarten Beginning of Year (BOY) Benchmark 1</p> <div> <p>One day, Scott was trying to skateboard at the big park near his house. Scott was not having fun because he kept tumbling off his brand-new skateboard. He was constantly getting hurt, even though he was wearing protective gear that he put on his elbows and knees. The gear was supposed to keep him safe. Scott was really frustrated. He desperately wanted to skateboard without getting hurt, which seemed impossible to do. He finally decided to ask his nice, big brother, who was also at the park, for help. He said, “I don’t know how to skateboard. Can you please help me learn how to skateboard because I keep falling down?” Then Scott’s helpful brother said, “Sure! I can teach you. When you start going, quickly clasp my hand.” After he held his brother’s hand, Scott finally learned to balance on the skateboard. He diligently practiced for the rest of the day. He was happy because he didn’t fall anymore.</p> </div> <table border="1"> <tr> <th>Using clues from this story, how good at skateboarding do you think Scott’s brother is?</th><th>Why do you think that?</th></tr> <tr> <td> <p>2 POINTS</p> <ul style="list-style-type: none"> • “Good.” • “Very good.” </td><td> <p>1 POINT</p> <ul style="list-style-type: none"> • “OK.” </td></tr> <tr> <th>Using clues from this story, how many skateboards do you think Scott has ridden?</th><th>Why do you think that?</th></tr> <tr> <td> <p>2 POINTS</p> <ul style="list-style-type: none"> • “None.” • “Not very many.” • “Just one (once).” </td><td> <p>1 POINT</p> <ul style="list-style-type: none"> • “Sometimes.” </td></tr> <tr> <th>Why do you think Scott’s brother was at the park?</th><th>Why do you think that?</th></tr> <tr> <td> <p>2 POINTS</p> <ul style="list-style-type: none"> • “He was skateboarding.” • “He was with his friends.” • “Any logical response.” </td><td> <p>1 POINT</p> <ul style="list-style-type: none"> • “He probably likes to skateboard.” • “He likes to play with his friends.” • “Any logical reason.” </td></tr> </table>	Using clues from this story, how good at skateboarding do you think Scott’s brother is?	Why do you think that?	<p>2 POINTS</p> <ul style="list-style-type: none"> • “Good.” • “Very good.” 	<p>1 POINT</p> <ul style="list-style-type: none"> • “OK.” 	Using clues from this story, how many skateboards do you think Scott has ridden?	Why do you think that?	<p>2 POINTS</p> <ul style="list-style-type: none"> • “None.” • “Not very many.” • “Just one (once).” 	<p>1 POINT</p> <ul style="list-style-type: none"> • “Sometimes.” 	Why do you think Scott’s brother was at the park?	Why do you think that?	<p>2 POINTS</p> <ul style="list-style-type: none"> • “He was skateboarding.” • “He was with his friends.” • “Any logical response.” 	<p>1 POINT</p> <ul style="list-style-type: none"> • “He probably likes to skateboard.” • “He likes to play with his friends.” • “Any logical reason.”
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**Specific
Scoring
Guidelines
for the NLM
Retell**

EXAMPLE 2: NLM Listening – Third Grade Middle of Year (MOY) Benchmark 1

Yesterday morning, Jen quietly walked into the kitchen. She got up early so that she could make breakfast for her mom. When Jen saw her dad in the kitchen, she asked him to help her make breakfast. But sadly, her dad was in a hurry. Jen was disappointed because she needed some help. She wanted to make fresh, delicious popovers, which are her mom’s favorite breakfast. Popovers are fluffy rolls that are baked in muffin tins. They are made with lots of eggs and butter. Jen decided to try to bake the popovers independently. She found the recipe. But she quickly grew frustrated because she couldn’t understand the convoluted instructions. She decided to wake up her sister, who was a fabulous cook. Jen hesitantly woke her sister up. She whispered, “Will you please help me make mom’s special breakfast?” Although Jen’s sister was very fatigued, she immediately said, “I forgot what day it is. I’ll be right there to help you.” After Jen and her sister cooked the breakfast, she was happy since she got to prepare her mom a special breakfast. Her mom loved it.

Using clues from this story, how many times do you think Jen has made popovers?

Why do you think that?

2 POINTS

- “Never.”
- “Not very many times”
- “Not alone.”
- “Only with help.”

1 POINT

- “She’s not good at it.”
- “She wants to know how.”

1 POINT

- “She asked her dad for help.”
- “She asked her sister for help.”
- “She needed help.”
- “She couldn’t understand the recipe.”

Using clues from this story, why do you think Jen’s sister immediately agreed to help?

Why do you think that?

2 POINTS

- “It was their mom’s birthday.”
- “It was a special day for mom.”

1 POINT

- “She was a nice sister.”
- “She loved her mom.”
- “She was a good cook.”

1 POINT

- “Popovers are her mom’s favorite breakfast.”
- “She remembered it was a special day for her mom.”

Why do you think Jen’s dad was in a hurry?

Why do you think that?

2 POINTS

- “He was going to work.”
- “He was late for an appointment.”
- “He woke up late.”

1 POINT

- “He didn’t want to go.”

1 POINT

- “My dad goes to work in the morning.”
- “People have to go to work early sometimes.”
- “Any logical reason.”

PERSONAL WRITING GENERATION (OPTIONAL)

Give Student NLM Writing Form. SAY: “**In this story, Jen was sad she couldn’t make breakfast. Write a story about a time when you couldn’t do something.**” Encourage student (up to 3x) to write a thematically related story. Score using NLM Flow Chart (see Examiner’s Manual).

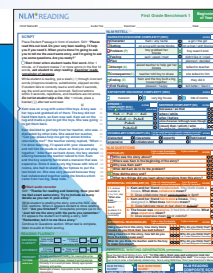
NLM RETELL

25

NLM QUESTIONS

30

NLM READING



Construct Measured	Oral Expressive Language and Writing. This subtest primarily relates to the Language Comprehension strand in Scarborough’s reading model and reflects the Background Knowledge and Verbal Reasoning strands.
Construct Significance	<ul style="list-style-type: none"> • The NLM Personal Writing Generation and Personal (Story) Generation subtests measure a student’s ability to produce complex academic language in oral or written form. • Narrative language samples elicited through personal story generation (oral or written) can reveal a significant amount of information about expressive academic language use.
Construct Connections	<ul style="list-style-type: none"> • Applying academic language skills to oral and written personal story generation is crucial for academic success.
Assessment Schedule	BOY Preschool to EOY Eighth Grade
Time	<p><i>Personal Generation</i> usually takes about 1 minute. Audio record the student’s personal story and use the <i>NLM Flowchart</i> (in the appendices) to score the student’s story.</p> <p><i>Personal Writing Generation</i> can be administered to a group of students. Students should be given approximately 10 minutes to complete the Personal Writing Generation subtest. Use the <i>NLM Flowchart</i> (in the appendices) to score the student’s written language.</p>
Prompts	<ul style="list-style-type: none"> • <i>NLM Listening (Personal Generation)</i>: Say, “In this story _____. Tell me story about a time when _____.” Use the script provided for each specific NLM Listening form to fill in the blanks. • <i>NLM Reading (Personal Writing Generation)</i>: Give the student the NLM Writing Form. Say, “In this story _____. Write a story about a time when _____.” Use the script provided for each specific NLM Reading form to fill in the blanks. • Prompt: Encourage the student (up to three times) to produce a related story*. *If necessary, examiners can encourage the student to tell a story about a more general theme (e.g., getting hurt or getting lost). The student’s story does not have to include the same specific problem presented in the model story used to elicit the retell. • NLM Listening Prompts: Neutral comments to help motivate (e.g., “Wow!” “Oh!”; “Ummm”; “OK”). Be engaged with the student as they are telling their personal story. Pay attention and create an authentic storytelling context. Do not ask specific questions such as “Why did he do that?” or “What did he do?” or “What happened next?” • NLM Reading Prompts: Neutral comments to help motivate (e.g., “Do your best writing.” “Wow!” “Oh!”; “Ummm”; “OK”). Do not ask specific questions such as “Why did he do that?” or “What

Scoring Overview	<p>NLM Listening Personal Generation: Audio record the student’s personal story generation. Use the NLM Flow Chart to score the story (available in the appendices).</p> <div> <p>PERSONAL GENERATION (OPTIONAL)</p> <p>SAY: “In this story, Chloe was afraid because she got lost at the zoo. Tell me a story about a time when you got lost.” Encourage the child (up to 3x) to produce a related story. Score using the NLM Flow Chart (see Examiner’s Manual).</p> </div> <p>NLM Reading Personal Writing Generation: If the student has poor transcription skills (hand writing), ask the student what the illegible words are, or if necessary, ask the student to read or dictate their story to you. Write down what the student says on the Student NLM Writing Form. Use the NLM Flow Chart to score the story (available in the appendices).</p> <div> <p>PERSONAL WRITING GENERATION (OPTIONAL)</p> <p>Give Student NLM Writing Form. SAY: “In this story, Jen was sad she couldn’t make breakfast. Write a story about a time when you couldn’t do something.” Encourage student (up to 3x) to write a thematically related story. Score using NLM Flow Chart (see Examiner’s Manual).</p> </div>
Discontinue Rule	<p>N/A</p>
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> • <i>NLM Questions</i> is typically administered prior to the <i>NLM Personal Writing</i> or the <i>NLM Personal Story Generation</i> sections. <p>After:</p> <ul style="list-style-type: none"> • Administer the language subtest of the <i>PEARL</i> or the <i>DYMOND</i> if there are concerns for language disorder.
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed portion of the test. • There are no benchmarks for the <i>Personal Generation</i> and <i>Personal Writing Generation</i>. • Take additional notes as needed. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Scoring Guidelines for the NLM Personal Writing Generation and the NLM Personal Story Generation

Eliciting a Story Without Using the NLM

Prior to eliciting a narrative, the examiner should select a story (or stories) to elicit. Narrative retells should be elicited using equivalent model stories whenever possible, especially if the purpose of assessment is progress monitoring. The same model story should not be used with a child more than once. To elicit a personal or fictional story generation, the examiner should provide a prompt for the child (e.g., “Tell me a story about a time when you were really scared”). The same story prompt should be used multiple times if the purpose of assessment is progress monitoring. Story generation prompts should be designed to elicit a narrative that has a complete episode (a problem/initiating event, attempt, and consequence). There are many experiences children across different cultures share, including *losing an item*, *getting hurt*, *being scared* etc. Prompts that revolve around general personal themes such as these often elicit excellent stories to which all children can relate.

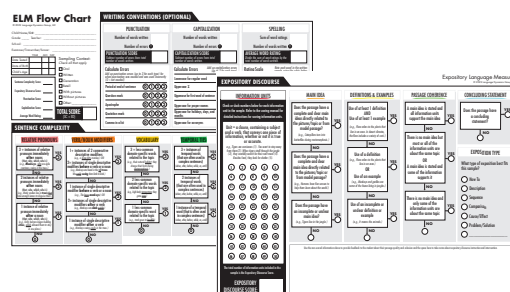
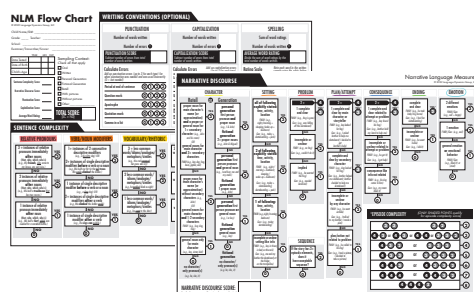
Eliciting a Story Using the NLM

Each NLM Listening and NLM Reading form includes a section that prompts the generation of personal oral or written narratives. These sections are supplemental. They were designed to measure generalized oral and written academic language growth. To elicit an oral or written personal story using the NLM, a student is first asked to complete an NLM Listening or NLM Reading narrative retell. After a student has retold the personal-themed NLM narrative, the examiner follows the elicitation script at the bottom of each NLM form, which prompts the student to generate an oral or written personal narrative that is thematically related to the story just retold.

The NLM and ELM Flow Charts

Personal oral and written stories and expository language samples elicited using the NLM are scored using the NLM Flowchart (Appendix A) or the ELM Flowchart (Appendix B). In addition, any story or expository language sample elicited from a child can be scored using these scoring guides (e.g., a retell from a children’s story book, a personal story recorded in an exchange with a peer, a written story from a teacher prompt, an explanation on how to build something). The NLM and ELM Flowcharts use a flow chart approach to assign a numerical score that quantifies the extent to which oral and written stories and exposition are comprised of essential features. The flowchart is detailed and is designed to sensitively measure subtle changes in children’s language over time. Examiners begin at the top of the flow chart for each element measured, and then move downward answering yes/no questions until they reach the student’s present level of performance. We specifically selected the flow chart items based on their relevance to state educational standards, their relevance to narration and exposition, and their relevance to academic language.

There are three major sections in the NLM and ELM Flowcharts: 1) **sentence complexity** with indices of vocabulary and grammar, 2) **story/passage structure** which provides information on story/passage clarity and completeness and 3) **writing conventions** with indices of punctuation, capitalization, and spelling. Specific information on how to score each section follows.



NLM and ELM Flowchart Scoring Details

[illegible][illegible]

SENTENCE COMPLEXITY

RELATIVE PRONOUNS

RELATIVE PRONOUNS

3 + instances of relative pronouns immediately after nouns

YES ③

(that, who, which, whose)
(e.g. *My friends* also came to my house, are very nice.)

↓ NO

2 instances of relative pronouns immediately after nouns

YES ②

(that, who, which, whose)
(e.g. *We built a treehouse* that has two rooms.)

↓ NO

1 instance of relative pronoun immediately after noun

YES ①

(that, who, which, whose)
(e.g. *We built a fort* which was needed for a snowball battle.)

↓ NO

- Identify noun + relative pronoun (that, who, which)
- Process: First find the noun, then see if one of the listed pronouns immediately follows it. If it does, highlight the pronoun in red. Count every instance, even if it is a repetition or stutter.

Relative Pronouns Examples	Non-Examples
<ul style="list-style-type: none"> • My mom, who is typically soft spoken, screamed out “Be careful!” • The toys that we are allowed to play with are over there. • Spaghetti, which we eat once a week, is one of my family’s favorite meals. 	<ul style="list-style-type: none"> • We’ve gone over that exam already. • I believe that you are happy. • I wanted that horse. • Which of those do you like?

VERB/NOUN MODIFIERS

VERB/NOUN MODIFIERS

- 1+ instances of 2 consecutive descriptive modifiers
(e.g., *a ditty old OR*
- 2+ instances of single descriptive modifiers **before** a verb or a noun
(e.g., *We had not been in the last two years.*
We gaily climbed the ladder once).

YES (3)

NO

- 1 instance of single descriptive modifier **before** a verb or a noun
(e.g., *a ditty old OR*
- 2+ instances of single descriptive modifiers **after** a verb
(e.g., *We climbed the ladder once).*

YES (2)

NO

- 1 instance of single descriptive modifier **after** a verb
(e.g., *The dogs ran quickly).*

YES (1)

NO

0

- Identify descriptive words (adverbs and adjectives, but not all).
- Process: Highlight words that modify a noun or verb and provide descriptive information in orange.

Noun Modifiers	Verb Modifiers
<ul style="list-style-type: none"> • Modify a noun. • Only count if used directly before the noun. • Must add sensory or qualitative information. 	<ul style="list-style-type: none"> • Modify a verb. • Count if used before or after a verb. • Do not have to come directly after or before the verb
<p>EXAMPLES:</p> <ul style="list-style-type: none"> • They played the new game for the rest of recess. • Fish live in the the big, blue ocean. • It was a good book. 	<p>EXAMPLES:</p> <ul style="list-style-type: none"> • They played the new game for the rest of recess. • Fish live in the the big, blue ocean. • It was a good book.

Distinguishing Noun Modifiers from Two-word Nouns

Noun modifiers must add sensory or qualitative information.

Descriptive information written before nouns sometimes contains categorical information, which classifies nouns based on their use. Such words create two-word nouns.

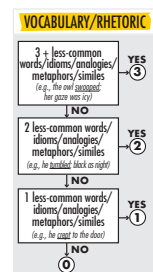
To identify a two-word noun, ask yourself if...

- The two words are frequently used together, and
- They are both necessary to identify the noun being referenced.

If you can answer “yes” to these questions, then it is a two-word noun. ***Such descriptors should not count as noun modifiers.***

SENTENCE COMPLEXITY (Continued)

VOCABULARY / RHETORIC (NLM ONLY)



Identify **less-common** words and idioms/analogies/metaphors/similes. Less-common words align with the concept of tier 2 words, which are not commonly used by K-3 students, but appear more frequently in text. Importantly, these words can be used across domains and topics.

Process: Highlight words in **yellow**. If you are uncertain whether a word is less-common, use any or all of these criterion:

1. Is there a simpler way of saying the word that the child could have used? (Example: child said “**chant**”, instead of “cheer” or “yell”).
2. Reference the list of planted words from the retell stories and compare the level of complexity.
3. The LWV List can be referenced as a last resort if the scorer is still unsure about a word. *It should not be used to look up every word* (only words that have already been flagged for possible V/R inclusion). When using the list, words that are 85% or above are considered common and **do not** count towards the V/R measure.

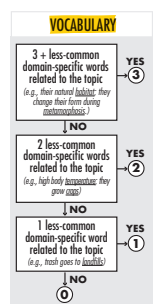
Vocabulary/Rhetoric

- Two words that are derived from the same word individually count if they constitute different form classes.
- Repeated words and derivations of the same form are not counted.

EXAMPLES:

- She was watching the doctor **like a hawk**.
- The girl felt sick **as a dog**.
- The children **chanted** a cheer together.
- Her mom asked if she felt better and she **replied** “yes”.
- He dropped the popsicle on the **disgusting** floor.
- The girl is trying to read an **epic novel**. (each word counts separately)

VOCABULARY (ELM ONLY)



Identify **less-common domain-specific** words related to the topic. Domain-specific words are words that are usually only relevant to science and social studies topics. Less-common ones would be words that K-3 students do not typically use and that you might only see in textbooks or in a science or social studies lessons (e.g., piston and fertilize vs. plant and seed).

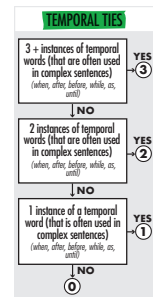
Process: Highlight words in **yellow**. If you are uncertain whether a word is less-common and domain-specific, use any or all of these criteria:

1. Is there a simpler way of saying the word that the child could have used? (Example: child said “**crops**”, instead of “plants” or “field”).
2. Is the word applicable to many topics and contexts? If so, it is not likely a domain-specific word.
3. If Academic Language of Primary Students (ALPS; Spencer, 2018) materials are used to elicit language sample, the **ALPS Less Common DS word list in Appendix C** can be referenced. Please note, this is not a complete list of less-common, domain-specific words, but the word the child uses can be compared to these words to make the determination. The words planted in the ALPS model passages are blue.

Words on list	Derivatives (award 1 point even if multiple in same sample)	Derivatives that change form class (award additional points if multiple in same sample)
1. Irrigate (verb)	Irrigates, irrigated (v.), irrigating	Irrigation (noun), irrigated (adj.), unirrigated (adj.)
2. Environment (noun)	Environments	Environmental (adj.)
3. Fertilize (verb)	Fertilizes, fertilized (v.), fertilizing	Fertilizer (noun), fertilization (noun), fertilized (adj.)

SENTENCE COMPLEXITY (Continued)

TEMPORAL TIES



- Identify temporal words (when, after, before, while, as, until).
- Process:** Highlight only the temporal ties listed above in green. Count every instance, even if it is a stutter, as well as derivatives of the word (whenever).

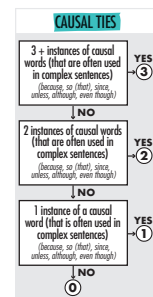
Temporal Tie Examples

- When** the boy's mom gave him another popsicle, he was happy.
- Daevon went to school **after** he found his shoe.
- As** he was standing in the kitchen, her husband mixed formula and water.

Not subordinate, but still examples

- He was being quiet **as** a mouse.
- When** will he find his missing shoe?
- After** all, **after** all that, nobody likes feeling sick.

CAUSAL TIES



- Identify causal words (because/cuz, so (that), since, unless, although, even though).
- Process:** Highlight only the causal ties listed above in blue. Count every instance, even if it is a stutter.

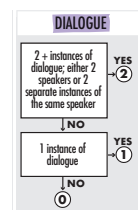
Causal Tie Examples

- They were happy **because** they got to play for the rest of the day.
- Fish need gills **so** they can breathe underwater.
- Ever **since** he started playing baseball, Matt has loved popsicles.
- Tigers won't eat humans **unless** they don't have any other food to eat.

Non-examples

- The girl was so tired.
- All of the children were making fun of her, so she went and told her teacher.
- Fish need to breathe underwater, so they need gills to breathe.

DIALOGUE (NLM ONLY)



- Identify content indicating what someone says.
- Process:** Highlight dialogue in purple. The selection does not need to include quotation marks; if it sounds like dialogue, count it.

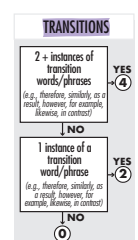
Dialogue Examples

- She said, **I don't know.**
- Have you seen my missing shoe?** he asked his dad.
- Let's see what we can do,** the teacher said.

Non-examples

- The teacher asked the children why they were pointing at the girl.
- The doctor told her he had some medicine for her to take.
- She said it was okay.
- They said yes.
- They said sorry

TRANSITIONS (ELM ONLY)



- Identify transition words (therefore, similarly, as a result, however, for example, likewise, in contrast).
- Process:** Highlight only the transitions listed above in purple. Count every instance, even if it is a stutter.

Dialogue Examples

- For example**, farmers benefit from livestock by harvesting chicken eggs.
- Similarly**, sharks have gills and do not need to come to the surface to breathe.
- However**, some plants need fertilizer to grow.

Non-examples

- Sometimes farmers take care of animals.
- Also, plants need good soil in order to blossom and grow.
- But not all animals need to eat meat to survive.

SENTENCE COMPLEXITY (Continued)

NLM
EXAMPLE 1

"Nina couldn't see the Dogman book in the picture so she went to the she went to the eye doctor and her **vision** wasn't so well. So she got glasses **that** right her her and she liked them **so** she put them on and she felt happy to get glasses so she could see the Dogman book **that** she's reading. And uh she could she could see **clearly** again and see she grade so she can have **good good** grade **good** grades and stuff."

SENTENCE COMPLEXITY		Comma in a list 0 1 2 3	Uppercase for acronyms 1 2 3	4 Conventional spelling. Spelled correctly. examples: our nor now, got nor gum	
RELATIVE PRONOUNS 3 + instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., My friends, who came to my house, are very nice.) YES 3 NO 2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., We built a treehouse that has two rooms.) YES 2 NO 1 instance of relative pronoun immediately after noun (that, who, which, who's) (e.g., We built a fort, which was needed for a snowball battle.) YES 1 NO 0	VERB/NOUN MODIFIERS 1+ instances of 2 consecutive descriptive modifiers (e.g., a big dirty dog) OR 2+ instances of single descriptive modifiers before a verb or a noun (e.g., We built our fort in the tall trees. We easily climbed the ladder.) YES 3 NO 1 instance of single descriptive modifier before a verb or a noun (e.g., a dirty dog) OR 2+ instances of single descriptive modifiers after a verb (e.g., We climbed the ladder easily.) YES 2 NO 1 instance of single descriptive modifier after a verb (e.g., The dogs ran quickly.) YES 1 NO 0	VOCABULARY/RHETORIC 3 + less-common words/idioms/analogies/metaphors/similes (e.g., the owl swooped her gaze was icy) YES 3 NO 2 less-common words/idioms/analogies/metaphors/similes (e.g., he bumbled; black as night) YES 2 NO 1 less-common words/idioms/analogies/metaphors/similes (e.g., he cased to the door) YES 1 NO 0	TEMPORAL TIES 3 + instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until) YES 3 NO 2 instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until) YES 2 NO 1 instance of a temporal word (that is often used in complex sentences) (when, after, before, while, as, until) YES 1 NO 0	CAUSAL TIES 3 + instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though) YES 3 NO 2 instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though) YES 2 NO 1 instance of a causal word (that is often used in complex sentences) (because, so (that), since, unless, although, even though) YES 1 NO 0	DIALOGUE 2 + instances of dialogue; either 2 speakers or 2 separate instances of the same speaker YES 2 NO 1 instance of dialogue YES 1 NO 0
SENTENCE COMPLEXITY SCORE: 7					

NLM
EXAMPLE 2

"Um Daevon (?found?) lost his shoe, and then he look in his castle and it was under a book and then he put it on and went to school. **After** he thought he was gonna be late, and then he wasn't late. And he put on his **favorite red** shorts and shirt. Wait, and backpack."

SENTENCE COMPLEXITY		Comma in a list 0 1 2 3	Uppercase for acronyms 1 2 3	4 Conventional spelling. Spelled correctly. examples: our nor now, got nor gum	
RELATIVE PRONOUNS 3 + instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., My friends, who came to my house, are very nice.) YES 3 NO 2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., We built a treehouse that has two rooms.) YES 2 NO 1 instance of relative pronoun immediately after noun (that, who, which, who's) (e.g., We built a fort, which was needed for a snowball battle.) YES 1 NO 0	VERB/NOUN MODIFIERS 1+ instances of 2 consecutive descriptive modifiers (e.g., a big dirty dog) OR 2+ instances of single descriptive modifiers before a verb or a noun (e.g., We built our fort in the tall trees. We easily climbed the ladder.) YES 3 NO 1 instance of single descriptive modifier before a verb or a noun (e.g., a dirty dog) OR 2+ instances of single descriptive modifiers after a verb (e.g., We climbed the ladder easily.) YES 2 NO 1 instance of single descriptive modifier after a verb (e.g., The dogs ran quickly.) YES 1 NO 0	VOCABULARY/RHETORIC 3 + less-common words/idioms/analogies/metaphors/similes (e.g., the owl swooped her gaze was icy) YES 3 NO 2 less-common words/idioms/analogies/metaphors/similes (e.g., he bumbled; black as night) YES 2 NO 1 less-common words/idioms/analogies/metaphors/similes (e.g., he cased to the door) YES 1 NO 0	TEMPORAL TIES 3 + instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until) YES 3 NO 2 instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until) YES 2 NO 1 instance of a temporal word (that is often used in complex sentences) (when, after, before, while, as, until) YES 1 NO 0	CAUSAL TIES 3 + instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though) YES 3 NO 2 instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though) YES 2 NO 1 instance of a causal word (that is often used in complex sentences) (because, so (that), since, unless, although, even though) YES 1 NO 0	DIALOGUE 2 + instances of dialogue; either 2 speakers or 2 separate instances of the same speaker YES 2 NO 1 instance of dialogue YES 1 NO 0
SENTENCE COMPLEXITY SCORE: 3					

SENTENCE COMPLEXITY (Continued)

ELM
EXAMPLE 1

“Um you can you can so you can look, you can smell, and you can eat, you can look and you can smell and then you can **hear**. **When when** you **when** you wanna see something, you can see with your **eyes**. **When** you wanna smell something, you can smell with your **nose** but if you wanna hear something you can you can hear with your **ears**. **When** your mom says come and eat, you listen with your ears. And you also look look where you going. And you also hafta look **underwater** **because** you’re in a mermaid (?tower?). And then you can smell shampoo with your nose. And you can also and you can also smell you can smell you can smell **nasty** conditioner **that** we don’t eat. And then the last one is critical, you cannot you cannot hear water and you can you can hear you can you can hear stuff **that** you can hear with your ears.”

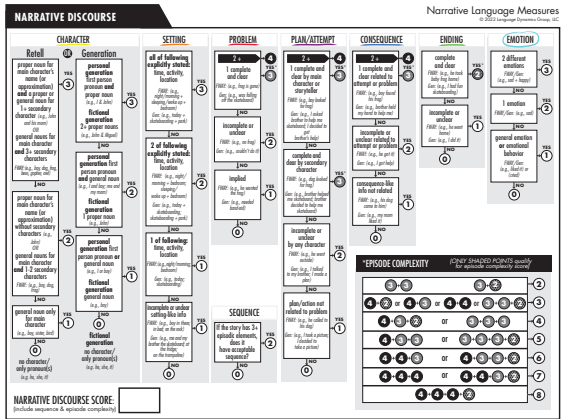
SENTENCE COMPLEXITY		Comma in a list	0 1 2 3	Uppercase for acronyms	1 2 3	4	examples: or, nor and, go, nor and Conventional spelling. Spelled correctly.
RELATIVE PRONOUNS	VERB/NOUN MODIFIERS	VOCABULARY	TEMPORAL TIES	CAUSAL TIES	TRANSITIONS		
3 + instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., <i>Monkeys, who are agile creatures, swing in the trees.</i>)	1 + instances of 2 consecutive descriptive modifiers (e.g., <i>a large, dirty monkey</i>) OR 2+ instances of single descriptive modifiers before a verb or a noun (e.g., <i>Monkeys are found in the tall trees.</i> <i>We easily swing from limb to limb.</i>)	3 + less-common domain-specific words related to the topic (e.g., <i>their natural habitat; they change their form during metamorphosis.</i>)	3 + instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	3 + instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though)	2 + instances of transition words/phrases (e.g., <i>therefore, similarly, as a result, however, for example, likewise, in contrast</i>)		
YES 3	YES 3	YES 3	YES 3	YES 3	YES 4		
2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., <i>Many snakes live in trees that have enough leaves to disguise them.</i>)	1 instance of single descriptive modifier before a verb or a noun (e.g., <i>The large monkeys</i>) OR 2+ instances of single descriptive modifiers after a verb (e.g., <i>Monkeys can climb quickly.</i>)	2 less-common domain-specific words related to the topic (e.g., <i>high body temperatures; they grow eggs</i>)	2 instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	2 instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though)	1 instance of a transition word/phrase (e.g., <i>therefore, similarly, as a result, however, for example, likewise, in contrast</i>)		
YES 2	YES 2	YES 2	YES 2	YES 2	YES 2		
1 instance of relative pronoun immediately after a noun (that, who, which, who's) (e.g., <i>Early humans began building cities, which allowed them to stay in one place.</i>)	1 instance of single descriptive modifier after a verb (e.g., <i>Monkeys swing easily in the trees.</i>)	1 less-common domain-specific word related to the topic (e.g., <i>trash goes to landfills</i>)	1 instance of a temporal word (that is often used in complex sentences) (when, after, before, while, as, until)	1 instance of a causal word (that is often used in complex sentences) (because, so (that), since, unless, although, even though)	NO		
YES 1	YES 1	YES 1	YES 1	YES 1	NO		
NO	NO	NO	NO	NO	NO		
0	0	0	0	0	0	SENTENCE COMPLEXITY SCORE: 12	

ELM
EXAMPLE 2

“So um if you if you’re gonna be healthy, you have to drink um eat **nutrients** and drink um water um and maybe drink milk sometimes **before**, and I do that **before** you play in the hot sun **because** you (?got?), **because** the um **nutrients** from the food give also give you **energy** to play in the park. But if you eat gummies you don’t really get that much **energy** so your body doesn’t really like um suck up like that doesn’t have **nutrients** for your body to eat. So if you eat that **before** you um go to the park, and out in the **hot** sun for a **long** time, then you’re **probably** gonna feel really tired **when** you get home. And yeah. And you shouldn’t eat like uh oh yeah and and if juice says one hundred percent may the juice is maybe a little bit good, but if it’s not then it’s not good well yeah, kinda not good.

SENTENCE COMPLEXITY		Comma in a list	0 1 2 3	Uppercase for acronyms	1 2 3	4	examples: or, nor and, go, nor and Conventional spelling. Spelled correctly.
RELATIVE PRONOUNS	VERB/NOUN MODIFIERS	VOCABULARY	TEMPORAL TIES	CAUSAL TIES	TRANSITIONS		
3 + instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., <i>Monkeys, who are agile creatures, swing in the trees.</i>)	1 + instances of 2 consecutive descriptive modifiers (e.g., <i>a large, dirty monkey</i>) OR 2+ instances of single descriptive modifiers before a verb or a noun (e.g., <i>Monkeys are found in the tall trees.</i> <i>We easily swing from limb to limb.</i>)	3 + less-common domain-specific words related to the topic (e.g., <i>their natural habitat; they change their form during metamorphosis.</i>)	3 + instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	3 + instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though)	2 + instances of transition words/phrases (e.g., <i>therefore, similarly, as a result, however, for example, likewise, in contrast</i>)		
YES 3	YES 3	YES 3	YES 3	YES 3	YES 4		
2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., <i>Many snakes live in trees that have enough leaves to disguise them.</i>)	1 instance of single descriptive modifier before a verb or a noun (e.g., <i>The large monkeys</i>) OR 2+ instances of single descriptive modifiers after a verb (e.g., <i>Monkeys can climb quickly.</i>)	2 less-common domain-specific words related to the topic (e.g., <i>high body temperatures; they grow eggs</i>)	2 instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	2 instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though)	1 instance of a transition word/phrase (e.g., <i>therefore, similarly, as a result, however, for example, likewise, in contrast</i>)		
YES 2	YES 2	YES 2	YES 2	YES 2	YES 2		
1 instance of relative pronoun immediately after a noun (that, who, which, who's) (e.g., <i>Early humans began building cities, which allowed them to stay in one place.</i>)	1 instance of single descriptive modifier after a verb (e.g., <i>Monkeys swing easily in the trees.</i>)	1 less-common domain-specific word related to the topic (e.g., <i>trash goes to landfills</i>)	1 instance of a temporal word (that is often used in complex sentences) (when, after, before, while, as, until)	1 instance of a causal word (that is often used in complex sentences) (because, so (that), since, unless, although, even though)	NO		
YES 1	YES 1	YES 1	YES 1	YES 1	NO		
NO	NO	NO	NO	NO	NO		
0	0	0	0	0	0	SENTENCE COMPLEXITY SCORE: 10	

NLM Flowchart Scoring Details: Narrative Discourse



NARRATIVE DISCOURSE

EXCLUSIVITY RULE

- Each utterance can count towards only one narrative structure element that contributes to episode complexity.

CONSERVATIVE RULE

- When faced with an unclear utterance, code that utterance under the most conservative category with the most conservative score.

CHARACTER

- Character information found anywhere in a story should be scored, including utterances which may count towards other narrative structure elements (problem, plan, etc.)

RETELL	PERSONAL GENERATION
<ul style="list-style-type: none">Proper nouns: Daevon, Sarah, etc.General nouns: Boy, sister, girl, the mom, teacher, adult, dog, doctor	<ul style="list-style-type: none">Proper nouns: Ben, Xavier, SarahGeneral nouns: Boy, sister, girl, the mom, teacher, adult, dog, doctorFirst person pronouns: I, we
<p>SCORING GUIDE</p> <ul style="list-style-type: none">1 POINT: the girl (general noun for main character)2 POINT: the girl + the doctor (2 general nouns including main)3 POINT: Hannah + the doctor (Proper noun for main + 1 general/proper noun)	<p>SCORING GUIDE</p> <ul style="list-style-type: none">1 POINT: the doctor / I/we (general noun for <u>anyone</u> / <u>personal pronoun</u>)2 POINT: Hannah / my mom + me (proper noun <u>for anyone</u> / General noun + <u>personal pronoun</u>)3 POINT: Hannah + Dr. Smith / Dr. Smith + me (2 proper nouns <u>for anyone</u> / Proper noun + <u>personal pronoun</u>)
<p>DO NOT COUNT</p> <ul style="list-style-type: none">Any pronouns	<p>DO NOT COUNT</p> <ul style="list-style-type: none">Any pronouns EXCEPT I, we
<p>EXAMPLE IN CONTEXT</p> <p>“The boy had a new pet frog and the dog. And the boy was happy. And when they went to bed the dog and the boy, the frog got out of his jar.”</p> <p>SCORE: 2 (use of 3 general nouns)</p>	<p>EXAMPLE IN CONTEXT</p> <p>“I fell on the ground. My mom picked me up.”</p> <p>SCORE: 2 (use of 1 proper noun, use of 1 ineligible pronoun)</p>

NARRATIVE DISCOURSE

SETTING
(Time, Activity, Location)

- **Explicit information about the context in which the problem occurs**
- Can be mentioned later in the story, but is usually close to the beginning
- Cannot double count setting and other narrative structure elements (problem, plan/attempt, consequence, ending, emotion)

UNCLEAR or INCOMPLETE

- A blinded scorer cannot tell what/where/when the story takes place
- Location-like information (1 point): rock, in the

** If the only activity (verb) occurs later in the story, this content would most likely be scored as a plan/attempt to solve the problem or as a consequence.*

TIME		ACTIVITY		LOCATION	
• General or specific reference to time of day, month, or year		• What the character is doing at the beginning of story; activity occurring before the problem; does not count towards PLAN/ ATTEMPT		• Any description of a specific place in which the problem occurs	
EXAMPLES:	NON-EXAMPLES:	EXAMPLES:	NON-EXAMPLES:	EXAMPLES:	NON-EXAMPLES:
<ul style="list-style-type: none"> • last night • one morning • yesterday • after school • at lunch time • a long time ago • once • once upon a time** 	<ul style="list-style-type: none"> • sometimes • at first • eventually • then 	<ul style="list-style-type: none"> • licking a popsicle • going to the dentist • getting dressed • playing with friends • doing nothing 	<ul style="list-style-type: none"> • was sad • felt sick • playing • lost shoe • was bored 	<ul style="list-style-type: none"> • park • bedroom • playground • grandma's house • outside • inside • tent • the dentist 	<ul style="list-style-type: none"> • on the couch • to the freezer • to bed
<p style="text-align: center;">SETTING EXAMPLE</p> <p style="text-align: center;">“<u>Last night</u> I <u>walked upstairs</u> to <u>my room</u>. (...)”</p> <p style="text-align: center;"> ↑ Reference to time ↑ Reference to activity ↑ Reference to location </p>					

*** can not count towards 2 or 3 point score (if activity and/or location are also present)*

STORIES WITH NO PROBLEM (OR IMPLIED PROBLEMS)

- Samples that only describe activities without a clear problem/issue that the main character encounters can be awarded points for setting.

“Um he has his backpack. Then he put he come fo his jacket. Then when he put his jacket, he goes to school and learn what the when in his t-shirt. (...) and he says he change and when he when he finish early, he go back to the house and brush his teeth and go to sleep.”

SETTING = **2 POINTS** (activity + location)

EPISODE COMPLEXITY

- A story **episode** is a complete story cycle.
- The next 4 narrative structure elements we will study contribute to Episodic Complexity.

These are:

1. Problem 2. Plan/Attempt 3. Consequence 4. Ending

Remember from before... the **EXCLUSIVITY RULE**:

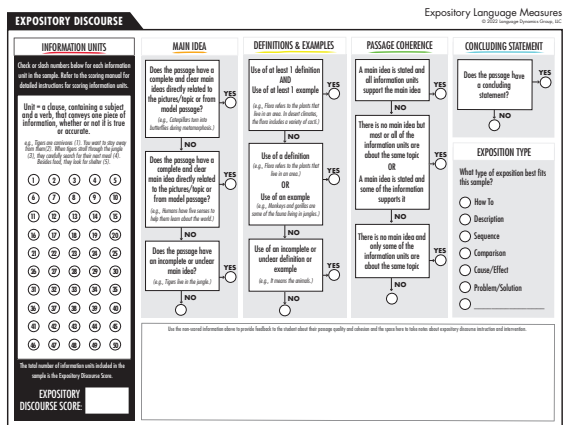
- A targeted speech segment can count towards only one of these four narrative structure elements.
- If you aren't sure which category a speech segment should count for, default to one of these four categories.

NARRATIVE DISCOURSE	
PLAN/ ATTEMPT	<ul style="list-style-type: none"> • Action performed by main or secondary character • An attempt to solve the problem • Directly causes the consequence <div> <p>EXAMPLES</p> <ul style="list-style-type: none"> • He asked his dad for help. • She closed her eyes and tried to sleep. • The mother changed the baby's diaper. <p>EXAMPLE IN CONTEXT</p> <p>"Nina couldn't see the dog man book in the picture so she went to the <u>she went to the eye doctor and her vision wasn't so well</u>. So she got glasses that right her her and she liked them so she put them on and she felt happy to get glasses so she could see the dog man book that she's reading. And uh she could she could see clearly again and see she grade so she can have good good grade good grades and stuff."</p> <p>SCORE: 3 (one complete and clear plan/attempt)</p> </div>
CONSEQUENCE	<ul style="list-style-type: none"> • Direct result of the attempt to solve the problem • Caused by the plan/attempt, even if a plan/attempt is not explicit • Can be actions by any character or no character at all <div> <p>EXAMPLES</p> <ul style="list-style-type: none"> • He found his missing shoe in the toy castle. • When she woke up, she felt better. • The baby stopped crying. • It started to feel better. <p>EXAMPLE IN CONTEXT</p> <p>"Nina couldn't see the dog man book in the picture so she went to the she went to the eye doctor and her vision wasn't so well. So <u>she got glasses</u> that right her her and she liked them so she put them on and she felt happy to get glasses so she could see the dog man book that she's reading. And uh she could she could see clearly again and see she grade so she can have good good grade good grades and stuff."</p> <p>SCORE: 3 (one complete and clear consequence related back to the problem and plan/attempt, consequence)</p> </div>

NARRATIVE DISCOURSE	
2+ PLAN/ATTEMPTS AND CONSEQUENCES	<ul style="list-style-type: none"> Samples containing more than one problem (P) or plan/attempt (PL/A) should be awarded 4 points in the appropriate category. <ul style="list-style-type: none"> <i>Separate problems or plan/attempts must be distinct in order to be awarded 4 points!</i> In order to receive 4 points for consequence (C), there must be <u>more than one problem</u>, or <u>more than one plan/attempt</u> that the consequence relates to. <ul style="list-style-type: none"> <i>Some samples contain a cluster of consequences related to <u>only one plan/attempt</u>. Such samples should receive a score of 3 for <u>consequence</u>.</i> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>EXAMPLE IN CONTEXT</p> <p>“So Hannah had a <u>had a pain in her mouth</u> (P) and <u>she tried making it better</u> (A) but when she tried <u>it wouldn't work</u> (C). So <u>she went to the dentist</u> (A) and <u>the dentist found out there's something stuck between her teeth and got it out</u> (C).”</p> <p>SCORE: 1 Problem (P) = 3 points 2 plan/attempts (PL/A) = 4 points 2 consequences (C) = 4 points</p> </div> <p>Conservative Rule Application</p> <ul style="list-style-type: none"> Sometimes it is difficult to tell if something should be scored as an attempt/ consequence or as consequence/ending. For example, deciding between these two options: <ul style="list-style-type: none"> <i>Option 1: The boy <u>dropped his popsicle</u> (P), his <u>mom gave him another one</u> (C) and then <u>he ate it before it melted</u> (E)</i> <i>Option 2: The boy <u>dropped his popsicle</u>(P), his <u>mom gave him another one</u>(P/A) and then <u>he ate it before it melted</u>(C)</i> When faced with this type of decision, first identify other elements in the story that can be scored. For example, if “then he thanked his mom for the popsicle” came at the end of this story, this would count as an ending. Option 2 would be a better choice for scoring because there is other content that can complete the episode. However, if there are not additional story components, then you must choose <u>the most conservative category</u> with the <u>most conservative score</u>. In Option 1, there is no clear attempt, but it can be assumed that if it was explicit, it would have been that the child asked his mom for another popsicle. The content is more clearly consequence and ending (in absence of other information) and receives the lower score (3, 3, 2) than Option 2 (3, 3, 3). Therefore, it is <u>the most conservative choice</u>.
ENDING	<ul style="list-style-type: none"> Complete and clear ending to the story <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>EXAMPLE IN CONTEXT</p> <p>“Nina couldn't see the dog man book in the picture so she went to the she went to the eye doctor and her vision wasn't so well. So she got glasses that right her her and she liked them so she put them on and she felt happy to get glasses so <u>she could see the dog man book that she's reading</u>. And uh she could <u>she could see clearly again and see she grade so</u> <u>she can have</u> good good grade <u>good grades and stuff</u>.”</p> <p>SCORE: 2 (complete and clear) <i>*Note, there are multiple endings but they only count as 2 points.</i></p> </div>

NARRATIVE DISCOURSE				
SEQUENCE	<ul style="list-style-type: none">In order to get a score of 2 the story must have 3+ of the following episodic elements, indicating a clear beginning, middle and ending:<ul style="list-style-type: none">– Problem– Plan/attempt– Consequence– Ending			
	<table><tr><th>Sequence Examples</th><th>Non-Examples</th></tr><tr><td><ul style="list-style-type: none">“Daevon couldn’t find his shoe. He asked his Dad for help, and his Dad told him to look for it in his castle. Daevon found his shoe. He put on his backpack and left for school.”</td><td><ul style="list-style-type: none">“Daevon was looking for his shoe and he found it in his toy castle. Then he went to school. His dad told him to look there.”“Daevon couldn’t find his shoe but then he found it.”</td></tr></table>	Sequence Examples	Non-Examples	<ul style="list-style-type: none">“Daevon couldn’t find his shoe. He asked his Dad for help, and his Dad told him to look for it in his castle. Daevon found his shoe. He put on his backpack and left for school.”
Sequence Examples	Non-Examples			
<ul style="list-style-type: none">“Daevon couldn’t find his shoe. He asked his Dad for help, and his Dad told him to look for it in his castle. Daevon found his shoe. He put on his backpack and left for school.”	<ul style="list-style-type: none">“Daevon was looking for his shoe and he found it in his toy castle. Then he went to school. His dad told him to look there.”“Daevon couldn’t find his shoe but then he found it.”			
EMOTION	<ul style="list-style-type: none">Explicit word(s) for how the character(s) feel(s)Can only get a score of 2 or 3 if there is a specific emotion<ul style="list-style-type: none">– <i>Cannot get a score of 3 if there is 1 general emotion or emotional behavior + 1 emotion, ex. “she liked them so she put them on and she felt happy”</i>– <i>Only “she felt happy” would qualify (score of 2)</i> <table><tr><th>EXAMPLES</th></tr><tr><td><ul style="list-style-type: none">He felt relieved because he was going to get to school on time.She was happy that her stomach wasn’t hurting anymore.Sara wasn’t concerned anymore because the baby stopped crying</td></tr></table>	EXAMPLES	<ul style="list-style-type: none">He felt relieved because he was going to get to school on time.She was happy that her stomach wasn’t hurting anymore.Sara wasn’t concerned anymore because the baby stopped crying	
EXAMPLES				
<ul style="list-style-type: none">He felt relieved because he was going to get to school on time.She was happy that her stomach wasn’t hurting anymore.Sara wasn’t concerned anymore because the baby stopped crying				
EPISODE COMPLEXITY	<ul style="list-style-type: none">Total all scores that have shaded cellsInclude this score in the total Narrative Structure Score			

ELM Flowchart Scoring Details: Expository Discourse



EXPOSITORY DISCOURSE

INDICES OF EXPOSITORY DISCOURSE

- | | |
|---|---|
| 1. Information Units (number in RED) | 4. Passage Cohesion (annotate in GREEN) |
| 2. Main Idea (underline in ORANGE) | 5. Concluding Statement (underline in BLUE) |
| 3. Definitions & Examples (underline in YELLOW) | 6. Exposition Type |

INFORMATION UNITS

Information units are any clause (subject and verb) that conveys one piece of new information AND verbs with implied or missing subjects or that are separated from the subject that convey one piece of new information.

Information Units Examples	Non-examples
<ul style="list-style-type: none">Frogs hopAfter the rain pouredSeals will be tangledBefore he hid for fifty years...If we didn't clean up...More ice meltsWhen all the garbage goes......because everyone was playingThere are animals in the jungle(implied you) need to clean up trash...to help living forms survive.	<ul style="list-style-type: none">After the rain......with ropes and ...on the groundBefore fifty years......even at the beach...instead of swimBut don't with scissors (implied verb)...like the polar bearsRunning around (running is the subject)If you have (requires a direct object)...above the branch...to know (see difficult to score infinitives)

Information units are any clause (subject and verb) that conveys one piece of new information AND verbs with implied or missing subjects or that are separated from the subject that convey one piece of new information.

Irrelevant and Unscorable Examples
<ul style="list-style-type: none">I love flowers.I see in the picture.You said that ...I'll say it's an otter.I like eating strawberries and blueberries and I like to make toast.

When scoring:

- Count each information unit ONLY ONCE, even if the content is repeated.
- This is not a test of comprehension, therefore the information does not have to be "correct".

EXPOSITORY DISCOURSE

INFORMATION UNITS

Helpful tips

- **Look for verbs.** Verbs are critical to information units. You can never have an information unit with an implied verb.
- **Distinguish clauses** (relative, subordinate, conditional, and main clauses) from phrases that do not contain a verb (e.g. prepositional phrases)
- **Do not include utterances** directed to the examiner or to one's self if they do not include "information" about the topic.
- **Do not count false starts**, repetitions, and fractured phrases.
- **Sometimes verbs (usually -ing) function as nouns** (e.g., Exercising is good for you) so make sure the verb is really the verb in that sentence.
- **Infinitives** (verbs preceded with "to") count as long as they are adding new and complete information. Keep in mind some verbs need direct objects to be complete.
- **If/then statements** containing a complete subject and verb count as two Information Units. "If fish have gills,^{F1} then they can swing underwater for a long time.^{F2}"

EXAMPLES

- ...I milked a cow before ^{N1}, ... but actually it was so funny the cow was like, "Get off my udder."^{N2} He tried to kick me,^{N3}
- ...if you're accidentally lost ^{F1} and you're trynta survive ^{F2}, you might even run into a cougar ^{F3}, you're gonna have to flee ^{F4} until it's too tired.
- ...soil is the food for the food for the flowers ^{F1}, and flowers always need water ^{F2} and sun to grow (. . .) that if they don't have sun or water to grow ^{F3} they can die ^{F4}. And one more thing. If you water the plant too much, ^{F5} they can die ^{F6}. Cuz one day I did it ^{N1}, and then my plant died ^{N2}. It wasn't good at all ^{N3}.
- My my tooth (was) about to fall out ^{N1}. My sister tooth already fall out ^{N2}. Her tooth fall^{N3} when her chewing on something really hard ^{N4}. And now I one, two, three her tooth fall out ^{N5}.
- Um eat healthy and exercise. ^{F1} And you have to eat what your mom packs me ^{F2} like that or that or that or that or that. That's healthy ^{P1} but this is not healthy. ^{P2} And water's healthy. ^{F3}
In this sample, when the child states an item on the card is healthy and another item is not healthy, these are scored as Picture Information Units. When they then state that water is healthy (without a reference to the picture), it is scored as a Factual Information Unit.
- In this one the crab walks on the sand. ^{P1} Crabs can't swim. ^{F1}
Similar to the previous example, the child initially refers to the card ("in this one"), which is scored as a Picture Information Unit, then states that "crabs can't swim" which is scored as a Factual Information Unit.
- First you plant the dirt.¹ Then you put in the water² and give sunlight.³
Notice that use of "you" makes this factual because it is not about a specific event. It's about what typically happens and represents a "how to" exposition.
- Dolphins have gills.¹ Some sharks have gills² and crabs do not have gills.³
Even though dolphins don't have gills, this is still scored as a factual statement.
- ...in this picture it looks like they digged the ground ¹ and they put a seed ² and then they and then they put the sand back where it belong ³ and then the the mushroom grow big. ⁴
- This one is big¹ and that one is not big.²
- The elephant uses its trunk to splash its water on top of it^{F1} and then drinks water from there.^{F2} ... and the lion is, can, uh can fight with other animals.^{F3} And, um, the bird uses its big um it big mouth to eat to eat other little animals...^{F4}
While the story card does contain a picture of an elephant, lion, and bird, the child does not describe what is on each picture or directly reference the card. Therefore, the information is scored as Factual Information Units.

EXPOSITORY DISCOURSE		
INFORMATION UNITS	EXAMPLES OF DIFFICULT TO SCORE UNITS WITH LISTS (words in parentheses are the subjects that do not need to be repeated) <ul style="list-style-type: none"> • (They) can bounce ^{F1} and swim ^{F2}. – Scored like “They can bounce.” and “They can swim.” • (A caterpillar) comes ^{F1}, then wraps itself up ^{F2}, and becomes a butterfly ^{F3}. • There’s a way to protect the earth ^{F1}, to pick up trash ^{F2}, and to put it in the can ^{F3}. – The subjects of each segment are not explicit, but because there is a verb in each segment, and each segment provides unique information, they are information units. – Scored like “There’s a way to protect the earth. You pick up trash. You put it in the can.” • And you also, you can use like the chicken for its meat ^{F1}, because farmers have to eat that sometimes ^{F2} and fruit. – In this sample, “and fruit” is not an information unit even though it is part of a list with the subject in the stem. That is because it does not have a verb with it. It is just a noun. *Not every type of list counts for information units so monitor the verbs! 	
	EXAMPLES OF DIFFICULT TO SCORE UNITS WITH LISTS (words in parentheses are the subjects that do not need to be repeated) <ul style="list-style-type: none"> • Mushrooms could make spores F1 to send to see where is the best area for it for it to grow F2 and produce F3. – The main clause is “mushrooms could make spores”, but the “to send” is a false start and the “to see where is the best area” needs to have the endings “for it to grow” and “for it to produce” to complete the information. • The elephant uses its trunk to splash its water on top of it F1. – The “to splash its water” and “on top of it” are prepositional phrases and do not constitute independent information units. – A way to check to see if the infinitive is a verb is delete the original verb and see if it makes sense, “The elephant to splash its water.” and “The elephant on top of it.” • Animals need mushrooms to eatF1 to survive F2. – Scored like “Animals need mushrooms to eat.” and “Animals eat mushrooms to survive.” *Not all infinitives function as verbs so double check they are verbs. 	
DEFINITIONS AND EXAMPLES	DEFINITIONS	EXAMPLES
	<ul style="list-style-type: none"> • Definition– attempts to define a concept • Process: Underline Definitions in yellow. Remember, this is not a test of comprehension, therefore the information does not have to be correct. 	<ul style="list-style-type: none"> • Example – attempts to give an example of a concept • Process: Underline Examples in yellow. Examples must be spoken to count. If they are acted out or performed only (“The crab walks like this...”), they are not counted. Remember, this is not a test of comprehension, therefore the information does not have to be correct.
	Examples	Examples
	<ul style="list-style-type: none"> • Gills are <u>special body parts that help fish breathe underwater.</u> • Carnivore <u>means they eat plants.</u> • The pink dolphin is a <u>rare species of dolphin that lives in Africa.</u> • Healthy <u>means good for you.</u> 	<ul style="list-style-type: none"> • The <u>Brown Pelican</u> is an endangered animal. • Some insects go through metamorphosis, <u>like butterflies and frogs.</u> • It’s better for you to eat healthy foods, <u>like fruits and vegetables.</u> • <u>Orange</u> is a type of fruit.

EXPOSITORY DISCOURSE	
PASSAGE COHESION	<ul style="list-style-type: none"> Identify whether there is a common theme in which the Information Units support the Main Idea. Process: Review the Information Units and Main idea scores for the passage to determine the degree to which the child stays on topic. Annotate your decision making process in green. <div> RULES <ul style="list-style-type: none"> 1. If there is a zero for Main Idea AND zero for Information Units, then Passage Cohesion is automatically a zero. If MI=0 + IU=0, then PC=0 1. If there is a zero for Main Idea, then the Passage Cohesion score can not = 3 If MI=0 then PC=0, 1, or 2 1. If there is a 1, 2, or 3 for Main Idea, then the Passage Cohesion score can not = 0 or 1 If MI=1, 2, or 3 then PC=2 or 3 2. Just describing each card individually without a common topic is scored as a 1. </div>
CONCLUDING STATEMENT	<ul style="list-style-type: none"> Identify whether the passage contains a concluding statement or an attempt at a concluding statement. Process: Read the entire passage, then go back and determine if the final sentence/ phrase summarizes – or attempts to summarize – the main idea for a majority of the passage content. If it does, underline the corresponding section in blue. <div> EXAMPLES <ul style="list-style-type: none"> That’s why it’s important to clean up the earth. Those are all the kinds of animals that live in the jungle. That’s how the five senses all work together. That’s how we can stay healthy. </div>
EXPOSITION TYPES	<ul style="list-style-type: none"> Exposition Types DO NOT CONTRIBUTE TO TOTAL SCORE Identify which of the six Exposition types best describes your sample and fill in the circle for the corresponding category. If there are elements of multiple exposition types, fill in more than one circle. <div> How To <ul style="list-style-type: none"> How To is a basic exposition type that explains to someone else how to do something. It includes the use of “you” as the audience for the “how to” instruction. You have to take care of the world. You throw away trash and put plastic in the recycling. Or you won’t have a good world. In this sample, the frequent use of “you” as the audience makes it clear it is a How To exposition type. Description <ul style="list-style-type: none"> Description describes events, items, beings or places in great detail. “Ocean animals are kind animals. Some are kind. Um they can be small ones, big ones, or normal ones. They’re colorful. They live in the sea. Um thy eat other fishes and things and you can find them at the beach if you you go really deep, like in a submarine down under.” </div>

EXPOSITORY DISCOURSE	
EXPOSITION TYPES	Sequence
	<ul style="list-style-type: none"> Sequence describes a specific order of something and includes words such as “first”, “next”, “second”, or “last.” These transition words signal sequenced material. “Butterflies and frogs go through the same ... um something metamorphosis and then the butterfly first is a this, and then it turns into a cocoon and then it’s a worm and then it turns into a butterfly like poof.” <i>In this sample, “you” is not used as the audience and “first” is used so it is just a <u>Sequence</u> exposition type.</i> “What you need to growing plants. You need soil, sunlight and air and you need to water the dirt first, and the first step, you got put seeds in the ground because if you don’t plants won’t, um appear.” <i>In this sample, “you” is used throughout, but it also has as “first” so we would count it as How To and Sequence.</i>
	Comparison
	<ul style="list-style-type: none"> Comparison compares two or more topics, events, characters or items. “Some animals eat plants and other eat meat. These are two groups of animals. Plant herbivores and meat eaters. Some um...both...herbivores and meat eaters live in the jungle. Elephants and tigers adapted on the ground, onto the ground in the jungle, but bird and monkeys adapted in the high trees.”
	Cause/Effect
	<ul style="list-style-type: none"> Cause/Effect tells how one event (the cause) leads to another event (the effect). We need to recycle and put trash in the trash bin. If we don’t recycle, bags and plastic can end up in the ocean. Ocean animals think the trash is food, and they can get hurt if they try to eat it. Also, if we don’t recycle and throw away our trash the earth will get very messy. That is why need to recycle and put everything where it belongs.
	Problem/Solution
	<ul style="list-style-type: none"> Problem/Solution presents an issue and proposes a possible solution. “A lot of people threw their trash on the ground, and that is why the forest is full of trash. To keep the forest clean, people should not litter. They should put their trash in the trash cans and they should recycle their plastic and metal. That is how we can keep the Earth clean.” Example 1: “So hens they they are very loud animals and and cows are very very loud animal. Sometimes people can go on the farm, and sometimes they like to um to see animals but they have to make sure they don’t .. Um ... don’t hit the animals or do something dangerous to the animals because they might die ... and if you hit animals, they might not have a very long life. Just like hens, they might not have a very long life because they’re big, and fluffy, and can’t hide.” – <i>Classification: This has elements of <u>Description</u> and <u>Cause/Effect</u>.</i> Example 2: “Every time when you plant a seed um it grows big, big, and bigger. Um like mushrooms aren’t even though you plant a seed and it’s still little ... And um, trees, um they’re kind easy to plant but its that you just need to water them every day. And um leaves are um like. Leaves are sometimes come with um tress but kind like different seeds, like different leaves you have to pant and um like you have if like grass, I think you have to plant because um, some grass could could be rake because you buy them at the store and some flowers could be take too. ...And, um, I see in this picture it looks like they digged the found and they put a seed and then they and they then they put the sand back where it belong and then the the mushroom grow big.” – <i>Classification: Classification: This is clearly a <u>How To</u> exposition type because of how they use “you” as the audience, the sentences “leaves are sometimes come with um trees” and “they put a see and then they put the sand back where it belong and then the mushroom grow big” are descriptive, <u>How To</u> would be the primary exposition type and <u>Description</u> would be the secondary exposition type.</i>

NLM and ELM Flowchart Scoring Details: Writing Conventions (Optional)

NLM Flow Chart

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Child Name: _____

Grade: _____ Teacher: _____

School: _____

Examiner/Observer/Observer: _____

Sampling/Content: _____

Check all that apply:

☐ Read ☐ Write

☐ Spelling ☐ Punctuation

☐ Capitalization ☐ Spelling

☐ Punctuation ☐ Spelling

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WRITING CONVENTIONS (OPTIONAL)

Number of words written

Number of errors

Calculate Errors

Period at end of sentence

Question mark

Apostrophe

Quotation mark

Comma in a list

Number of words written

Number of errors

Calculate Errors

Lowercase for regular word

Uppercase I

Uppercase for first word of sentence

Uppercase for proper names

Uppercase for holidays, days, and months

Uppercase for acronyms

Sum of word ratings

Number of words written

Calculate Errors

Lowercase for regular word

Uppercase I

Uppercase for first word of sentence

Uppercase for proper names

Uppercase for holidays, days, and months

Uppercase for acronyms

Sum of word ratings

Number of words written

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Calculate Errors

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Uppercase for first word of sentence

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Uppercase for holidays, days, and months

Uppercase for acronyms

Rating Scale

Rate each word in the written sample using the rubric below

1 Unconventional symbol. Contains vertical line, dot, circle instead of letter or number.

2 Conventional symbol. Contains at least one real letter or number, but is unrecognizable as a word. Examples: "4", "7", "15", "80c"

3 Phonetic representation. Contains one or more letters that are phonetically related to a recognizable word. Examples: "ib" for "bird", "i" for "are"

4 Invented spelling. Contains two or more letters that represent most of the phonemes of a recognizable word. "Most" here is a vowel and be easy to figure out. Examples: "bir" for "bird", "gof" for "go"

5 Conventional spelling. Spelled correctly.

6 Conventional spelling. Spelled correctly.

7 Conventional spelling. Spelled correctly.

8 Conventional spelling. Spelled correctly.

9 Conventional spelling. Spelled correctly.

10 Conventional spelling. Spelled correctly.

11 Conventional spelling. Spelled correctly.

12 Conventional spelling. Spelled correctly.

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WRITING CONVENTIONS

CAPITALIZATION

Regular Words are Lowercase	First Word of Sentence	Proper Names are Capitalized
Correct • home, box, dog Incorrect: • Home, boX, DOG	Correct • They were happy. Incorrect: • they were happy.	Correct • Mary, Alaska, Atlantic Ocean, Dr. Jorge Incorrect: • She asked sara for help
Holidays, Days, and Months are Capitalized	Acronyms are Capitalized	
Correct • March, Christmas, Friday, April Incorrect: • halloween, tuesday, april	Correct • ASAP, DOB Incorrect: • asap, sped	

Count the Number of Words Written:

- A word is a letter or a string of letters that are separated from other words by spacing and/or by interpretable spelling.
- A word can be counted as a word even if you do not know what the word is, but is clearly set apart by spacing.
- If the sample does not have at least one interpretable sentence, do not score it for capitalization.
- If it is not scored, in the excel cell for capitalization, put **-1234**.
- **Always score punctuation first because capitalization errors are related to punctuation.**

Calculate the Number of Errors:

1. Search through the sample for errors, beginning with “lowercase for regular words.”
 2. For each error, fill in the circle or put an X on the number (1-3).
 3. If you get to 3 before searching the entire sample, you can stop.
- Repeat steps for each type of error and then sum the errors.
 - Capitalization errors are independent of spelling errors!
 - However, if you can’t figure out what the word is supposed to be, assume it is a regular word.

Subtract # of Errors from # of Words Written = Capitalization Score

WRITING CONVENTIONS

SPELLING

SCORE 0 = Unconventional Symbol

- ☺ ♦ *

SCORE 1 = Conventional Symbol

- 9, bh, rR, B3x

SCORE 2 = Phonetic Representation

- Can only score this if you know what word they are trying to write.
- If can't interpret the word, score as Conventional Symbol.

SCORE 3 = Invented Spelling

- Must have a vowel.
- Can only score this if you know what word they are trying to write.
- If no vowel, score as Phonetic Representation.
- If can't interpret the word, score as Conventional Symbol.

SCORE 4 = Conventional Spelling

- Word is spelled correctly.
- Homonyms of the intended word would receive 3 points.

**The use of a symbol instead of a word such as & or # is not scored for spelling. Treat it as missing and do not count it toward the word count for Writing Conventions.*

SPELLING WORD RATING

Count the Number of Words Written

- A word is a letter or a string of letters that are separated from other words by spacing and/or by interpretable spelling.
- A word can be counted as a word even if you do not know what the word is, but is clearly set apart by spacing.
- If the sample does not have at least one interpretable sentence, score the entire sample as either a 0 (if only unconventional symbols are used) or 1 (if sample has at least one conventional symbol).

Rate Each Word

- Use the interpreted sample and the original sample to determine each word's spelling score (0-4).
- If using a word document or a printed sample, place the number (0-4) under each word that corresponds to its rating.
- Add up all the scores and put that number in the top box "Sum of word ratings".
- Divide the Sum of Word Ratings by # of Words Written = Average Word Rating

INTERPRETATION OF SCORES

- The scales for punctuation and capitalization are not restricted to 0-4, like spelling is.
- Therefore, each index should be interpreted individually without creating a Writing Conventions total score.

DDM DYNAMIC DECODING MEASURES

The simple view of reading and constituent strands of that model reveal the extent to which the measurement of word recognition entails the assessment of multiple skills. The Dynamic Decoding Measures (DDM) subtest assesses those key skills. The DDM measures 1) phonemic awareness, including phoneme segmentation, phoneme blending, first sounds, continuous phoneme blending, phoneme addition, phoneme deletion, and phoneme substitution, 2) orthographic mapping, which provides the measurement of temporarily and irregularly spelled words, letter sounds, and letter names, and 3) decoding, which provides information on a student's ability to recode nonsense words with multiple syllable types and patterns.

Administration and scoring of the DDM subtests can be done in real-time, either by hand, or via a digital device using the Insight system. DDM Decoding forms are not grade-specific, yet guidelines for when to administer each subtest and target are provided in this manual. The same DDM Decoding subtests and targets are used for benchmark screening and for progress monitoring.

The image displays four overlapping DDM subtest forms: **DDM® Decoding Inventory (DI)**, **DDM® Orthographic Mapping (OM)**, **DDM® Phonemic Awareness (PA)**, and **DDM® Phoneme Manipulation (PM)**. Each form includes a 'Script' section with detailed instructions for administration and a 'Response Pattern' table for recording scores. The forms are marked with 'Benchmark' and 'Beginning of Year' indicators.

DECODING INVENTORY

- Closed Syllables
- Vowel-Consonant-E
- Basic Affixes
- Advanced Affixes
- Vowel Teams
- Vowel-R-Controlled
- Complex Vowels
- Advanced Word Forms
- Multisyllabic Words in Context

ORTHOGRAPHIC MAPPING

- Irregular Words
- Letter Sounds
- Letter Names

PHONEMIC AWARENESS

- Phoneme Segmentation
- Phoneme Blending
- First Sounds
- Continuous Phoneme Blending

PHONEME MANIPULATION

- Phoneme Deletion
- Phoneme Addition
- Episode Substitution

DDM Phonemic Awareness (PA) & DDM Phoneme Manipulation (PM)

Phonemic awareness is foundational to the decoding process. It is the ability to identify and manipulate individual sounds, called phonemes, in words. When vocally or sub-vocally decoding written words, a student converts arbitrary symbols, called graphemes, to sounds. The student can then recognize those sounds and blend them as necessary to form the words used in oral language. If a student cannot recognize the different phonemes in a word, then that student will likely not be able to assign different phonemes to different letters to decode, and the inverse is true for spelling. Although measuring phonemic awareness is not the same thing as measuring decoding (or spelling), it is highly predictive of decoding (and decoding) ability. Quality instruction in phonemic awareness can lead to improvement in decoding and spelling. Once a student can successfully blend and segment words into phonemes orally, he or she likely has sufficient phonemic awareness to decode, and spell written words.

DDM® Phonemic Awareness (PA) Benchmark Beginning of Year

DDM® Phoneme Manipulation (PM) Benchmark Beginning of Year

Benchmark Scores

Subtest	PA	PM
Phoneme Segmentation	1	1
Phoneme Blending	1	1
First Sounds	1	1
Continuous Phoneme Blending	1	1
Phoneme Deletion	1	1
Phoneme Addition	1	1
Phoneme Substitution	1	1

Response Pattern

Response	PA	PM
Blank response	0	0
Blank response with sound	0	0
Blank response with word	0	0
Blank response with sentence	0	0
Blank response with paragraph	0	0
Blank response with page	0	0
Blank response with book	0	0
Blank response with other	0	0

The DDM Phonemic Awareness (PA) subtest has four targets:

- The first target on the subtest is **Phoneme Segmentation**, followed by **Phoneme Blending**, then **First Sounds**, and then **Continuous Phoneme Blending**.

The DDM Phoneme Manipulation subtest has three targets:

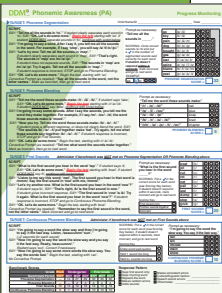
- Phoneme Deletion**, **Phoneme Addition**, and **Phoneme Substitution**.

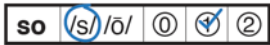
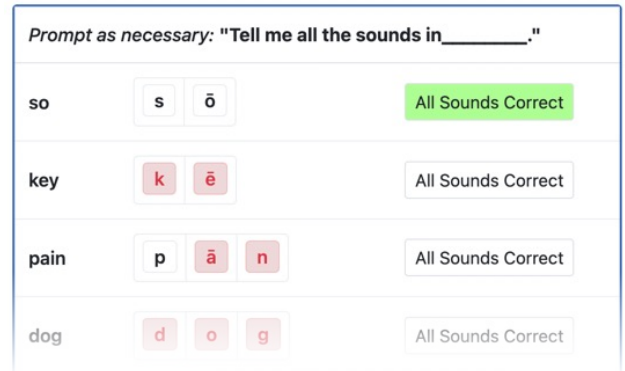
There are dynamic assessments features embedded in the phonemic awareness subtests. First, these subtests use a 'test the limits' procedure to identify a student's current instructional level, to examine how close a student is to demonstrating a more advanced level of phonemic awareness, and to measure the extent to which that student is progressing in his or her phonemic awareness. Second, there are instructional procedures used to help the student understand most of the phonemic awareness tasks, and the examiner can identify whether a student has particular difficulty learning the task that they will be asked to perform.

In the Phonemic Awareness and Phoneme Manipulation subtest, students are usually administered the more advanced target first. If it is clear that the student cannot perform at that level, which can be recognized quickly, then a less demanding skill is assessed until it is clear what a student can and cannot do. If at any point along the continuum of testing a student meets benchmark expectations on any target, subsequent targets are not administered. The same phonemic awareness measures are repeatedly used for progress monitoring. There are no alternate forms because of the improbability of a student being able to memorize the words used across the targets, and because the specific sounds in each word are not taught in any testing-related teaching procedures.

Phonemic Awareness (PA)

TARGET: Phoneme Segmentation

<div>► TARGET: Phoneme Segmentation</div> <div>Child Name/ID _____ Date _____</div> <div><div><div>SCRIPT</div><div>SAY: "Tell me all the sounds in 'to'." If student clearly separates each sound in 'to', SAY: "OK. Let's do some more." Begin the test starting with 'so'. If student DOES NOT separate sounds in 'to', continue with script below.</div><div>SAY: "I'm going to say a word. After I say it, you tell me all the sounds in the word. For example, if I say 'stop', you will say /s/ /t/ /o/ /p/."</div><div>SAY: "Let's try one: Tell me all the sounds in 'map'."</div><div>If student clearly separates each sound in 'map', SAY: "That's right. The sounds in 'map' are /m/ /a/ /p/."</div><div>If student does not separate sounds, SAY: "The sounds in 'map' are /m/ /a/ /p/. Try it again. Tell me all the sounds in 'map'."</div><div>If student response is incorrect, STOP and go to Phoneme Blending.</div><div>SAY: "OK. Let's do some more." Begin the test, starting with 'so'.</div><div>Corrective Prompt (as needed): "Say all the sounds in the word, not the letter names." Mark as incorrect, then go to next word.</div></div><div><div>Prompt as necessary: "Tell me all the sounds in _____."</div><div>SCORING: Circle correct sounds /s/ /o/ and put a ✓ in the number of segmented sounds said correctly for each word. If student doesn't respond within 2 seconds, mark incorrect, and go to next word.</div><div>EXAMPLE: <table><tr><td>so</td><td>/s/</td><td>/o/</td><td>0</td><td>1</td><td>2</td></tr><tr><td>key</td><td>/k/</td><td>/e/</td><td>0</td><td>1</td><td>2</td></tr><tr><td>pain</td><td>/p/</td><td>/ā/</td><td>/n/</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>dog</td><td>/d/</td><td>/o/</td><td>/g/</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>bought</td><td>/b/</td><td>/o/</td><td>/t/</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>gas</td><td>/g/</td><td>/a/</td><td>/s/</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>last</td><td>/l/</td><td>/a/</td><td>/s/</td><td>/t/</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>spice</td><td>/s/</td><td>/p/</td><td>/i/</td><td>/s/</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>blame</td><td>/b/</td><td>/l/</td><td>/ā/</td><td>/m/</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>pest</td><td>/p/</td><td>/e/</td><td>/s/</td><td>/t/</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr></table></div><div>PHONEME SEGMENTATION SCORE = <input type="text" value="32"/></div></div></div>		so	/s/	/o/	0	1	2	key	/k/	/e/	0	1	2	pain	/p/	/ā/	/n/	0	1	2	3	dog	/d/	/o/	/g/	0	1	2	3	bought	/b/	/o/	/t/	0	1	2	3	gas	/g/	/a/	/s/	0	1	2	3	last	/l/	/a/	/s/	/t/	0	1	2	3	4	spice	/s/	/p/	/i/	/s/	0	1	2	3	4	blame	/b/	/l/	/ā/	/m/	0	1	2	3	4	pest	/p/	/e/	/s/	/t/	0	1	2	3	4	<div>DOOP® Phonemic Awareness (PA)</div> <div></div>
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<div>Construct Significance</div>	<div>Phonemic Awareness Predicts Future Decoding and Spelling Outcomes</div> <div>Phonemic awareness is a meta-linguistic skill that enables word recognition and spelling. Performance on phonemic awareness tasks can help predict whether a student will likely meet future decoding/word-recognition expectations (Good et al., 2001, Torgesen, 1998, 2004).</div> <div>Students Who Struggle with Decoding Often Have Difficulty with Phonemic Awareness</div> <div>At least 80 percent of all poor readers are estimated to demonstrate a weakness in phonological awareness and/or phonological memory. Research has repeatedly shown that poor readers do poorly on phonemic awareness tasks. Readers with phonological processing weaknesses also tend to be the poorest spellers (Cassar, Trieman, Moats, Pollo, & Kessler, 2005).</div>																																																																																					
<div>Construct Connections</div>	<div>Phonemic Awareness is necessary for learning and using the alphabetic code</div> <div>English uses an alphabetic system where single letters and combinations of letters represent single speech sounds. Students who can take apart words into sounds (segmentation), demonstrate a foundational skill needed to use the alphabetic principle (Liberman, Shankweiler, & Liberman, 1989, Troia, 2004).</div> <div>Instruction in phonemic awareness helps beginning readers and spellers</div> <div>Instruction in speech-sound awareness can prevent and mitigate spelling difficulties (Adams, Foorman, Lundberg, & Beeler, 1998; Gillon, 2004; NICHD, 2000; Rath, 2001). Explicit instruction in speech sounds also accelerates learning of the alphabetic code.</div> <div>Phonemic awareness interacts with and facilitates the development of vocabulary and word consciousness</div> <div>Phonological awareness and memory are involved in these activities of word learning:</div> <div><ul style="list-style-type: none">• Attending to unfamiliar words and comparing them with known words• Repeating and pronouncing words correctly• Encoding words accurately so that they can be retrieved and used• Differentiating words that sound similar (homophones) so their meanings can be contrasted and accurately applied</div> <div>Phoneme segmentation is one of two key skills that facilitates orthographic mapping</div>																																																																																					

Assessment Schedule*	<p>Benchmark Expectations for: BOY Kindergarten to EOY First Grade</p> <p><i>*Phoneme Segmentation is usually administered prior to the administration of the Phoneme Manipulation subtest for all grades.</i></p>
Time	Varies according to student performance. Typically, less than 1 minute. This is an untimed test.
Prompts	<ul style="list-style-type: none"> Always prompt the first item, then prompt as necessary with the remaining items. “Tell me all the sounds in _____” Corrective prompt (as needed): “Say all the sounds in the word, not the letter names.” Mark as incorrect then go to the next word.
Scoring Overview	<p>Paper/Pencil:</p> <p>1 point for each correct phoneme segmented in each word.</p> <p>Circle the correct segmented phoneme and put a checkmark in the correct number of phonemes.</p> <p><i>EXAMPLE:</i></p>  <p>Insight:</p> <p>1 point for each correct phoneme segmented in each word.</p> <p>Click on any <i>incorrectly</i> segmented phonemes.</p> <div> <p>SCORING:</p> <p><i>Click the incorrect sounds /s/ /ō/. If student doesn't respond within 3 seconds, mark incorrect, and go to next word.</i></p>  </div>
Wait Rule	If student does not respond within 3 seconds, mark the word as incorrect and go to the next word. Prompt, “Tell me all the sounds in _____”
Discontinue Rule	If student produces incorrect response in last practice trial, STOP and go to <i>Phoneme Blending</i> .

What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> Kindergarten: This is typically the first assessment administered to kindergarten students. First grade+ students are typically administered the <i>NLM Reading</i> and/or the <i>NLM Listening</i> subtests first. <p>After:</p> <ul style="list-style-type: none"> If the student is not at benchmark, then administer the <i>Phoneme Blending</i> target. BOY and MOY kindergarten: If student is at benchmark, discontinue Phonemic Awareness subtest. Administer <i>Orthographic Mapping</i> subtest. *EOY kindergarten+: Administer the <i>Phoneme Manipulation</i> subtest. The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. This is not a timed test. Prompt as necessary: “Tell me all the sounds in _____” Corrective prompt (as needed): “Say all the sounds in the word, not the letter names.” Mark as incorrect then go to the next word. Use the benchmark table provided at the bottom of the protocol form to determine whether the student met benchmark expectations. Benchmark expectations are also available in this manual. Record Response Patterns and take additional notes as needed. Schwa sound (the ‘uh’ sound) are not counted as errors. Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Guidelines for Scoring the Phoneme Segmentation Target

Prompt as necessary: "Tell me all the sounds in _____."

so	s	ō	All Sounds Correct		
key	k	ē	All Sounds Correct		
pain	p	ā	n	All Sounds Correct	
dog	d	o	g	All Sounds Correct	
bought	b	o	t	All Sounds Correct	
gas	g	a	s	All Sounds Correct	
last	l	a	s	t	All Sounds Correct
spice	s	p	i	s	All Sounds Correct
blame	b	l	ā	m	All Sounds Correct
pest	p	e	s	t	All Sounds Correct
PHONEME SEGMENTATION SCORE = 13/32 High Risk					

Grade	Pre-K	Kindergarten			First Grade+		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY
Phoneme Segmentation	—	14	27	29	30	30	30

The student said 'p' - 'ain'.
They only segmented the /p/.

The student said 'gas'. They did not
segment any of the sounds.

If student is not at benchmark,
administer Phoneme Blending.

- In the Phoneme Segmentation target, students are asked to produce all the phonemes in a series of words. Students are required to produce each individual phoneme in each word.
- Score all sounds a student produces correctly. If a student inserts a sound, ignore it. Some students will produce the schwa vowel (uh) at the end of consonants, and even sometimes at the end of vowels. Although not ideal, these additional sounds are not counted against the student.
- The examiner can ask the student to say all the sounds in a word again if the examiner could not hear the student very well the first time, or if it was difficult to determine whether the student segmented the phonemes in a word the first time. The examiner should not ask a student to produce the sounds in a word more than two times. Insight will automate the scoring process. For students who speak very softly or quickly, the DDM may need to be scored from an audio recording.
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM.
- If a student meets the benchmark criteria on Phoneme Segmentation, then the Phonemic Awareness subtest can be discontinued (Phoneme Blending, First Sounds, and Continuous Phoneme Blending do not need to be administered). If the student does not meet benchmark, then Phoneme Blending should be administered.
- For example, if the test is being administered traditionally (paper/pencil) to a kindergarten student in the middle of the year (MOY), the examiner would quickly reference the kindergarten MOY benchmark for Phoneme Segmentation (from the table at the bottom of the protocol form) and note that benchmark is 27. The examiner would note that this student did not meet benchmark with a score of 13. Therefore, the examiner would administer the next target (Phoneme Blending).
- More specific cut point information can be obtained by referring to the comprehensive benchmark tables found in this manual, which includes benchmark and multiple risk cut points.

Phonemic Awareness (PA)

TARGET: Phoneme Blending

TARGET: Phoneme Blending

SCRIPT

SAY: "Tell me the word these sounds make: /r/ - /ē/ - /d/." If student says 'take', SAY: "OK. Let's do some more." **Begin the test** starting with /r/ /ē/ /d/. If student **DOES NOT** say 'take', continue with script below.

SAY: I'm going to say some sounds. After I say the sounds, you tell me the word they make together. For example, if I say /m/ - /oo/ - /d/, the word those sounds make is 'mood'."

SAY: "Now you try. Tell me the word these sounds make: /b/ - /a/ - /t/." If student gives a different response, or does not clearly blend the word, SAY: "The sounds /b/ - /a/ - /t/ put together make 'bat'. Try again, tell me what these sounds say together: /b/ - /a/ - /t/." If student response is incorrect, STOP and go to First Sounds.

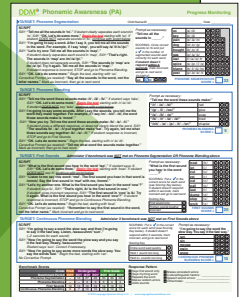
SAY: "OK. Lets do some more." Begin the test, starting with /r/ /ē/ /d/. Corrective Prompt (as needed): "Tell me what word the sounds make together." Mark as incorrect, then go to next word.

Prompt as necessary:

"Tell me the word these sounds make:"

"/r/ - /ē/ - /d/"	red	⓪	①
"/g/ - /l/ - /oo/"	glue	⓪	①
"/s/ - /ō/ - /p/"	soap	⓪	①
"/b/ - /r/ - /a/ - /d/"	brad	⓪	①
"/ch/ - /a/ - /p/ - /t/ - /er/"	chapter	⓪	①

PHONEME BLENDING SCORE = 5



Construct Measured	<p>Phonemic Awareness</p> <p>This subtest primarily relates to word recognition and falls under the umbrella of phonological awareness.</p>
Construct Significance	<p>Phonemic Awareness Predicts Future Decoding and Spelling Outcomes</p> <p>Phonemic awareness is a meta-linguistic skill that enables word recognition and spelling. Performance on phonemic awareness tasks can help predict whether a student will likely meet future decoding/word-recognition expectations (Good et al., 2001, Torgesen, 1998, 2004).</p> <p>Students Who Struggle with Decoding Often Have Difficulty with Phonemic Awareness</p> <p>At least 80 percent of all poor readers are estimated to demonstrate a weakness in phonological awareness and/or phonological memory. Research has repeatedly shown that poor readers do poorly on phonemic awareness tasks. Readers with phonological processing weaknesses also tend to be the poorest spellers (Cassar, Trieman, Moats, Pollo, & Kessler, 2005).</p>
Construct Connections	<p>Phonemic Awareness is necessary for learning and using the alphabetic code</p> <p>English uses an alphabetic system where single letters and combinations of letters represent single speech sounds. Students who can take apart words into sounds (segmentation), demonstrate a foundational skill needed to use the alphabetic principle (Liberman, Shankweiler, & Liberman, 1989, Troia, 2004).</p> <p>Instruction in phonemic awareness helps beginning readers and spellers</p> <p>Instruction in speech-sound awareness can prevent and mitigate spelling difficulties (Adams, Foorman, Lundberg, & Beeler, 1998; Gillon, 2004; NICHD, 2000; Rath, 2001). Explicit instruction in speech sounds also accelerates learning of the alphabetic code.</p> <p>Phonemic awareness interacts with and facilitates the development of vocabulary and word consciousness</p> <p>Phonological awareness and memory are involved in these activities of word learning:</p> <ul style="list-style-type: none"> • Attending to unfamiliar words and comparing them with known words • Repeating and pronouncing words correctly • Encoding words accurately so that they can be retrieved and used • Differentiating words that sound similar (homophones) so their meanings can be contrasted and accurately applied <p>Phoneme blending is one of two key skills that facilitates orthographic mapping</p>
Assessment Schedule*	<p>Benchmark Expectations for:</p> <p>BOY Kindergarten to EOY First Grade</p>

Time	Varies according to student performance. Typically, less than 30 seconds. This is an untimed test.																								
Prompts	<ul style="list-style-type: none">Always prompt the first item, then prompt as necessary with the remaining items. “Tell me the word these sounds make:”Corrective prompt (as needed): “Tell me what word the sounds make together.” Mark as incorrect then go to the next word.																								
Scoring Overview	<div><p>Paper/Pencil:</p><p>1 point if student says the correct word.</p><p>Insight:</p><p>1 point for each word blended correctly.</p></div> <div><p>Prompt as necessary: “Tell me the word these sounds make:”</p><table><tr><td>“/r/ - /e/ - /d/”</td><td>red</td><td>0</td><td>1</td></tr><tr><td>“/g/ - /l/ - /oo/”</td><td>glue</td><td>0</td><td>1</td></tr><tr><td>“/s/ - /o/ - /p/”</td><td>soap</td><td>0</td><td>1</td></tr><tr><td>“/b/ - /e/ - /d/ - /d/”</td><td>brad</td><td>0</td><td>1</td></tr></table></div> <div><p>Prompt as necessary: “Tell me the word these sounds make:”</p><table><tr><td>“/r/ - /e/ - /d/”</td><td>red</td><td>0</td><td>1</td></tr><tr><td>“/g/ - /l/ - /oo/”</td><td>glue</td><td>0</td><td>1</td></tr></table></div>	“/r/ - /e/ - /d/”	red	0	1	“/g/ - /l/ - /oo/”	glue	0	1	“/s/ - /o/ - /p/”	soap	0	1	“/b/ - /e/ - /d/ - /d/”	brad	0	1	“/r/ - /e/ - /d/”	red	0	1	“/g/ - /l/ - /oo/”	glue	0	1
“/r/ - /e/ - /d/”	red	0	1																						
“/g/ - /l/ - /oo/”	glue	0	1																						
“/s/ - /o/ - /p/”	soap	0	1																						
“/b/ - /e/ - /d/ - /d/”	brad	0	1																						
“/r/ - /e/ - /d/”	red	0	1																						
“/g/ - /l/ - /oo/”	glue	0	1																						
Wait Rule	No wait rule. Prompt as necessary: “Tell me the word these sounds make:”																								
Discontinue Rule	If student produces incorrect response in last practice trial, STOP and go to <i>First Sounds</i> .																								
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"><i>Phoneme Segmentation</i> is typically administered prior to this target.First grade+ students are typically administered the <i>NLM Reading</i> and/or the <i>NLM Listening</i> subtests first. <p>After:</p> <ul style="list-style-type: none">If the student is not at benchmark, then administer the <i>First Sounds</i> target.BOY and MOY kindergarten: If student is at benchmark, discontinue <i>Phonemic Awareness subtest</i>. Administer <i>Orthographic Mapping</i> subtest.The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.																								
Reminders	<ul style="list-style-type: none">Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry.Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time.This is not a timed test.Prompt as necessary: “Tell me the word these sounds make.”Corrective prompt (as needed): “Tell me what word the sounds make together.” Mark as incorrect then go to the next word.Use the benchmark table provided at the bottom of the protocol form to determine whether the student met benchmark expectations. Benchmark expectations are also available in this manual.Record Response Patterns and take additional notes as needed.Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.																								

Specific Guidelines for Scoring the Phoneme Blending Target

Prompt as necessary: "Tell me the word these sounds make:"

"/r/ - /e/ - /d/"	red	<div>0</div>	<div>1</div>
"/g/ - /l/ - /oo/"	glue	<div>0</div>	<div>1</div>
"/s/ - /ō/ - /p/"	soap	<div>0</div>	<div>1</div>
"/b/ - /r/ - /a/ - /d/"	brad	<div>0</div>	<div>1</div>
"/ch/ - /a/ - /p/ - /t/ - /er/"	chapter	<div>0</div>	<div>1</div>

PHONEME BLENDING SCORE =

3/5

Moderate Risk

The student said the word 'red'

The student said 'br' – 'ad'

If student is not at benchmark, administer First Sounds.

Grade	Pre-K	Kindergarten			First Grade+		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY
Phoneme Blending	–	–	2	3	3	4	4

- In the Phoneme Blending target, students are asked to blend individual phonemes clearly and distinctly presented by the examiner. Two points are awarded if a student correctly produces the first sound; one point is awarded if a student produces the first and second sounds together.
- If the student segments all three phonemes, the student is awarded two points and is then prompted to only produce the first sound.
- The examiner should check the correct score to the right of each word
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM.
- If a student meets the benchmark criteria on Phoneme Blending, then the Phonemic Awareness subtest can be discontinued (First Sounds, and Continuous Phoneme Blending do not need to be administered). If the student does not meet benchmark, then First Sounds should be administered.
- For example, if the test is being administered

traditionally (paper/pencil) to a second grade student in the middle of the school year (MOY), the examiner would quickly reference the table at the bottom of the protocol form and would notice that second grade is not on the table. The examiner would then use the grade closest to the student's grade (first grade) and note that the benchmark is 4. The examiner would note that this student did not meet benchmark with a score of 3. Therefore, the examiner would administer the next target (First Sounds).

- More specific cut point information can be obtained by referring to the comprehensive benchmark tables found in this manual, which includes benchmark and multiple risk cut points.

Phonemic Awareness (PA)

TARGET: First Sounds

TARGET: First Sounds Administer if benchmark was **NOT** met on Phoneme Segmentation OR Phoneme Blending above**SCRIPT**

SAY: "What is the first sound you hear in the word 'tap'." If student says /t/, SAY: "OK. Let's do some more." **Begin the test** starting with 'boat'. If student **DOES NOT** say /t/, **continue with script below**.

SAY: "Listen to me say this word: 'mat'. The first sound you hear in that word is /mmm/. Say the first sound in 'mat' with me, /mmm/."

SAY: "Let's try another one. What is the first sound you hear in the word 'cow'?" If student says /k/, SAY: "That's right, /k/ is the first sound in cow."

If student gives incorrect response, SAY: "The first sound in 'cow' is /k/. Try it again. What is the first sound you hear in the word 'cow'?" If student response is incorrect, STOP and go to Continuous Phoneme Blending.

SAY: "OK. Let's do some more." Begin the test, starting with 'boat'.

Corrective Prompt (as needed): "Remember to say the first sound in the word, not the letter name." Mark incorrect and go to next word.

Prompt as necessary:
"What is the first sound you hear in the word _____?"

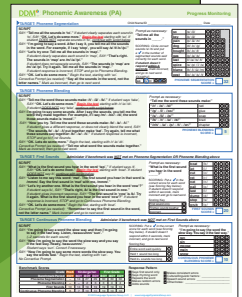
SCORING: Put a ✓ in the correct score for each word (see Scoring Key below). If student doesn't respond within 3 seconds, mark incorrect and go to next word.

Scoring Key

First sound only	2
First two sounds together	1
Incorrect	0

boat	/b/	0	1	2
jet	/j/	0	1	2
cut	/c/	0	1	2
rot	/r/	0	1	2
net	/n/	0	1	2
pail	/p/	0	1	2
last	/l/	0	1	2
dump	/d/	0	1	2
stop	/s/	0	1	2
grub	/g/	0	1	2

FIRST SOUNDS SCORE = **20**



Construct Measured	Phonemic Awareness This subtest primarily relates to word recognition and falls under the umbrella of phonological awareness .																												
Construct Significance and Connections	Identifying the first sound in a word is an early-emerging phonemic awareness skill This skill is related to phoneme segmentation, which is one of two key skills that facilitates orthographic mapping.																												
Assessment Schedule	Benchmark Expectations for: EOY Preschool to EOY First Grade																												
Time	Varies according to student performance. Typically, less than 1 minute. This is an untimed test.																												
Prompts	<ul style="list-style-type: none">Always prompt the first item, then prompt as necessary with the remaining items. “What is the first sound you hear in the word _____?”Corrective prompt (as needed): “Remember to say the first sound in the word, not the letter name.” Mark as incorrect go to the next word.																												
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none">2 points for each correct first sound (initial phoneme).1 point for correct first and second sounds combined (VC/CC). <p>Paper/Pencil: Put a checkmark in the correct score for each word.</p> <table><tr><td>boat</td><td>/b/</td><td>0</td><td>1</td><td>2</td></tr><tr><td>jet</td><td>/j/</td><td>0</td><td>1</td><td>2</td></tr><tr><td>cut</td><td>/c/</td><td>0</td><td>1</td><td>2</td></tr><tr><td>rot</td><td>/r/</td><td>0</td><td>1</td><td>2</td></tr></table> <p>Insight: Click on the correct score for each word.</p> <table><tr><td>boat /b/</td><td>0</td><td>1</td><td>2</td></tr><tr><td>jet /j/</td><td>0</td><td>1</td><td>2</td></tr></table>	boat	/b/	0	1	2	jet	/j/	0	1	2	cut	/c/	0	1	2	rot	/r/	0	1	2	boat /b/	0	1	2	jet /j/	0	1	2
boat	/b/	0	1	2																									
jet	/j/	0	1	2																									
cut	/c/	0	1	2																									
rot	/r/	0	1	2																									
boat /b/	0	1	2																										
jet /j/	0	1	2																										
Wait Rule	If student does not respond within 3 seconds, mark the word incorrect and go to the next word. Prompt, “ What is the first sound you hear in the word _____? ”																												

Discontinue Rule	If student produces incorrect response in last practice trial, STOP and go to <i>Continuous Phoneme Blending</i> .
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> • <i>Phoneme Blending</i> is typically administered prior to this target. <p>After:</p> <ul style="list-style-type: none"> • If the student is not at benchmark, then administer the <i>Continuous Phoneme Blending</i> target. • If student is at benchmark, discontinue <i>Phonemic Awareness</i> subtest. Administer <i>Orthographic Mapping</i> subtest. • The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the PEARL and DYMOND can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed test. • Prompt as necessary: “What is the first sound you hear in the word_____?” • Corrective prompt (as needed): “Remember to say the first sound in the word, not the letter name.” Mark as incorrect go to the next word. • Use the benchmark table provided at the bottom of the protocol form to determine whether the student met benchmark expectations. Benchmark expectations are also available in this manual. • Record Response Patterns and take additional notes as needed. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Guidelines for Scoring the First Sounds Target

Prompt as necessary: "What is the first sound you hear in the word ____?"

boat /b/	0	1	2
jet /j/	0	1	2
cut /c/	0	1	2
rot /r/	0	1	2
net /n/	0	1	2
pail /p/	0	1	2
last /l/	0	1	2
dump /d/	0	1	2
stop /s/	0	1	2
grub /g/	0	1	2

FIRST SOUNDS SCORE = 9/20 High Risk

The student said 'bo' instead of 'b'.

The student said 'j'.

The student said 'c' – 'u' – 't', segmenting each sound. The examiner reminded the student to only say the first sound.

The student said 'pail'.

If the student is not at benchmark, administer Continuous Phoneme Blending.

Grade	Pre-K	Kindergarten				First Grade+		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY	
First Sounds	10	14	19	19	19	19	19	

- In the First Sounds target, students are asked to identify the initial phoneme of a series of words. Two points are awarded if a student correctly produces the first sound; one point is awarded if a student produces the first and second sounds together.
- If the student segments all three phonemes, the student is awarded two points and is then prompted to only produce the first sound.
- The examiner should check the correct score to the right of each word.
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM.
- If a student meets the benchmark criteria on First Sounds, then the Phonemic Awareness subtest can be discontinued (Continuous Phoneme Blending does not need to be administered). If the student does not meet benchmark, then Phoneme Blending should be administered.
- For example, if the test is being administered traditionally (paper/pencil) to a first grade student in the beginning of the school year (BOY), the examiner would quickly reference the table at the bottom of the protocol form and would note that the benchmark is 19. The examiner would note that this student did not meet benchmark with a score of 9. Therefore, the examiner would administer the next target (Continuous Phoneme Blending).
- More specific cut point information can be obtained by referring to the comprehensive benchmark tables found in this manual, which includes benchmark and multiple risk cut points.

Phonemic Awareness (PA)

TARGET: Continuous Phoneme Blending

<div>TARGET: Continuous Phoneme BlendingAdminister if benchmark was NOT met on First Sounds above</div> <div><div>SCRIPT</div><div>SAY: "I'm going to say a word the slow way and then I'm going to say it the fast way. Listen, /sssuuunnn/ 'sun'." (~2 seconds for each sound) SAY: "Now I'm going to say the word the slow way and you say it the fast way. Ready, /sssuuunnn/." <i>Student says 'sun'. Correct if necessary.</i> SAY: "Now I'm going to say some more words the slow way. You say the words fast." Begin the test, starting with 'ran'. <i>No Corrective Prompt.</i></div><div>SCORING: Put a ✓ in the correct score for each word (see Scoring Key below). If student doesn't respond within 3 seconds, mark incorrect, and go to next word.</div><div>Scoring Key</div><div><table><tr><td>Entire word said quickly</td><td>2</td></tr><tr><td>Held 1 sound too long</td><td>1</td></tr><tr><td>Held 2+ sounds too long</td><td>0</td></tr></table></div><div><div>Prompt as necessary:</div><div>"I'm going to say the word the slow way. You say it the fast way."</div><div><table><tr><td>ran</td><td>0</td><td>1</td><td>2</td></tr><tr><td>sin</td><td>0</td><td>1</td><td>2</td></tr><tr><td>moose</td><td>0</td><td>1</td><td>2</td></tr><tr><td>main</td><td>0</td><td>1</td><td>2</td></tr><tr><td>snow</td><td>0</td><td>1</td><td>2</td></tr></table></div><div>CONTINUOUS PHONEME BLENDING SCORE = 10</div></div></div>		Entire word said quickly	2	Held 1 sound too long	1	Held 2+ sounds too long	0	ran	0	1	2	sin	0	1	2	moose	0	1	2	main	0	1	2	snow	0	1	2	
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main	0	1	2																									
snow	0	1	2																									
Construct Measured	Phonemic Awareness This subtest primarily relates to word recognition and falls under the umbrella of phonological awareness.																											
Construct Significance and Connections	Identifying the first sound in a word is an early-emerging phonemic awareness skill This skill is related to phoneme blending, which is one of two key skills that facilitates orthographic mapping.																											
Assessment Schedule	Benchmark Expectations for: EOY Preschool to EOY First Grade																											
Time	Varies according to student performance. Typically, less than 1 minute. This is an untimed test.																											
Prompts	<ul style="list-style-type: none">Always prompt the first item, then prompt as necessary with the remaining items. "I'm going to say the word the slow way. You say it the fast way."No corrective prompt allowed.																											
Scoring Overview	<div>Scoring Key:</div> <ul style="list-style-type: none">2 points for entire word said quickly (all sounds blended as a single word).1 point if one sounds is held too long.0 points if two or more sounds are held too long. <div>Paper/Pencil:</div> <div>Put a checkmark in the correct score for each word.</div> <div><table><tr><td>ran</td><td>0</td><td>1</td><td>2</td></tr><tr><td>sin</td><td>0</td><td>1</td><td>2</td></tr><tr><td>moose</td><td>0</td><td>1</td><td>2</td></tr><tr><td>main</td><td>0</td><td>1</td><td>2</td></tr></table></div> <div>Insight:</div> <div>Click on the correct score for each word.</div> <div><table><tr><td>ran</td><td>0</td><td>1</td><td>2</td></tr><tr><td>sin</td><td>0</td><td>1</td><td>2</td></tr></table></div>	ran	0	1	2	sin	0	1	2	moose	0	1	2	main	0	1	2	ran	0	1	2	sin	0	1	2			
ran	0	1	2																									
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moose	0	1	2																									
main	0	1	2																									
ran	0	1	2																									
sin	0	1	2																									
Wait Rule	If student does not respond within 3 seconds, mark the word incorrect and go to the next word. Prompt, "I'm going to say the word the slow way. You say it the fast way."																											
Discontinue Rule	No discontinuation rule. When this target has been administered, administer the Orthographic Mapping subtest.																											

What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> • <i>First Sounds</i> is typically administered prior to this target. <p>After:</p> <ul style="list-style-type: none"> • Administer <i>Orthographic Mapping</i> subtest. • The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed test. • Prompt as necessary: “I’m going to say the word the slow way. You say it the fast way.” • There are no corrective prompts. • Use the benchmark table provided at the bottom of the protocol form to determine whether the student met benchmark expectations. Benchmark expectations are also available in this manual. • Record Response Patterns and take additional notes as needed. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Guidelines for Scoring the Continuous Phoneme Blending Target

Prompt as necessary: "I'm going to say the word the slow way. You say it the fast way."

ran	0	1	2	<p>The student said the word ‘ran’ in a typical, blended manner.</p> <p>The student said ‘moose’.</p> <p>The student said ‘ssssnooooo’</p>
sin	0	1	2	
moose	0	1	2	
main	0	1	2	
snow	0	1	2	

CONTINUOUS PHONEME BLENDING SCORE = 5/10 High Risk

Grade	Pre-K	Kindergarten				First Grade+		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY	
Continuous Phoneme Blending	6	7	10	10	10	10	10	

- In the final target of the DDM Phonemic Awareness subtest, Continuous Phoneme Blending, students are asked to produce a word ‘fast’ after the examiner produces that word slowly (e.g., examiner says /ssssiiiiinnnn/ for “sin”, taking approximately 2 seconds for each sound, and the student says “sin” as they would in normal speech). Two points are awarded if a student says the entire word quickly; one point is awarded if a student produces part of the word quickly. All test items are administered.
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM.
- Continuous Phoneme Blending is the last target administered in the Phonemic Awareness subtest.

Phonemic Manipulation (PM)

TARGET: Phoneme Deletion

▶ TARGET: Phoneme Deletion

SCRIPT

SAY: "I am going to say a word. Then I will only say a part of that word. For example, 'make'. Now I'm going to say 'make' without saying /m/. 'ake'."

SAY: "Now you try one: Say 'goat'." Student says "goat".

"Now say 'goat' without saying /t/." Student says "go".

If student says 'go', SAY: "That's right. 'Goat' without the /t/ is 'go'."

If student gives a different response, SAY: "The sounds in 'goat' are /g/ /oa/ /t/. If I say 'goat' without saying /t/, I say 'go'. Now you say goat without saying /t/. If student response is incorrect, STOP and do not administer Phoneme Deletion or any additional APA subtest targets.

SAY: "OK. Let's do some more." Begin the test starting with 'pan'.

"Say 'pan'. (pause) Now say 'pan' without saying /p/."	an	0	1
"Say 'date'. (pause) Now say 'date' without saying /d/."	ate	0	1
"Say 'grim'. (pause) Now say 'grim' without saying /g/."	rim	0	1
"Say 'fork'. (pause) Now say 'fork' without saying /f/."	or	0	1
"Say 'freeze'. (pause) Now say 'freeze' without saying /z/."	free	0	1

PHONEME DELETION
SCORE =

Construct Measured	Phonemic Awareness This subtest primarily relates to word recognition strand in Scarborough's reading model and falls under the umbrella of phonological awareness .
Construct Significance and Connections	<p>"Phonological manipulation tasks are the best measures of the phonological awareness skills needed for reading because they are the best predictors of word-level reading proficiency" (Kilpatrick, 2015; p. 155)</p> <ul style="list-style-type: none"> Adding, deleting, and substituting phonemes is the layer of phonemic awareness that is the most closely related to reading connected text (Kilpatrick, 2015) Phoneme manipulation might be helpful for students who are not able to orthographically map words
Assessment Schedule*	Benchmark Expectations for: MOY Kindergarten to EOY First Grade <i>*The Phoneme Segmentation target from the Basic Phonemic Awareness subtest is usually administered prior to the Phoneme Manipulation subtest.</i>
Time	Varies according to student performance. Typically, less than 30 seconds. This is an untimed test.
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none"> 1 point for the correct word. <p>Paper/Pencil:</p> <p>Put a checkmark in the correct score for each word.</p> <p>Insight:</p> <p>Click on the correct score for each word.</p>

"Say 'pan'. (pause) Now say 'pan' without saying /p/."	an	0	1
"Say 'date'. (pause) Now say 'date' without saying /d/."	ate	0	1
"Say 'grim'. (pause) Now say 'grim' without saying /g/."	rim	0	1
"Say 'fork'. (pause) Now say 'fork' without saying /f/."	or	0	1

"Say 'pan'. (pause) Now say 'pan' without saying /p/."	an	0	1
"Say 'date'. (pause) Now say 'date' without saying /d/."	ate	0	1
"Say 'grim'. (pause) Now say 'grim' without saying /g/."	rim	0	1

Wait Rule	No wait rule.
Discontinue Rule	<ul style="list-style-type: none"> • If student produces incorrect response in final practice trial, STOP. Do not administer the <i>Phoneme Deletion</i> target or any other <i>Phoneme Manipulation</i> targets. • If the student can successfully complete the final practice item, administer all <i>Phoneme Deletion</i> items.
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> • <i>Phoneme Segmentation</i> from the <i>Phonemic Awareness (PA)</i> subtest is typically administered prior to this target. <p>After:</p> <ul style="list-style-type: none"> • Administer the <i>Phoneme Addition</i> target. • The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed test. • No prompts are allowed. • Benchmark expectations are available in this manual. • Record Response Patterns and take additional notes as needed. • Schwa sound (the 'uh' sound) are not counted as errors. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Phonemic Manipulation (PM)

TARGET: Phoneme Addition

TARGET: Phoneme Addition

SCRIPT

SAY: "I am going to say a word. Then I will add a sound to that word. For example, 'at'. Now I'm going to add /r/ to the *beginning* of 'at'. 'rat'."

SAY: "Now you try one: Say 'car'." Student says "car".
"Now add /t/ to the *end* of 'car'." Student says "cart".

If student says "cart", SAY: "That's right, 'car' with /t/ added to the *end* is 'cart'."

If student gives a different response, SAY: "The sounds in 'cart' are /k/ /ar/ /t/. If I say 'car' with a /t/ added to the *end*, I say 'cart'. Now you say car with /t/ added to the *end*." If student response is incorrect, STOP and do not administer Phoneme Addition or any additional APA subtest targets.

SAY: "OK. Let's do some more." Begin the test starting with 'and'.

"Say 'and'. (pause) Now add /s/ to the <i>beginning</i> of 'and'."	sand	0	1
"Say 'all'. (pause) Now add /k/ to the <i>beginning</i> of 'all'."	call	0	1
"Say 'lace'. (pause) Now add /p/ to the <i>beginning</i> of 'lace'."	place	0	1
"Say 'war'. (pause) Now add /m/ to the <i>end</i> of 'war'."	warm	0	1
"Say 'nee'. (pause) Now add /d/ to the <i>end</i> of 'nee'."	need	0	1

PHONEME ADDITION
SCORE =

Construct Measured	Phonemic Awareness This subtest primarily relates to word recognition strand in Scarborough’s reading model and falls under the umbrella of phonological awareness .																																
Construct Significance and Connections	<p>“Phonological manipulation tasks are the best measures of the phonological awareness skills needed for reading because they are the best predictors of word-level reading proficiency” (Kilpatrick, 2015; p. 155)</p> <ul style="list-style-type: none">• Adding, deleting, and substituting phonemes is the layer of phonemic awareness that is the most closely related to reading connected text (Kilpatrick, 2015)• Phoneme manipulation might be helpful for students who are not able to orthographically map words																																
Assessment Schedule	Benchmark Expectations for: MOY Kindergarten to EOY First Grade																																
Time	Varies according to student performance. Typically, less than 30 seconds. This is an untimed test.																																
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none">• 1 point for the correct word. <p>Paper/Pencil:</p> <p>Put a checkmark in the correct score for each word.</p> <p>Insight:</p> <p>Click on the correct score for each word.</p> <div><table><tr><td>“Say ‘and’. (pause) Now add /s/ to the <i>beginning</i> of ‘and’.”</td><td>sand</td><td>0</td><td>1</td></tr><tr><td>“Say ‘all’. (pause) Now add /k/ to the <i>beginning</i> of ‘all’.”</td><td>call</td><td>0</td><td>1</td></tr><tr><td>“Say ‘lace’. (pause) Now add /p/ to the <i>beginning</i> of ‘lace’.”</td><td>place</td><td>0</td><td>1</td></tr><tr><td>“Say ‘war’. (pause) Now add /m/ to the <i>end</i> of ‘war’.”</td><td>warm</td><td>0</td><td>1</td></tr></table><div><table><tr><td>“Say ‘and’. (pause) Now add /s/ to the beginning of ‘and’.”</td><td>sand</td><td>0</td><td>1</td></tr><tr><td>“Say ‘all’. (pause) Now add /k/ to the beginning of ‘all’.”</td><td>call</td><td>0</td><td>1</td></tr><tr><td>“Say ‘lace’. (pause) Now add /p/ to the beginning of ‘lace’.”</td><td>place</td><td>0</td><td>1</td></tr><tr><td>“Say ‘war’. (pause) Now add /m/ to the end of ‘war’.”</td><td>warm</td><td>0</td><td>1</td></tr></table></div></div>	“Say ‘and’. (pause) Now add /s/ to the <i>beginning</i> of ‘and’.”	sand	0	1	“Say ‘all’. (pause) Now add /k/ to the <i>beginning</i> of ‘all’.”	call	0	1	“Say ‘lace’. (pause) Now add /p/ to the <i>beginning</i> of ‘lace’.”	place	0	1	“Say ‘war’. (pause) Now add /m/ to the <i>end</i> of ‘war’.”	warm	0	1	“Say ‘and’. (pause) Now add /s/ to the beginning of ‘and’.”	sand	0	1	“Say ‘all’. (pause) Now add /k/ to the beginning of ‘all’.”	call	0	1	“Say ‘lace’. (pause) Now add /p/ to the beginning of ‘lace’.”	place	0	1	“Say ‘war’. (pause) Now add /m/ to the end of ‘war’.”	warm	0	1
“Say ‘and’. (pause) Now add /s/ to the <i>beginning</i> of ‘and’.”	sand	0	1																														
“Say ‘all’. (pause) Now add /k/ to the <i>beginning</i> of ‘all’.”	call	0	1																														
“Say ‘lace’. (pause) Now add /p/ to the <i>beginning</i> of ‘lace’.”	place	0	1																														
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“Say ‘war’. (pause) Now add /m/ to the end of ‘war’.”	warm	0	1																														
Wait Rule	No wait rule.																																

Discontinue Rule	<ul style="list-style-type: none"> • If student produces incorrect response in final practice trial, STOP. Do not administer the <i>Phoneme Addition</i> target or any other <i>Phoneme Manipulation</i> targets. • If the student can successfully complete the final practice item, administer all <i>Phoneme Deletion</i> items.
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> • <i>Phoneme Deletion</i> is typically administered prior to this target. <p>After:</p> <ul style="list-style-type: none"> • Administer the <i>Phoneme Substitution</i> target. • The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed test. • No prompts are allowed. • Benchmark expectations are available in this manual. • Record Response Patterns and take additional notes as needed. • Schwa sound (the ‘uh’ sound) are not counted as errors. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

DDM Phonemic Manipulation (PM)

TARGET: Phoneme Substitution

TARGET: Phoneme Substitution

SCRIPT

SAY: "I am going to say a word. Then I will change a sound in that word. For example, 'win'. Now I'm going to change /w/ sound in 'win' to /p/. That turns the word 'win' into 'pin'."

SAY: "Now you try one: Say 'game'." Student says "game".

"Now change the /g/ sound in 'game' to /s/." Student says "same".

If student says "same", SAY: "That's right. You changed the /g/ sound in 'game' to /s/. Now the word is 'same'."

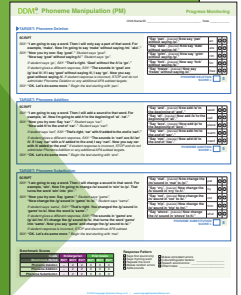
If student gives a different response, SAY: "The sounds in 'game' are /g/ /ai/ /m/. If I change the /g/ sound to /s/, that turns the word 'game' into 'same'. Now you say 'game' and change the /g/ sound to /s/."

If student response is incorrect, STOP and discontinue APA subtest.

SAY: "OK. Let's do some more." Begin the test starting with 'mat'.

"Say 'mat'. (pause) Now change the /m/ sound in 'mat' to /p/."	pat	0	1
"Say 'cry'. (pause) Now change the /k/ sound in 'cry' to /t/."	try	0	1
"Say 'not'. (pause) Now change the /n/ sound in 'not' to /k/."	cot	0	1
"Say 'trip'. (pause) Now change the /p/ sound in 'trip' to /m/."	trim	0	1
"Say 'shove'. (pause) Now change the /v/ sound in 'shove' to /t/."	shut	0	1

PHONEME SUBSTITUTION
SCORE =



Construct Measured	Phonemic Awareness This subtest primarily relates to word recognition strand in Scarborough’s reading model and falls under the umbrella of phonological awareness .																																
Construct Significance and Connections	<ul style="list-style-type: none">• Phoneme substitution is the critical breakthrough skill a child needs to teach themselves how to read new words• “Phonological manipulation tasks are the best measures of the phonological awareness skills needed for reading because they are the best predictors of word-level reading proficiency” (Kilpatrick, 2015; p. 155)• Adding, deleting, and substituting phonemes is the layer of phonemic awareness that is the most closely related to reading connected text (Kilpatrick, 2015)• Phoneme manipulation might be helpful for students who are not able to orthographically map words																																
Assessment Schedule	Benchmark Expectations for: MOY Kindergarten to EOY First Grade																																
Time	Varies according to student performance. Typically, less than 30 seconds. This is an untimed test.																																
Prompt	<ul style="list-style-type: none">• Say the prompts provided for each item word for word (e.g., “Say ‘mat’. (pause) Now change the /m/ sound in ‘mat’ to /p/.”)• No corrective prompt allowed.																																
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none">• 1 point for the correct word. <p>Paper/Pencil:</p> <p>Put a checkmark in the correct score for each word.</p> <p>Insight:</p> <p>Click on the correct score for each word.</p> <div><table><tr><td>“Say ‘mat’. (pause) Now change the /m/ sound in ‘mat’ to /p/.”</td><td>pat</td><td><input type="radio"/></td><td><input checked="" type="radio"/></td></tr><tr><td>“Say ‘cry’. (pause) Now change the /k/ sound in ‘cry’ to /t/.”</td><td>try</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td></tr><tr><td>“Say ‘not’. (pause) Now change the /n/ sound in ‘not’ to /k/.”</td><td>cot</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td></tr><tr><td>“Say ‘trip’. (pause) Now change the /p/ sound in ‘trip’ to /m/.”</td><td>trim</td><td><input type="radio"/></td><td><input checked="" type="radio"/></td></tr></table><div><table><tr><td>“Say ‘mat’. (pause) Now change the /m/ sound in ‘mat’ to /p/.”</td><td>pat</td><td><input type="radio"/></td><td><input checked="" type="radio"/></td></tr><tr><td>“Say ‘cry’. (pause) Now change the /k/ sound in ‘cry’ to /t/.”</td><td>try</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td></tr><tr><td>“Say ‘not’. (pause) Now change the /n/ sound in ‘not’ to /k/.”</td><td>cot</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td></tr><tr><td>“Say ‘trip’. (pause) Now change the /p/ sound in ‘trip’ to /m/.”</td><td>trim</td><td><input type="radio"/></td><td><input checked="" type="radio"/></td></tr></table></div></div>	“Say ‘mat’. (pause) Now change the /m/ sound in ‘mat’ to /p/.”	pat	<input type="radio"/>	<input checked="" type="radio"/>	“Say ‘cry’. (pause) Now change the /k/ sound in ‘cry’ to /t/.”	try	<input checked="" type="radio"/>	<input type="radio"/>	“Say ‘not’. (pause) Now change the /n/ sound in ‘not’ to /k/.”	cot	<input checked="" type="radio"/>	<input type="radio"/>	“Say ‘trip’. (pause) Now change the /p/ sound in ‘trip’ to /m/.”	trim	<input type="radio"/>	<input checked="" type="radio"/>	“Say ‘mat’. (pause) Now change the /m/ sound in ‘mat’ to /p/.”	pat	<input type="radio"/>	<input checked="" type="radio"/>	“Say ‘cry’. (pause) Now change the /k/ sound in ‘cry’ to /t/.”	try	<input checked="" type="radio"/>	<input type="radio"/>	“Say ‘not’. (pause) Now change the /n/ sound in ‘not’ to /k/.”	cot	<input checked="" type="radio"/>	<input type="radio"/>	“Say ‘trip’. (pause) Now change the /p/ sound in ‘trip’ to /m/.”	trim	<input type="radio"/>	<input checked="" type="radio"/>
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“Say ‘trip’. (pause) Now change the /p/ sound in ‘trip’ to /m/.”	trim	<input type="radio"/>	<input checked="" type="radio"/>																														

Wait Rule	No wait rule.
Discontinue Rule	<ul style="list-style-type: none"> • If student produces incorrect response in final practice trial, STOP. Do not administer the <i>Phoneme Substitution</i> target or any other <i>Phoneme Manipulation</i> targets. • Administer the <i>Orthographic Mapping</i> subtest
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> • <i>Phoneme Addition</i> is typically administered prior to this target. <p>After:</p> <ul style="list-style-type: none"> • Administer the <i>Orthographic Mapping</i> subtest. • The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> • Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. • Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. • This is not a timed test. • There are no corrective prompts. • Benchmark expectations are available in this manual. • Record Response Patterns and take additional notes as needed. • Schwa sound (the 'uh' sound) are not counted as errors. • Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

DDM Orthographic Mapping (OM)

Orthographic Mapping entails the rapid, automatized recognition of written words. The process requires the ability to automatically map a sound or a group of sounds onto a symbol or group of symbols from memory. Fluent, effective readers primarily use this process when reading.

The DDM Orthographic Mapping subtest has three targets:

- Irregular Words, Letter Sounds, and Letter Names.

This subtest helps to identify a student's instructional level and to measure the extent to which that student is progressing in his or her automatic recall of a selection of temporarily and permanently irregularly spelled words, letter sounds, or letter names. The Orthographic Mapping targets are timed in order to help measure automaticity.

Identifying irregular words and knowing letter sounds is important to decoding. However, it is not necessary to know letter names to be an effective reader. Nevertheless, educators teach letter names to young children, and are therefore often interested in documenting progress in that area. Furthermore, conceptually, the process across all three targets is nearly identical, wherein an arbitrary symbol or group of symbols is assigned one or more sounds from memory.

In the DDM Orthographic Mapping subtest, students are typically administered Irregular Words and Letter Sounds. Because irregular word identification and letter sound identification are both important to the decoding process, both targets are usually administered to younger students, even when a student has met benchmark or demonstrates mastery on the Irregular Words or Letter Sounds measures. Of course, if a student has reached mastery on any of the targets previously, those targets do not need to be reassessed unless regression of skills is suspected. There is considerable flexibility in the order of administration of the targets. If the examiner suspects that a very young student will become quickly frustrated having to read irregular words, and will “shut down” because of the target difficulty, then easier or earlier developing targets can be administered first, and the assessment can get progressively harder instead of progressively easier. Young kindergarten students are administered the Letter Names, and Letter Sounds targets, in that order, and Irregular Words is not administered. There are no alternate forms because of the improbability of a student being able to memorize the order of the words and letters used across the targets, and because the specific words, letter sounds, and letter names are not taught in any testing-related teaching procedures.

DDM[®] Orthographic Mapping (OM) Benchmark Beginning of Year

Child Name/ID _____ Date _____

TARGET: Irregular Words

SCRIPT: Display Irregular Words from benchmark student stimulus book. SAY: "Please read these words. If you don't know a word, that is OK. Just keep going." Point to the first word "the". Start the 1 minute timer.

SCORING: Put a slash (/) through incorrect or circle correct words. If student pauses for 3 seconds, say the word, mark it incorrect, and point to the next word. After 1 minute, place bracket () after last word read if student doesn't know any words in the first row. SAY: "Look at the rest of these words. Read the words you know."

the a to his I they you was 8
said she do he some have little my 14
like what were is love come one me 24
how of this find where your over could 32
from info who go here soon saw new 40
good all no there away down does one 48
out their off day would see

IRREGULAR WORD SCORE = **54**

TARGET: Letter Sounds Administer if mastery of letter sounds has NOT been previously documented

SCRIPT: Display Letter Sounds from benchmark student stimulus book. SAY: "Letters make sounds." Point to the "M". "The sound this letter makes is /mmm/. Say /mmm/." "Tell me the sound this letter makes." Point to the "M". If student says /mmm/, SAY: "That's right. This letter says /mmm/." If student gives a different response, SAY: "The sound this letter makes is /mmm/. Now you say the sound this letter makes." If student response is incorrect, STOP and do not administer Target 2 Letter Sounds. SAY: "I want you to tell me the sounds these letters make. If you don't know a sound, that's OK. Just keep going." Point to the first letter "M". SAY: "Go." Start the 1 minute timer. Corrective Prompt (2x max): "Tell me the sound the letter makes."

SCORING: Put a slash (/) through incorrect or circle correct letter sounds. Any appropriate letter sounds are correct (e.g., long /short vowels, guh /juh for y). After 1 minute, place bracket () after last sound student says. If student pauses for 3 seconds, say the sound, mark it incorrect, and point to the next letter. Do not score the letter "M" used in the demo. If student doesn't know any letter sounds in the first row, SAY: "Look at the rest of these letters. Tell me the sounds of the letters that you know."

M h S w e d v X 7
H D F M J m th N 15
W V G P T z L k 23
Q b h O T r u e X 31
I p s c x a q R ph 39
o i K t U A Sh Rh 47
ch wh Ch Th Qu Wh

LETTER SOUNDS SCORE = **61**

TARGET: Letter Names Administer if benchmark was NOT met on Letter Sounds above

SCRIPT: Display Letter Names from benchmark student stimulus book. SAY: "Letters have names." Point to the "O". SAY: "The name of this letter is /oi/. Say /oi/." SAY: "All these letters have names. I want you to tell me the names of these letters." Point to the first letter "O". SAY: "Go." Start the 2 minute timer. Corrective Prompt (2x max): "Tell me the name of the letter."

SCORING: Put a slash (/) through incorrect letters. If student pauses for 3 seconds, say the letter, mark it incorrect, and point to the next letter. After 2 minutes, place bracket () after last letter name student says. Do not score the letter "O" used in the demo. If student doesn't know any letter names in the first row, SAY: "Look at the rest of these letters and tell me the ones that you know."

O t B Z I z j w 7
l o r f A X g p 15
e F R M q N h 23
n G u V D C u Q 31
W i J O c P S a 39
L v Y M v X b s 47
E K d k T

LETTER NAMES SCORE = **52**

Benchmark Scores

Benchmark Period	Pre-K			Kindergarten			First Grade			Second Grade		
	EDV	BOV	MOV	EDV	BOV	MOV	EDV	BOV	MOV	EDV	BOV	MOV
Irregular Words	—	3	7	12	12	30	35	35	40	40		
Letter Sounds	5	5	15	30	30	35	43					

Response Pattern

☐ Makes random errors
☐ Makes consistent errors on specific letter(s)
☐ Says letter sound instead of letter name
☐ Doesn't track correctly
☐ Cultural/linguistic factors
☐ Speech sound errors
☐ Other/unknown

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Orthographic Mapping (OM)

TARGET: Irregular Words

▶ TARGET: Irregular Words

SCRIPT

Display Irregular Words from benchmark student stimulus book.

SAY: "Please read these words. If you don't know a word, that is OK. Just keep going."

Point to the first word 'the'.

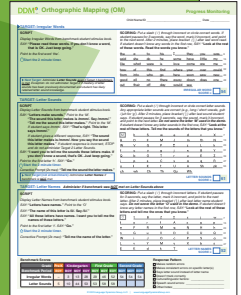
▶ Start the 2 minute timer.

▶ Next Target: Administer **Letter Sounds** even if Target 1 benchmark is met. Exception: do not administer Target 2 if mastery of letter sounds has been previously documented and student has likely retained letter sound knowledge.

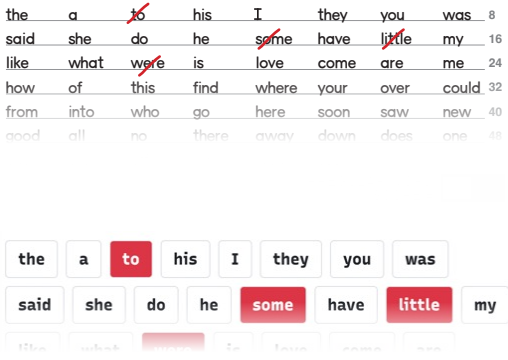
SCORING: Put a slash (/) through incorrect or circle correct words. If student pauses for 3 seconds, say the word, mark it incorrect, and point to the next word. After 2 minutes, place bracket () after last word read. If student doesn't know any words in the first row, SAY: "Look at the rest of these words. Read the words you know."

the a to his I they you was 8
said she do he some have little my 16
like what were is love come are me 24
how of this find where your over could 32
from into who go here soon saw new 40
good all no there away down does one 48
out their off day would see

IRREGULAR WORD SCORE = 54



Construct Measured	Orthographic Mapping This subtest primarily relates to the word recognition strand in Scarborough's reading model and falls under the umbrella of Sight Recognition . This subtest measures a student's ability to recognize temporarily and permanently irregularly spelled words, letter names, and letter sounds.
Construct Significance	<ul style="list-style-type: none"> • Students learn to read words by sight, to spell words from memory, and to acquire vocabulary words from print using Orthographic Mapping • Many students with word-reading difficulties do not develop orthographic mapping as they should • Some students have difficulty developing the sight word vocabulary needed for fluent reading and will likely stay disfluent and hesitant readers unless they receive intervention that builds proficiency in phonemic awareness (in particular segmenting and blending) and phonics and decoding skills (Kilpatrick, 2015; Parker, 2019).
Construct Connections	<ul style="list-style-type: none"> • Orthographic Mapping is enabled by phonemic awareness and grapheme-phoneme knowledge • Segmenting and blending phonemes is needed to support decoding and orthographic mapping • Orthographic mapping involves the formation of letter-sound connections to bond the spellings, pronunciations, and meanings of specific words in memory
Assessment Schedule	Benchmark Expectations for: MOY Kindergarten to EOY Second Grade
Time	2 minutes. This is a timed test.
Prompts	<ul style="list-style-type: none"> • "Please read these words. If you don't know a word, that is OK. Just keep going." • If student doesn't know any words in the first row, say, "Look at the rest of these words. Read the words you know."
Scoring Overview	Scoring Key: <ul style="list-style-type: none"> • 1 point for each word read correctly.

Scoring Overview	<p>Paper/Pencil:</p> <p>Cross out (or put a slash through) any words read incorrectly.</p> <p>Place a bracket after the last word attempted by student at the end of 2 minutes.</p> <p>Insight:</p> <p>Click on any words read incorrectly.</p> <p>Click on the last word attempted by student at the end of 2 minutes.</p> 
Wait Rule	<p>If student pauses for 3 seconds, say the word, mark it incorrect, and point to the next word.</p>
Discontinue Rule	<ul style="list-style-type: none"> Discontinue after 2 minutes or when student reaches end of word list. If student doesn't know any words in the first row, say, "Look at the rest of these words. Read the words you know."
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> The <i>Phonemic Awareness</i> and/or the <i>Phoneme Manipulation</i> subtests are typically administered prior the <i>Orthographic Mapping</i> subtest. <p>After:</p> <ul style="list-style-type: none"> Administer <i>Letter Sounds</i> unless mastery of letter sounds has been documented previously. The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. This is a timed test. The student has 2 minutes to read as many words as they can. Use the benchmark table provided at the bottom of the protocol form to determine whether the student met benchmark expectations. Benchmark expectations are also available in this manual. Record Response Patterns and take additional notes as needed. The word 'a' can be pronounced with a long or short vowel sound. Do not let the student skip a row. If student begins to read from top to bottom, or points randomly, say, "Go this way" and move your finger from left to right along the row. This reminder can only be given one time. If a student stops and it appears that they are not certain if they should continue, say "keep going". Say as often as necessary. If student loses their place, point to where they left off to help them find their place in the row. Do this as often as necessary. Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Guidelines for Scoring the Irregular Words Target

thea to his I they you was said

she do he some have little my like

what were is love come are me how

of this find where your over could

from into who go here soon saw new

good all no there away down does

one out their off day would see

IRREGULAR WORD SCORE = 40 / 54 Moderate Risk

If student struggles reading a word for more than 3 seconds, say the word for them and have them move to the next word.

Administer the next target, Letter Sounds, even if the student is at benchmark.

Grade	Pre-K	Kindergarten			First Grade			Second Grade		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
Irregular Words	–	3	13	28	29	46	52	54	54	54

- In the Irregular Words target, students are asked to read a series of permanent/temporary irregular words in two minutes. One point is assigned for each word read correctly by the student. The examiner puts a slash / through words read incorrectly. If a student pauses or struggles reading the word for 3 seconds, the examiner says the word, marks it as incorrect, and points to the next word. The assessment is timed in order to measure automaticity.
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM. To score the digital Irregular Words target, start the timer and click on the words read by the student incorrectly.
- Even if a student meets the benchmark criteria on Irregular Words, Letter Sounds should be administered in most cases. This is because both irregular words and letter sounds are important skills to master and monitor for mastery and growth over time. Nevertheless, because letter sound knowledge is a constrained skill, it may not be necessary to administer the Letter Sounds target if the student has previously demonstrated mastery in letter sounds.
- If the test is being administered traditionally (paper/pencil) to a first grade student in the middle of the school year (MOY), the examiner would quickly reference the table at the bottom of the protocol form and would note that the benchmark is 46. The examiner would note that this student did not meet the benchmark expectation with a score of 40.
- More specific cut point information can be obtained by referring to the comprehensive benchmark tables found in this manual, which includes benchmark and multiple risk cut points.

Orthographic Mapping (OM)

TARGET: Letter Sounds

TARGET: Letter Sounds

SCRIPT

Display Letter Sounds from benchmark student stimulus book.

SAY: "Letters make sounds." Point to the 'M'.

"The sound this letter makes is /mmm/. Say /mmm/."

"Tell me the sound this letter makes." Point to the 'M'.

If student says /mmm/, SAY: "That's right. This letter says /mmm/."

If student gives a different response, SAY: "The sound this letter makes is /mmm/. Now you say the sound this letter makes." If student response is incorrect, STOP and do not administer Target 2 Letter Sounds.

SAY: "I want you to tell me the sounds these letters make. If you don't know a sound, that's OK. Just keep going."

Point to the first letter 'h'. SAY: "Go."

Start the 2 minute timer.

Corrective Prompt (2x max): "Tell me the sound the letter makes."

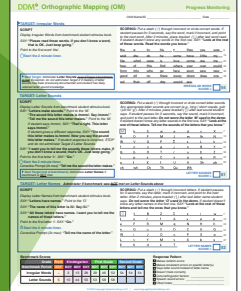
Next Target (not at benchmark): Administer Letter Names if benchmark is NOT met.

SCORING: Put a slash (/) through incorrect or circle correct letter sounds.

Any appropriate letter sounds are correct (e.g., long / short vowels, guh / juh for 'g'). After 2 minutes, place bracket () after last sound student says. If student pauses for 3 seconds, say the sound, mark it incorrect, and point to the next letter. Do not score the letter 'M' used in the demo. If student doesn't know any letter sounds in the first row, SAY: "Look at the rest of these letters. Tell me the sounds of the letters that you know."

M	h	S	w	e	d	v	X	7
H	D	F	M	J	m	th	N	15
W	V	G	P	I	z	L	k	23
f	c	y	g	j	n	B	Y	31
Q	b	O	T	r	u	E	Z	39
i	p	s	C	x	a	q	R	47
o	l	K	t	U	A	Sh	ph	55
ch	wh	Ch	Th	Qu	Wh			

LETTER SOUNDS
SCORE = 61



Construct Measured	Orthographic Mapping This subtest primarily relates to the word recognition strand in Scarborough's reading model and falls under the umbrella of Sight Recognition . This subtest measures a student's ability to recognize temporarily and permanently irregularly spelled words, letter names, and letter sounds.
Construct Significance and Connections	<ul style="list-style-type: none"> Letters are graphemes upon which phonemes are mapped A student's ability to automatically recognize letter sounds leads to successful decoding Orthographic mapping involves the formation of letter-sound connections to bond the spellings, pronunciations, and meanings of specific words in memory
Assessment Schedule	Benchmark Expectations for: EOY Preschool to EOY First Grade
Time	2 minutes. This is a timed test.
Prompts	<ul style="list-style-type: none"> "I want you to tell me the sounds these letters make. If you don't know a sound, that's OK. Just keep going." If student doesn't know any letter sounds in the first row, say, "Look at the rest of these letters. Tell me the sounds of the letters that you know." Corrective Prompt (up to two times): "Tell me the sound the letter makes."
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none"> 1 point for each correct sound. <p>Paper/Pencil:</p> <p>Cross out (or put a slash through) any sounds identified incorrectly.</p> <p>Place a bracket after the last sound attempted by student at the end of 2 minutes.</p> <p>Insight:</p> <p>Click on any sounds identified incorrectly.</p> <p>Click on the last sound attempted by student at end of 2 minutes.</p>

M	h	S	w	e	d	v	X	7
H	D	F	M	J	m	th	N	15
W	V	G	P	I	z	L	k	23
f	c	y	g	j	n	B	Y	31
Q	b	O	T	r	u	E	Z	39
i	p	s	C	x	a	q	R	47

M	h	S	w	e	d	v	X	H	D	F
M	J	m	th	N	W	V	G	P	I	

Wait Rule	If student pauses for 3 seconds, say the sound, mark it incorrect, and point to the next letter. Do not score the letter ‘M’ used in the demo.
Discontinue Rule	<ul style="list-style-type: none"> Discontinue after 2 minutes or when student reaches end of list.
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> <i>Irregular Words</i> is typically administered prior the <i>Letter Sounds</i>. However, the order of administration can be changed. <p>After:</p> <ul style="list-style-type: none"> If student is at benchmark on <i>Letter Sounds</i>, then discontinue the <i>Orthographic Mapping</i> subtest. <ul style="list-style-type: none"> BOY kindergarten: Administer <i>NLM Listening</i> subtest. MOY kindergarten+: Administer <i>Decoding Inventory</i> subtest. If student is not at benchmark on <i>Letter Sounds</i>, then administer <i>Letter Names</i> target. The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. This is a timed test. The student has 2 minutes to name as many sounds as they can. Use the benchmark table provided at the bottom of the protocol form to determine whether the student met benchmark expectations. Benchmark expectations are also available in this manual. Record Response Patterns and take additional notes as needed. Any appropriate letter sounds are correct (e.g., long/short vowels, guh / juh for ‘g’). Do not let the student skip a row. If student begins to read from top to bottom, or points randomly, say, “Go this way” and move your finger from left to right along the row. This reminder can only be given one time. If a student stops and it appears that they are not certain if they should continue, say “keep going”. Say as often as necessary. If student loses their place, point to where they left off to help them find their place in the row. Do this as often as necessary. Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Guidelines for Scoring the Letter Sounds Target

MhSwedvXHDFM

JmthNWVGPIzL

kfcygjnbYQbo

TruEZipsCxaq

RoLKtUAShphchwh

CHThQuWh

LETTER SOUNDS SCORE = 44 / 61 High Risk

Grade	Pre-K	Kindergarten			First Grade			Second Grade		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
Irregular Words	5	10	44	53	53	58	58			

If student struggles identifying the sound of a letter for more than 3 seconds, say the sound for them and have them move on.

Any acceptable sound for Y is counted as correct.

Students can produce the long or short vowel sounds.

If the student is at benchmark, discontinue the Orthographic Mapping subtest. If not at benchmark, consider administering the Letter Sounds target.

- In the Letter Sounds target, students are asked to produce the sounds of a series of letters. One point is assigned for each correct letter sound. The examiner clicks on or puts a slash / through incorrect sounds. Any appropriate letter-sounds are counted as correct (e.g., long / short vowels, different sounds for y or x or g etc.).
- If a student pauses or struggles for 3 seconds, the examiner says the sound, marks it as incorrect, and then points to the next letter. The total number of correct letter sounds is calculated and entered into the Correct Sounds box, or is calculated automatically in Insight. This target is discontinued when a student is finished with all the letters, or when 2 minutes have expired, or when it is clear the student does not know letter sounds. The assessment is timed in order to measure automaticity
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM. To score the digital Letter Sounds target, start the timer and click on the letter sounds identified incorrectly by the student.
- Even if a student meets the benchmark criteria on Irregular Words, Letter Sounds should be administered in most cases. This is because both irregular words and letter sounds are important skills to master and monitor for mastery and growth over time. Nevertheless, because letter sound knowledge is a constrained skill, it may not be necessary to administer the Letter Sounds target if the student has previously demonstrated mastery in letter sounds.
- If the test is being administered traditionally (paper/pencil) to a first grade student in the middle of the school year (MOY), the examiner would quickly reference the table at the bottom of the protocol form and would note that the benchmark is 58. The examiner would note that this student did not meet the benchmark expectation with a score of 44.
- More specific cut point information can be obtained by referring to the comprehensive benchmark tables found in this manual, which includes benchmark and multiple risk cut points.

Orthographic Mapping (OM)

TARGET: Letter Names

TARGET: Letter Names Administer if benchmark was **NOT** met on Letter Sounds above**SCRIPT**

Display Letter Names from benchmark student stimulus book.

SAY: "Letters have names." Point to the 'O'.

SAY: "The name of this letter is /ō/. Say /ō/."

SAY: "All these letters have names. I want you to tell me the names of these letters."

Point to the first letter 't'. SAY: "Go."

Start the 2 minute timer.

Corrective Prompt (2x max): "Tell me the name of the letter."

SCORING: Put a slash (/) through incorrect letters. If student pauses for 3 seconds, say the letter, mark it incorrect, and point to the next letter. After 2 minutes, place bracket () after last letter name student says. **Do not score the letter 'O' used in the demo.** If student doesn't know any letter names in the first row, SAY: "Look at the rest of these letters and tell me the ones that you know."

<input type="checkbox"/>	t	B	Z	I	z	j	w	7
l	o	r	f	A	x	g	p	15
e	F	R	M	q	N	H	h	23
n	G	u	V	D	C	U	Q	31
W	i	J	O	c	P	S	a	39
L	v	Y	M	y	X	b	s	47
E	K	d	k	T				

LETTER NAMES
SCORE =

Construct Measured	Orthographic Mapping This subtest primarily relates to the word recognition strand in Scarborough's reading model and falls under the umbrella of Sight Recognition . This subtest measures a student's ability to recognize temporarily and permanently irregularly spelled words, letter names, and letter sounds.
Construct Significance and Connections	<ul style="list-style-type: none"> Letters are graphemes upon which phonemes are mapped A student's ability to automatically recognize letter names is a strong predictor of future decoding ability
Assessment Schedule	There are no benchmark Expectations for Letter Names. Mapping letter "names" onto English letters is conceptually the same as mapping letter "sounds." Learning letter "sounds", however, is necessary for learning to decode.
Time	2 minutes. This is a timed test.
Prompts	<ul style="list-style-type: none"> "All these letters have names. I want you to tell me the names of these letters." If student doesn't know any letter names in the first row, say, "Look at the rest of these letters and tell me the ones that you know." Corrective Prompt (up to two times): "Tell me the name of the letter."
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none"> 1 point for each letter name identified correctly. <p>Paper/Pencil:</p> <p>Cross out (or put a slash through) any letter names identified incorrectly.</p> <p>Place a bracket after the last letter name attempted by student at the end of 2 minutes.</p> <p>Insight:</p> <p>Click on any letter names identified incorrectly.</p> <p>Click on the last letter name attempted by student at end of 2 minutes.</p>

<input type="checkbox"/>	t	B	Z	I	z	j	w	7
l	o	r	f	A	x	g	p	15
e	F	R	M	q	N	H	h	23
n	G	u	V	D	C	U	Q	31
W	i	J	O	c	P	S	a	39
L	v	Y	M	y	X	b	s	47

<input type="checkbox"/>	t	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Wait Rule	If student pauses for 3 seconds, say the letter name, mark it incorrect, and point to the next letter. Do not score the letter 'O' used in the demo.
Discontinue Rule	<ul style="list-style-type: none"> Discontinue after 2 minutes or when student reaches end of list.
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none"> <i>Letter Sounds</i> is typically administered prior the <i>Letter Names</i>. However, the order of administration can be changed. <p>After:</p> <ul style="list-style-type: none"> BOY kindergarten: Administer <i>NLM Listening</i> subtest. MOY kindergarten+: Administer <i>Decoding Inventory</i> subtest. The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.
Reminders	<ul style="list-style-type: none"> Turn on your audio recorder. Email audio files to Language Dynamics Group at sales@languagedynamicsgroup.com if LDG is contracted to help with scoring and data entry. Standardized administration is essential. Booklets and online instructions include scripts for examiners to follow that help to ensure each subtest is administered the same every time. This is a timed test. The student has 2 minutes to name as many letters as they can. Benchmark expectations are available in this manual. Record Response Patterns and take additional notes as needed. Any appropriate letter names are correct. Do not let the student skip a row. If student begins to read from top to bottom, or points randomly, say, "Go this way" and move your finger from left to right along the row. This reminder can only be given one time. If a student stops and it appears that they are not certain if they should continue, say "keep going". Say as often as necessary. If student loses their place, point to where they left off to help them find their place in the row. Do this as often as necessary. Do not mark differences in pronunciation due to dialect, speech sound errors (articulation errors), or influence of a language other than English.

Specific Guidelines for Scoring the Letter Sounds Target

MhSwedvXHDFM

JmthNWVGPIzL

kfcygjnbYQbO

TruEZipsCxaq

RoLKtUAShphchwh

CHThQuWh

LETTER SOUNDS SCORE = 44 / 61 High Risk

Grade	Pre-K	Kindergarten			First Grade			Second Grade		
Benchmark Period	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
Irregular Words	5	10	44	53	53	58	58			

If student struggles identifying the sound of a letter for more than 3 seconds, say the sound for them and have them move on.

Any acceptable sound for Y is counted as correct.

Students can produce the long or short vowel sounds.

If the student is at benchmark, discontinue the Orthographic Mapping subtest. If not at benchmark, consider administering the Letter Sounds target.

- In the Letter Sounds target, students are asked to produce the sounds of a series of letters. One point is assigned for each correct letter sound. The examiner clicks on or puts a slash / through incorrect sounds. Any appropriate letter-sounds are counted as correct (e.g., long / short vowels, different sounds for y or x or g etc.).
- If a student pauses or struggles for 3 seconds, the examiner says the sound, marks it as incorrect, and then points to the next letter. The total number of correct letter sounds is calculated and entered into the Correct Sounds box, or is calculated automatically in Insight. This target is discontinued when a student is finished with all the letters, or when 2 minutes have expired, or when it is clear the student does not know letter sounds. The assessment is timed in order to measure automaticity
- The digital assessment, accessed through the Insight system, allows for the electronic administration and scoring of the DDM. To score the digital Letter Sounds target, start the timer and click on the letter sounds identified incorrectly by the student.
- Even if a student meets the benchmark criteria on Irregular Words, Letter Sounds should be administered in most cases. This is because both irregular words and letter sounds are important skills to master and monitor for mastery and growth over time. Nevertheless, because letter sound knowledge is a constrained skill, it may not be necessary to administer the Letter Sounds target if the student has previously demonstrated mastery in letter sounds.
- If the test is being administered traditionally (paper/pencil) to a first grade student in the middle of the school year (MOY), the examiner would quickly reference the table at the bottom of the protocol form and would note that the benchmark is 58. The examiner would note that this student did not meet the benchmark expectation with a score of 44.
- More specific cut point information can be obtained by referring to the comprehensive benchmark tables found in this manual, which includes benchmark and multiple risk cut points.

DDM Decoding Inventory (DI)

The majority of English words can be written using six syllable-spelling conventions. Helping students understand that longer words can be divided into manageable, syllabic sections can help with decoding and spelling. It is also important to determine how well a student can recognize consistently used bound derivational and inflectional morphemes (affixes).

Although these morphemes cannot stand alone (they are not free morphemes), they have meaning. And when a student can decode those morphemes, they have established the first step in identifying those morphemes, upon which meaning can be overlaid. Morphological awareness facilitates vocabulary comprehension, prosody, and spelling. It also helps students break longer words into more manageable parts.

The Decoding Inventory subtests of the CUBED provides an examiner information on how well a student can (a) decode the syllable types, which are referred to as “targets”, (b) decode affixes, also referred to as “targets”, and (c) read whole words with those syllable types and affixes.

The DDM Decoding Inventory subtest has nine targets:

- **Close Syllables, Vowel-Consonant-E, Basic Affixes, Advanced Affixes, Vowel Teams, Vowel-R-Controlled, Complex Vowels, Advanced Word Forms, and Multisyllabic Words in Context**

DDM Decoding Inventory (DI) Benchmark Beginning of Year

Child Name/ID: _____ Date: _____

SCRIPT
Display appropriate Decoding Inventory page from benchmark student stimulus book.
For benchmark testing, only have student read words in the black box for each target.
For a more comprehensive inventory, have student read all words in each target.
SAY: "Please read these words. They are not real words." Point to the first word.
If student refuses to read, SAY: "I can help you. Just try your best." Encourage 2nd word.
Corrective prompt (x max): SAY: "Remember, these are not real words."

HOW TO SCORE
• Any accurate sound should be counted as correct (e.g., /malver/, /mlver/, /mlver/).
• Underline entire word if blended correctly.
• Circle the boxed and underlined targets that the student blends correctly (read as one syllable).
• Target correct (underlined portion) = 1 point / Whole word correct = 1 point.

Response Patterns
☐ Says correct sounds and correctly blends
☐ Says correct sounds out of order (sound-by-sound)
☐ Makes random errors
☐ Does not blend (but says correct sounds)
☐ Says correct sounds but blends out of order
☐ Says correct sounds but blends with incorrect sound(s)
☐ Tracks incorrectly
☐ Attempts to recode nonsense words into real words
☐ Makes consistent errors on specific letter sound(s)
☐ Other/notes: _____

TARGET: Closed Syllables (grades K-5+)
min sal jom vun quim whar tap deg gib les pag rud tus baf shi het wan kex zick chom thuz vil cass noff
WHOLE WORDS BLENDED CORRECTLY = ☐ 6

TARGET: Vowel-Consonant-E (grades 1.5+)
naze gude mepe sule worlde atane jime tebe goke fene vome rame sove
WHOLE WORDS BLENDED CORRECTLY = ☐ 6

TARGET: Basic Affixes (grades 1.5+)
hezes pafed senest brutel temness premiv foing upron repog miver dutless givly
WHOLE WORDS BLENDED CORRECTLY = ☐ 6 CORRECT TARGETS = ☐ 6

TARGET: Vowel Teams (grades 1.5+)
fepo nals touy keaf heaf goupak zay loak zoan qoad wook pels shax haph roaf zow heaf paak
WHOLE WORDS BLENDED CORRECTLY = ☐ 6 CORRECT TARGETS = ☐ 7

TARGET: Vowel-R-Controlled (grades 1.5+)
kax ner foarp moue tase lreaga tor wit ploor rak zaf hear zur thee glar searc four vour sloze
WHOLE WORDS BLENDED CORRECTLY = ☐ 6 CORRECT TARGETS = ☐ 7

TARGET: Advanced Affixes (grades 2+)
mution dlarle goble mearle gopure gepous birnog tizom nappit zhabale malarut transub unquim virust
WHOLE WORDS BLENDED CORRECTLY = ☐ 6 CORRECT TARGETS = ☐ 6

TARGET: Complex Vowels (grades 2+)
vind mild zough heigh draught highfoast vast ordid fish rlight wought pough klaugh
WHOLE WORDS BLENDED CORRECTLY = ☐ 6 CORRECT TARGETS = ☐ 7

TARGET: Advanced Word Forms (grades 2.5+)
wecent smink lomb gliffe chong grombacent brism grunk mark ghof fulte
WHOLE WORDS BLENDED CORRECTLY = ☐ 6 CORRECT TARGETS = ☐ 7

OPTIONAL TARGET: Multisyllabic Words in Context (grades 2.5+) Do not include in DI Composite Score CORRECT TARGETS = ☐ 11

1. David made a new game. He called it Timbong . It used a lot of new words.	timbong/ timbong/	0
2. David played the game with a stick that he called a stodrun .	stodrun/ stodrun/	0
3. The game also used a big block with a hole in it that he called a goupak .	goupak/ goupak/ goupik/ goupik/	0
4. A player throws the stick through the hole in the block. If they miss, it is called a tirpang .	tirpang/ tirpang/	0
5. If you get the stick through the hole, that is called a highfoast . They get one point.	highfoast/ highfoast/	0
6. There are other people in the game called ungobers . They try to take the block away.	ungobers/ ungobers/	0
7. If they take the block away, then they get a second block called a birnudgete .	birnudgete/ birnudgete/	0
8. If they take the block away again, then they get a golden block called a poughdigid .	poughdigid/ poughdigid/	0
9. If they take the block away a third time, then they get a glowing block called a grombacent .	grombacent/ grombacent/	0
10. Once anyone has a glowing block, they can exchange, or ponerate it for a very large block.	ponerate/ ponerate/	0
11. Each player on the team wears firmarves to protect them, which are made out of foam.	firmarves/ firmarves/	0

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Decoding Inventory (DI)

ALL TARGETS

Construct Measured	Decoding This subtest primarily relates to the word recognition strand in Scarborough's reading model and falls under the decoding subskill.
Construct Significance	<ul style="list-style-type: none"> • Written English can be categorized under several syllable-spelling conventions • An understanding of these conventions can help students remember how to spell words and how to pronounce the vowels in new words. • Students need to learn how to chunk longer words into manageable parts. Some students may see a longer word and resort to guessing the word or skipping it. • Students need to be familiar with syllable-spelling conventions. This can help them read longer words accurately and fluently and can help with spelling.

Construct Connections	<ul style="list-style-type: none"> • Reading syllable patterns is a more advanced decoding skill, reliant on student mastery of phonemic awareness and phoneme-grapheme correspondences. • Closed Syllables are the most common spelling convention in English. This syllable pattern accounts for approximately 50 percent of the syllables in written language. • Vowel-Consonant-E (VCE), also known as magic-e or silent-e contain long vowels spelled with a single letter, followed by a single consonant, and a silent e. • An Open Syllable will end with a long vowel sound. An open syllable is spelled with one vowel letter. This pattern is called an open syllable because there is no consonant after the vowel. • Vowel Teams can be two, three, or four letters. These letter combinations represent short, long, or diphthong vowel sounds. • Vowel-R and R-Controlled syllables (sometimes called “Bossy R”) affect the sound a vowel is supposed to represent. • Stable Final Syllable, c-le combinations are found only at the ends of words. • Complex Syllables are syllables that contain consonant clusters (i.e., a sequence of two or three consonant phonemes) spelled with a consonant blend before and/or after the vowel. • These syllable patterns are represented in the Decoding Inventory subtest of the CUBED.
Assessment Schedule	MOY Kindergarten to EOY Eighth Grade.
Time	Varies according to student performance.
Prompts	<ul style="list-style-type: none"> • “Please read these words. They are not real words.” • If it appears the student is reading the words using phonology from a language other than English, say “Read these nonsense words in English.” • Corrective Prompt (up to two times per word): If student refuses to read, say, “I can’t help. Just try your best.” • Corrective Prompt (one time per target): “Remember, these are not real words.” • Examiners should not penalize a child if a different dialect is being used other than what is reflected in the tables below.
Scoring Overview	<p>Scoring Key:</p> <ul style="list-style-type: none"> • 1 point for entire word blended correctly • 1 point for bolded and underlined target blended correctly (read as one syllable) <p>Paper/Pencil:</p> <p>Circle the bolded and underlined targets that the student blends correctly (read as one syllable).</p> <div> <p>TARGET: Closed Syllables (grades K.5+) WHOLE WORDS BLENDED CORRECTLY = 2 6</p> <p>min sal jom <u>yun</u> quim whav fap deg gib les pag rud tus baf shil het wan kex zick chom thuz vill cass noff</p> <p>TARGET: Vowel-Consonant-E (grades K.5+) WHOLE WORDS BLENDED CORRECTLY = 3 6</p> <p>naze <u>gude</u> <u>mepe</u> sule wonkide <u>atane</u> jime tebe goke fene vome rame sove</p> <p>TARGET: Basic Affixes (grades K.5+) WHOLE WORDS BLENDED CORRECTLY = 2 6 CORRECT TARGETS = 4 6</p> <p>hex<u>es</u> <u>pa</u>ted <u>senest</u> <u>br</u>ful temness <u>pre</u>miv foting unron repog miver dutless giply</p> <p>TARGET: Advanced Affixes (grades 1.5+) WHOLE WORDS BLENDED CORRECTLY = 6 6 CORRECT TARGETS = 6 6</p> <p>mubtion discla gobic mavible gopture gepous bimog trizom nonplut zikable misdut transbub unquinq virupt</p> <p>TARGET: Vowel Teams (grades 1.5+) WHOLE WORDS BLENDED CORRECTLY = 6 6 CORRECT TARGETS = 7 7</p> </div>

Scoring Overview	<p>Insight:</p> <p>Closed Syllables and Vowel-Consonant-E targets:</p> <p>Click on 1 point if entire word is blended correctly.</p> <div><p>TARGET: Closed Syllables</p><table><tr><td>min</td><td>0</td><td>1</td></tr><tr><td>sal</td><td>0</td><td>1</td></tr><tr><td>jom</td><td>0</td><td>1</td></tr></table></div> <p>For all other targets:</p> <p>Click on the bolded and underlined targets that the student blends correctly (read as one syllable). Click on the remainder of the word if blended correctly.</p> <div><p>TARGET: Basic Affixes</p><table><tr><td>hezes</td><td>hez</td><td><u>es</u></td><td>All Correct</td></tr><tr><td>pafed</td><td>paf</td><td><u>ed</u></td><td>All Correct</td></tr><tr><td>senest</td><td>sen</td><td><u>est</u></td><td>All Correct</td></tr><tr><td>bruful</td><td>bru</td><td><u>ful</u></td><td>All Correct</td></tr></table></div>	min	0	1	sal	0	1	jom	0	1	hezes	hez	<u>es</u>	All Correct	pafed	paf	<u>ed</u>	All Correct	senest	sen	<u>est</u>	All Correct	bruful	bru	<u>ful</u>	All Correct
min	0	1																								
sal	0	1																								
jom	0	1																								
hezes	hez	<u>es</u>	All Correct																							
pafed	paf	<u>ed</u>	All Correct																							
senest	sen	<u>est</u>	All Correct																							
bruful	bru	<u>ful</u>	All Correct																							
Wait Rule	No wait rule. Use Examiner judgement.																									
Discontinue Rule	<ul style="list-style-type: none">Discontinue after 2 minutes or when student reaches end of list.																									
What is Administered Before and After?	<p>Before:</p> <ul style="list-style-type: none">BOY kindergarten to EOY first grade: <i>Orthographic Mapping</i> is typically administered prior to this subtest.BOY second grade to EOY sixth grade: <i>NLM Reading</i> and/or <i>NLM Listening</i> is typically administered prior to this subtest. <p>After:</p> <ul style="list-style-type: none">Administer the <i>NLM Reading</i> and/or <i>NLM Listening</i> if they have not yet been administered.The <i>Rapid Automatized Naming</i> and <i>Dynamic Assessment of Decoding</i> subtests from the <i>PEARL</i> and <i>DYMOND</i> can also help identify students who have dyslexia.																									

Specific Guidelines for Scoring DDM Decoding Inventory Targets

TARGET: Closed Syllables

Benchmark

	Acceptable Response
min	min (as in pin) /mɪn/
sal	sal (as in pal) /sæl/
jom	jom (as in mom) /jam/
vun	vun (as in run) /vʌn/
quim	quim (as in rim) /kwɪm/
whav	whav (as in have) /wæv/

Full list

	Acceptable Response
fap	fap (as in tap) /fæp/
deg	deg (as in peg) /dɛg/
gib	gib (as in fib) /gɪb/
les	les (as in mess) /lɛs/
pag	pag (as in rag) /pæg/
rud	rud (as in mud) /rʌd/
tus	tus (as in fuss) /tʌs/
baf	baf (as in laugh) /bæf/
shil	shil (as in pill) /ʃɪl/

	Acceptable Response
het	het (as in met) /hɛt/
wan	wan (as in tan) /wæn/
kex	kex (as in rex) /kɛks/
zick	zick (as in pick) /zɪk/
chom	chom (as in mom) /tʃəm/
thuz	thuz (as in fuzz) /θʌz/
vill	vill (as in mill) /vɪl/
cass	cass (as in sass) /cæs/
noff	noff (as in cough) /nɒf/

TARGET: Vowel-Consonant-E

Benchmark

	Acceptable Response
naze	naze (as in daze) /neɪz/
gude	gude (as in rude) /gud/
mepe	mepe (as in keep) /mip/
sule	sule (as in rule) /sul/
wonkine	wonkine (as in mine) /wɒnkɪn/
atane	atane (as in mane) /ʌtæn/

Full list

	Acceptable Response
jime	jime (as in time) /dʒaɪm/
tebe	tebe (as in keep) /tib/
goke	goke (as in woke) /goʊk/
fene	fene (as in mean) /fin/
vome	vome (as in home) /voʊm/
rame	rame (as in name) /raɪm/
sove	sove (as in stove) /soʊv/ if student says 'suv' /suv/ say, "what else could this word be?"

TARGET: Basic Affixes

Benchmark

	Acceptable Responses		
hezes	hezes (as in kisses) /hɛzɪz/	hezes (as in bezel) /hɛzɪz/	hezes (as in pleases) /hɪzɪz/
pafed	pafed (as in taped) /pɛft/	pafed (as in raft) /pæft/	pafed (as in dreaded) /pɛftɪd/
senest	senest (as in tennis) /senɛst/	senest (as in scene) /sɪnɛst/	
bruful	bruful (as in ruin) /brʊfʊl/	bruful (as in ruffle) /brʌfʊl/	
temness	temness (as in hem) /tɛmɪs/		
premv	premv (as in predefine) /prɪmɪv/ if student says 'pre' /prɛ/ as in 'prep' say, "what else could this word be?"		

Full list

foting	foting (as in boating) /foʊtɪŋ/	foting (as in potting) /fɒtɪŋ/
unron	unron (as in unwanted) /ʌnrɒn/	
repog	repog (as in replay) /rɪpəg/	repog (as in repetition) /rɛpəg/
miver	miver (as in river) /mɪvə/	miver (as in diver) /maɪvə/
dutless	dutless (as in luckless) /dʌtlɪs/	
giply	giply (as in ripply) /gɪpli/	

Specific Guidelines for Scoring DDM Decoding Inventory Targets

TARGET: Advanced Affixes

Benchmark

	Acceptable Responses		
mubtion	mubtion (as in eruption) /mʌbʃən/		
discla	discla (as in miss) /dɪslə/	discla (as in claw) /dɪslə/	discla (as in mug) /dɪslə/
gobic	gobic (as in rob) /gəbɪk/	gobic (as in robe) /gəʊbɪk/	
mavible	mavible (as in have) /mævɪbəl/		
gopture	gopture (as in got) /gəptʃə/	gopture (as in go) /gəʊptʃə/	
gepous	gepous (as in get) /gɛpəs/	gepous (geese) /gɪpəs/	

Full list

bimog	bimog (as in bite) /baɪmag/
trizom	if student says 'beemog' /bɪmag/ say, "what else could this word be?"
nonplut	trizom (as in try) /traɪzəʊm/
zikable	mubtion (as in eruption) /mʌbʃən/
misdut	discla (as in miss) /dɪslə/
transbub	gobic (as in rob) /gəbɪk/
uniquin	mavible (as in have) /mævɪbəl/
virupt	gopture (as in got) /gəptʃə/

TARGET: Vowel Teams

Benchmark

	Acceptable Responses		
feep	feep (as in jeep) /fi:p/		
naig	naig (as in aim) /naɪg/		
touv	touv (as in loud) /taʊv/	touv (as in soup) /tuv/	touv (as touch) /tʌv/
keat	keat (as in meat) /kit/		
heag	heag (as in head) /hɛg/	heag (as in steak) /haɪg/	
goupaik	goupaik (as in soup) /gupeɪk/	goupaik (as in loud) /gaʊpeɪk/	

Full list

zay	feep (as in jeep) /fip/		
loak	naig (as in aim) /naig/		
zoon	touv (as in loud) /tauv/	touv (as in soup) /tuv/	touv (as touch) /tav/
soud	keat (as in meat) /kit/		
wook	heag (as in head) /hɛg/	heag (as in steak) /haig/	
poig	goupaik (as in soup) /gupeik/	goupaik (as in loud) /gaupeik/	
shaw	shaw (as in paw) /ʃa/ (‘aw’ is not a vowel team, but it is not a complex vowel nor is it an advanced word form, so it was listed here)		
hieb	hieb (as in pie) /heib/	hieb (as in piece) /hib/	
roef	roef (as in toe) /roaf/		
zow	zow (as in cow) /zaʊ/ (‘ow’ is not a vowel team, but it is not a complex vowel nor is it an advanced word form, so it was listed here)		zow (as in snow) /zoa/
bewk	bewk (as in new) /buk/ (‘ew’ is not a vowel team, but it is not a complex vowel nor is it an advanced word form, so it was listed here)		
pauk	pauk (as innock) /pak/		

Specific Guidelines for Scoring DDM Decoding Inventory Targets

TARGET: Vowel-R-Controlled

Benchmark

	Acceptable Responses
klar	klar (as in car) /klɑr/
ner	ner (as in her) /nɜr/
foarp	foarp (as in boar) /fɔrp/
mour	mour (as in flower) /maʊə/ mour (as in four) /mɔr/
lare	lare (as in care) /lɛr/
lirparg	lirparg (as in fir and car) /lɪrpɑrɡ/

Full list

	Acceptable Responses
tor	tor (as in or) /tɔr/
wir	wir (as in fir) /wɜr/
ploor	ploor (as in or) /plɔr/
rark	rark (as in mark) /rɑr/
zair	zair (as in hair) /zɛr/
kear	kear (as in ear) /kɪr/
zur	zur (as in fur) /zɜr/
theer	theer (as in deer) /ðɪr/
glier	glier (as in deer) /glɪr/
searc	searc (as in bird) /sɪrk/ searc (as in near) /sɪrk/
lourt	lourt (as in sport) /lɔrt/
vour	vour (shower) /ʃaʊə/
slore	slore (as in snore) /slɔr/

TARGET: Complex Vowels

Benchmark

	Acceptable Responses			
vind	vind (as in kind) /vaɪnd/	vind (as in pin) /vɪnd/		
nild	nild (as in child) /naɪld/	nild (as in guild) /nɪld/		
zough	zough (as in now) /zaʊ/	zough (as in no) /zɔa/	zough (as in bought) /zɑ/	zough (as in tough)
keigh	keigh (as in key) /ki/	keigh (as in skate) /keɪ/	keigh (as in site) /kaɪ/	
glaught	glaught (as in saw) /glɑt/			
kighdost	kighdost (as in kite and most) /kaɪdɑst/			

Full list

	Acceptable Responses			
vost	vost (as in most) /voʊst/	vost (as in lost) /vɒst/		
grolld	grolld (as in old) /grɔld/			
figh	figh (as in hi) /faɪ/			
pight	pight (as in hi) /paɪt/			
wought	wought (as in shot) /wɒt/			
pough	pough (as in dough) /poʊa/	pough (as in bought) /pɑ/	pough (as in tough) /pʌ/	
klaugh	klaugh (as in laugh) /klæf/	klaugh (as in claw) /kla/		

Specific Guidelines for Scoring DDM Decoding Inventory Targets

TARGET: Advanced Word Forms

Benchmark

	Acceptable Responses	
wecent	wecent (as in wet) /wēsɛnt/	wecent (as in we) /wisɛnt/
smink	smink (as in wink) /smɪŋk/	
lomb	lomb (as in comb) /loʊm/	lomb (as in bomb) /lʌm/
glistle	glistle (as in whistle) /glɪsəl/	
ohong	ohong (as in oh) /oʊhʌŋ/	ohong (as in ah) /ahʌŋ/
grombacent	grombacent (as in tom, bass, scent) /grʌmbɛɪsɛnt/	

Full list

	Acceptable Responses	
brism	brism (as in prism) /brɪsm/	
grunk	grunk (as in skunk) /grʌŋk/	
mank	mank (as in bank) /mɛŋk/	
ghosl	ghosl (as in floss) /gʌsəl/	
futle	futle (as in putt) /fʌtəl/	futle (as in few) /fjʊtəl/

CUBED-3 INTERPRETATION

An examiner must interpret the data collected from a test so that decisions and actions can be made. If a test does not provide guidelines for clear interpretation, then that test lacks validity. The CUBED-3 provides two different ways to interpret test results. The first approach is through criterion-referencing, and the second approach is through norm-referencing.

Criterion-Referenced Interpretation

When CUBED-3 results are interpreted through a criterion-referenced lens, examiners use raw scores to represent a student's performance (e.g., 25 correct words per minute), and make a determination about whether the student's scores meet expectations according to a pre-defined criterion (e.g., 45 correct words per minute). The simplest way to characterize student performance on a criterion-referenced test is to use a binary classification system that sorts students according to whether they do or do not meet expectations. However, many criterion-referenced assessments, including the CUBED-3, provide more specified characterizations of student performance. With the CUBED-3, students can be categorized as “at benchmark” if they meet criteria, at “moderate risk” if their performance is moderately lower than expected, and at “high risk” if their performance is very low. Risk status refers to the extent to which a student is at risk for experiencing difficulty in the specific domain being tested.

In conjunction with these three classifications (benchmark, moderate risk, high risk), one additional classifying tier, “advanced”, is available for students significantly above benchmark on some of the CUBED-3 measures. This finer-tuned classification allows for greater differentiation of students who would otherwise be grouped together in the benchmark category.

The CUBED-3 has different criteria for adequate performance (or benchmarks) depending on the measure. The CUBED-3 criteria are based on three major sources of information: a) national and state education standards, such as the Common Core State Standards, b) research that has identified the necessary criteria for academic success, including regression analysis, and c) current norms, which were mostly used as a baseline reference upon which the (often higher) criteria were established.

The following tables display the cut points for key CUBED-3 assessments for the beginning of the school year (BOY), middles of the school year (MOY), and end of the school year (EOY) across all grades.

CUBED-3 BENCHMARKS AND RISK CUT POINTS

KEY

Above benchmark expectations
At Benchmark expectations BENCHMARK
Moderately below benchmark expectations MODERATE RISK
Significantly below benchmark expectations HIGH RISK

CUBED-3 Composite

Preliminary Composite Cut Points				
≥ 45	≥ 45	≥ 188	≥ 311	≥ 317
≤ 44	≤ 44	≤ 187	≤ 310	≤ 316
EOY PreK	BOY Kindergarten	BOY First Grade	BOY Second Grade	BOY Third Grade

NLM Listening

NLM Retell														
		10	10	11	13	15	17	20	23	24	26	30	34	39
		6	7	10	11	12	14	16	18	20	23	25	29	34
		4-5	4-6	7-9	8-10	5-11	11-13	12-15	9-17	16-19	17-23	18-24	18-28	19-33
		0-3	0-3	0-6	0-7	0-4	0-10	0-11	0-8	0-15	0-16	0-17	0-17	0-18
NLM Questions														
			14	18	18	22	23	24	24	25	26	26	27	29
			7-14	14-17	15-17	18-21	20-22	21-23	19-23	21-24	22-25	22-25	24-26	25-28
			0-6	0-13	0-14	0-17	0-19	0-20	0-18	0-20	0-21	0-21	0-23	0-24
BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
PreK			Kindergarten			First Grade			Second Grade			Third Grade		

NLM Reading

NLM Retell																						
15	17	20	23	24	26	30	34	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	14	16	18	20	23	25	29	34	30	31	32	33	36	37	37	38	40	40	40	40	40	40
5-11	11-13	12-15	9-17	16-19	17-22	18-24	18-28	19-33	15-29	17-30	20-31	19-32	21-35	24-36	24-36	27-37	29-39	29-39	29-39	29-39	29-39	29-39
0-4	0-10	0-11	0-8	0-15	0-16	0-17	0-17	0-18	0-14	0-16	0-19	0-18	0-20	0-23	0-23	0-26	0-28	0-28	0-28	0-28	0-28	0-28
NLM Questions																						
22	23	24	24	25	26	26	27	29	20	20	21	21	22	22	22	23	23	23	23	23	23	23
18-21	20-22	21-23	19-23	21-24	22-25	22-25	24-26	25-28	12-19	12-19	13-20	13-20	14-21	15-21	15-21	16-22	17-22	17-22	17-22	17-22	17-22	17-22
0-17	0-19	0-20	0-18	0-20	0-21	0-21	0-23	0-24	0-11	0-11	0-12	0-12	0-13	0-14	0-14	0-15	0-16	0-16	0-16	0-16	0-16	0-16
Decoding Fluency																						
31	34	66	85	109	125	109	118	118	122	137	151	139	150	159	152	157	166	156	165	177	161	173
10	22	48	47	73	87	73	89	93	92	103	115	101	114	123	120	121	132	138	138	138	138	138
65%	80%	91%	92%	96%	96%	96%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	98%	98%	98%	98%	98%
5-9	12-21	22-47	27-46	41-72	54-86	53-72	66-88	68-92	71-91	70-102	87-114	74-100	92-113	94-122	96-119	93-120	102-131	80-137	89-137	99-137	78-137	85-137
0-4	0-11	0-21	0-26	0-40	0-53	0-52	0-65	0-67	0-70	0-69	0-86	0-73	0-91	0-93	0-95	0-92	0-101	0-79	0-88	0-98	0-77	0-84
BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY
First Grade			Second Grade			Third Grade			Fourth Grade			Fifth Grade			Sixth Grade			Seventh Grade			Eighth Grade	

DDM Decoding Inventory

TARGET: Closed Syllables														
	4	5	5	-	-	-	-	-	-	-	-	-	-	-
	2	3	3	4	5	5	5	6	6	6	6	6	6	6
	1	2	2	3	4	4	4	5	5	5	5	5	5	5
	0	0-1	0-1	0-2	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-4	0-4	0-4
TARGET: Vowel-Consonant-E														
				4	4	5	-	-	-	-	-	-	-	-
				1	2	2	3	5	5	6	6	5	6	6
				0	1	1	2	4	4	5	5	4	5	5
					0	0	0-1	0-3	0-3	0-4	0-4	0-3	0-4	0-4
TARGET: Basic Affixes														
				4	5	5	6	-	-	-	-	-	-	-
				2	3	3	4	4	5	5	5	5	5	5
				1	2	2	3	3	4	4	4	4	4	4
				0	0-1	0-1	0-2	0-2	0-3	0-3	0-3	0-3	0-3	0-3
TARGET: Vowel Teams														
				4	5	5	6	-	-	-	-	-	-	-
				1	3	3	4	5	5	5	6	6	6	6
				0	1-2	1-2	2-3	3-4	3-4	3-4	4-5	5	5	5
					0	0	0-1	0-2	0-2	0-2	0-3	0-4	0-4	0-4
TARGET: Vowel-R-Controlled														
				4	4	4	6	7	7	-	-	-	-	-
				1	1	1	4	5	5	6	6	6	6	6
				0	0	0	3	4	4	4-5	4-5	5	5	5
							0-2	0-3	0-3	0-3	0-3	0-4	0-4	0-4
TARGET: Advanced Affixes														
					3	3	4	5	5	-	-	-	-	-
					1	1	2	3	3	4	5	5	5	5
					0	0	1	2	2	2-3	3-4	4	4	4
							0	0-1	0-1	0-1	0-2	0-3	0-3	0-3
TARGET: Complex Vowels														
						5	5	7	7	-	-	-	-	-
						1	2	3	3	4	5	5	5	5
						0	1	2	2	3	4	4	4	4
							0	0-1	0-1	0-2	0-3	0-3	0-3	0-3
TARGET: Advanced Word Forms														
							5	6	6	-	-	-	-	-
							1	2	2	3	4	5	5	5
							0	1	1	2	3	4	4	4
								0	0	0-1	0-2	0-3	0-3	0-3
BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
Kindergarten			First Grade			Second Grade			Third Grade			Fourth Grade+		

DDM Orthographic Mapping

TARGET: Irregular Words (1 minute)											
			12	15	26	26	36	41	41	-	-
			3	7	12	12	30	35	35	40	40
			0-2	4-6	8-11	8-11	15-29	20-34	20-34	35-39	35-39
				0-3	0-7	0-7	0-14	0-19	0-19	0-34	0-34
TARGET: Letter Sounds (1 minute)											
		10	10	25	35	35	46	-	-	-	-
		5	5	15	30	30	35	43	-	-	-
		0-4	0-4	6-14	19-29	19-29	27-34	31-42	-	-	-
				0-5	0-18	0-18	0-26	0-30	-	-	-
TARGET: Letter Names Norms (2 minutes)											
75th Percentile		10	37	43	52	-	-	-	-	-	-
40th Percentile		5	10	25	50	-	-	-	-	-	-
16th Percentile		0-1	3	14	47	-	-	-	-	-	-
10th Percentile			0-1	0-11	0-35	-	-	-	-	-	-
BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
PreK			Kindergarten			First Grade			Second Grade		

DDM Phonemic Awareness

TARGET: Phoneme Segmentation											
			28	31	-	-	-	-	-	-	-
			14	27	29	30	30	30	30	30	30
			2-13	20-26	27-28	28-29	28-29	28-29	28-29	28-29	28-29
			0-1	0-19	0-26	0-27	0-27	0-27	0-27	0-27	0-27
TARGET: Phoneme Blending											
				5	5	5	-	-	-	-	-
				4	4	4	4	4	-	-	-
				3	3	3	3	3	-	-	-
				0-2	0-2	0-2	0-2	0-2	-	-	-
TARGET: First Sounds											
			16	19	20	20	-	-	-	-	-
			10	16	19	19	19	19	-	-	-
			1-9	10-15	16-18	17-18	18	18	18	-	-
			0	0-9	0-15	0-16	0-17	0-17	0-17	-	-
TARGET: Continuous Phoneme Blending											
			9	10	-	-	-	-	-	-	-
			6	7	10	10	10	10	-	-	-
			2-5	3-6	9	-	-	-	-	-	-
			0-1	0-2	0-8	0-9	0-9	0-9	0-9	-	-
BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY	BOY	MOY	EOY
PreK			Kindergarten			First Grade			Second Grade		

DDM Phoneme Manipulation

TARGET: Phoneme Deletion					
	4	4	-	-	-
	2	2	3	3	3
	1	1	2	2	2
	0	0	0-1	0-1	0-1
TARGET: Phoneme Addition					
	4	4	5	-	-
	2	2	4	4	4
	1	1	3	3	3
	0	0	0-2	0-2	0-2
TARGET: Phoneme Manipulation					
	4	4	5	-	-
	2	2	4	4	4
	1	1	3	3	3
	0	0	0-2	0-2	0-2
BOY	MOY	EOY	BOY	MOY	EOY
First Grade			Second Grade		

RISK RECOMMENDATIONS FLOWCHART

NLM Reading Fluency

Pre-K – First Grade

HIGH RISK

MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on Decoding Fluency on **ALL** of the following tests, follow recommendations on right:

- NLM Reading Retell 1
- NLM Reading Retell 2

BENCHMARK

No recommendations if student is at **BENCHMARK** on Decoding Fluency on **ANY** of the NLM Reading Benchmarks.

RECOMMENDATIONS

Reading Fluency

Students who need high intensity intervention for decoding fluency, accuracy, and prosody should receive 5-15 minutes of practice multiple times a week, in addition to other classroom-based literacy instruction. Reading fluency interventions should supplement other interventions designed to teach word recognition. Once students have learned to decode at least 85% of the words in a passage, it can be useful to practice fluency. If a student's accuracy is low, then he/she needs more phonics or word recognition instruction. It is essential that fluency intervention does not exclusively focus on speed reading. There should be considerable attention on prosody and comprehension. Students should be encouraged to decode so it sounds like language, not a list of words. Repeatedly reading passages or completing short one-minute reading sprints can help students build fluency.

NLM Retell

HIGH RISK

MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on the combined NLM Questions Score on **ALL** of the following tests, review individual sections and follow recommendations on right:

- NLM Reading Benchmark 1
- NLM Reading Benchmark 2
- NLM Listening Benchmark

BENCHMARK

No recommendations if student is at **BENCHMARK** on the combined NLM Retell Score on **ANY** of the following:

- NLM Reading Benchmark 1
- NLM Reading Benchmark 2
- NLM Listening Benchmark

SECTIONS	RECOMMENDATIONS
If Episode 1 Complexity (EC1) score is 0-2:	Story Grammar (Basic) Provide 15-30 minutes of explicit instruction in large or small groups twice a week. Interventions should be provided by an educator who has received training in explicit language instruction. Practice retelling simple stories (e.g., Story Champs level A stories) that include a problem, an attempt, and a consequence/ending.
If Sentence Complexity (SC) is 0:	Complex Sentences (Basic Episodes) Students should be encouraged and prompted to use complex language structures while retelling a basic episode narrative. Interventionists should wait until students can produce a basic episode narrative before working on these targets. Some appropriate language complexity targets include "then" and "because." Then targets such as "when" and "after" can be introduced. Students should also be encouraged to use relative subordinate clauses, where a noun is followed by relative pronouns such as "who", "that", or "which" (e.g., the boy who was tall).
If Vocabulary Complexity (VC) is 0:	Complex Vocabulary Students should be taught to use more complex, tier 2 words as well as adjectives and adverbs.

NLM Questions

Pre-K – First Grade

HIGH RISK

MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on the combined NLM Questions Score on **ALL** of the following tests, review individual sections and follow recommendations on right:

- NLM Reading Retell 1
- NLM Reading Retell 2
- NLM Listening Retell

BENCHMARK

No recommendations if student is at **BENCHMARK** on the combined NLM Questions Score on **ANY** of the following:

- NLM Reading Benchmark 1
- NLM Reading Benchmark 2
- NLM Listening Benchmark

SECTIONS	RECOMMENDATIONS
If Factual Questions (FQ) is 0-7:	Factual Questions Students should receive repeated practice during retell intervention sessions to answer questions about story grammar elements. Use the following questions as needed: 1) Who was the story about? 2) What was his/her problem? 3) How did he/she feel about his/her problem? 4) What did he/she do to fix his/her problem? 5) How did the story end?
If the expository question (last question from the Factual Questions section) is 0 across all of the NLM Questions subtests:	Expository Provide explicit instruction that will help the student identify important information and comprehend specific discourse structures. Provide instruction on how concepts are connected. Pre-reading, during reading, and post-reading strategies that emphasize key words, including new tier 3 and tier 2 words, graphic organizers, asking questions, marking text, summarizing, and discussion are helpful.
If Inferential Vocabulary (IR) is 0-4 across all of the NLM Questions subtests:	Inferential Vocabulary Encourage use of clues in the story to infer meaning of words and provide definitions of target vocabulary words.
If Inferential Reasoning (IR) is 0-6 across all of the NLM Questions subtests:	Inferential Reasoning Encourage use of clues in the story to infer meaning of words and provide definitions of target vocabulary words.

DDM: Orthographic Mapping (OM)

Pre-K – First Grade

HIGH RISK**MODERATE RISK**

If student is at **MODERATE** or **HIGH RISK** on **ANY** of the OM targets, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** across **ALL** OM targets.

TARGET	RECOMMENDATIONS
Irregular Words	<p>Students who need intervention for irregular words should receive explicit instruction in small groups or individually multiple times a week, in addition to other classroom-based literacy instruction. The smaller the group size the more opportunities to respond. An empirically supported decoding curriculum should be used so that the instruction is systematic, intensive, and effective.</p> <p>Irregular words are words that do not follow the standard phonics rules. This includes high frequency words with irregular spellings (e.g., the, said, are, come) as well as words for which the phonics rules will be taught later. For example, the word like is irregular for a kindergartener who has not yet learned the silent –e rule, but it is not irregular for a first grader who has learned the silent –e rule. Because a sounding out strategy cannot be used to read all of the parts of irregular words, students must memorize the oral word or part of that oral word that corresponds to the written word or part of that written word and be able to produce it in an automatized manner. It can be helpful to use flash cards or other drill type instruction to teach irregular words, but it is recommended that, to the extent possible, students practice irregular words while they read books instead of in isolation. Irregular words should be taught and practiced as they appear in the books students read rather than learning a large set of sight words before students have seen them in books. It is also important not to introduce irregular words before students are consistently using a sounding out strategy for decodable words. Struggling readers may default to guessing with all words before they have attempted a sounding out strategy. Therefore, interventionists should be careful not to encourage early readers to approach decodable words in the same manner they approach irregular words. It is conceptually this: the irregular portions of a word are explicitly taught while the decodable parts of a word are read in the same manner as any other decodable word.</p>
Letter Sounds	<p>Students who need to work on letter sounds should practice saying the sounds that correspond to each letter. This can be taught and practiced using flashcards, repeated one-minute timings, and any other repeated practice strategy. When introducing letter sounds, it is important that visually and auditorily similar letters are separated. For example, the sounds /f/ and /v/, /t/ and /d/, /b/ and /d/, /b/ and /p/ are auditorily similar and the letters b and d, b and p, q and p, n and m are visually similar. Their introduction should be separated by several sessions. The more useful letters of s, a, t, m, and i should be introduced first because students will be able to decode many words with them. The first letter sounds should be continuous sounds (e.g., m, s, f, l, r, n). Students should be encouraged to hold the sound for 2 seconds. Begin teaching letter sounds using lower case letters instead of upper-case letters. Introduce one sound for each letter at first, usually the most common sound (e.g., /k/ for c, not /sss/). Letter sounds can be targeted alongside letter names, first sounds, and oral phoneme segmenting.</p>

DDM: Phonemic Awareness (PA) and Phoneme Manipulation (PM)

Pre-K – First Grade

HIGH RISK**MODERATE RISK**

If student is at **MODERATE** or **HIGH RISK** on **ANY** PA and PM targets, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** across **ALL** PA and PM targets.

TARGET	RECOMMENDATIONS
Phonemic Awareness	Phonemic awareness is a meta-linguistic skill that enables word recognition and spelling. Performance on phonemic awareness tasks can help predict whether a student will likely meet future decoding/word-recognition expectations. Instruction in speech-sound awareness can prevent and mitigate spelling difficulties (Adams, Foorman, Lundberg, & Beeler, 1998; Gillon, 2004; NICHD, 2000; Rath, 2001). Explicit instruction in speech sounds also accelerates learning of the alphabetic code.
Phoneme Segmentation and Phoneme Blending	Students who need to work on phoneme segmentation and/or blending should practice segmenting and blending words orally. The focus should be on the individual sounds (phonemes) of each word beginning with simple consonant-vowel (e.g., see, me), vowel-consonant (e.g., if, on), and consonant-vowel-consonant words (e.g., man, sun). It may be helpful to teach students to say words the slow way without stopping between sounds before teaching them to isolate each sound in the word. For example, first teach, “Say ‘man’ the slow way.” “mmmaaannn.” Then teach, “Say all the sounds in the word man.” “/mm/ /aa/ /nn/.” Interventionists may choose to use visuals such as holding up a finger or moving a small chip each time a different sound in the word is produced. Phoneme segmentation can be targeted alongside oral phoneme blending, letter sounds, and letter names.
Phoneme First Sounds and Continuous Phoneme Blending	Students who need to work on identifying the first sound in words should receive repeated practice with a variety of words. It may be helpful to begin first sound instruction with onset-rime segmentation in which the same ending has many different onset sounds. For example, many initial sounds can be added to the ending –an to make tan, pan, man, can, fan, and ran. To the extent possible, this activity should be integrated with letters so that the visuals can help students understand that each letter makes its own sound. As students are able to identify the first sound of simpler, single-syllable words, it is appropriate to have them practice identifying first sounds of more complex words. First sounds can be targeted alongside letter sounds and letter names.
Phoneme Manipulation	<p>“Phonological manipulation tasks are the best measures of the phonological awareness skills needed for reading because they are the best predictors of word-level reading proficiency” (Kilpatrick, 2015; p.155)</p> <ul style="list-style-type: none"> • Adding, deleting, and substituting phonemes is the layer of phonemic awareness that is the most closely related to reading connected text (Kilpatrick, 2015) • Phoneme manipulation might be helpful for students who are not able to orthographically map words.

DDM: Decoding Inventory (DI) – Closed Syllables target

Pre-K – First Grade

HIGH RISK MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on Closed Syllables target, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** on Closed Syllables target.

RECOMMENDATIONS

Decoding (CVC)

Students who are unable to blend simple consonant-vowel-consonant (CVC) words should be taught to decode simple words with V-C, C-V, or CVC patterns (e.g., am, me, man) before reading words with letter combinations and more complex patterns (e.g., sh, th, ea, ou, ar, ir). They should receive intervention that teaches a letter-by-letter sounding out strategy because it has several advantages over word family and analogy decoding strategies. One advantage of the letter-by-letter sounding out strategy is that students are taught to observe each letter and not rely on an auditory rime (e.g., cat, sat, mat, fat). Another advantage is the letter-by-letter strategy enables transfer of the decoding skill to words that have not been taught.

DDM: Decoding Inventory (DI) – All other targets

HIGH RISK MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on **ANY** of the other DI targets, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** on **ALL** other DI targets.

RECOMMENDATIONS

Decoding (Higher Level Targets)

Students who can read simple CVC words but not words with letter combinations or more complex patterns should be taught various word patterns beginning with patterns that occur most frequently in words they will encounter. There are several types of letter combinations, including consonant digraphs (e.g., sh, th, ph), vowel digraphs (e.g., ee, ea, oo), diphthongs (e.g., oi, ou), and r- and l-controlled vowels (ar, ir, ol). Digraphs consists of two letters that represent one sound. In a diphthong, two consecutive vowels contribute to the unique sound. Vowels followed by an r or an l that influence the way in which it is spoken are called r- or l-controlled vowels. Before teaching the silent –e rule, students need to know the long and short sounds associated with each vowel. Once teaching of the silent –e rule, it is helpful for students to decode CVC words and then decode the same word with the –e added to the end. For example, students should be able to change rat to rate and sit to site. It is also appropriate to point to the –e at the end of the word before students begin to decode it. This draws attention to the –e and its influence on the vowel. As a letter combination is introduced, students will need many opportunities to read lists of words with these patterns in them. The Decoding Inventory subtest of the CUBED can provide an inventory of the syllable types a student can decode, use the information from this subtest to guide instruction.

NLM Reading Fluency

Second Grade +

HIGH RISK**MODERATE RISK**

If student is at **MODERATE** or **HIGH RISK** on Decoding Fluency on **ALL** of the following tests, follow recommendations on right:

- NLM Reading Retell 1
- NLM Reading Retell 2

BENCHMARK

No recommendations if student is at **BENCHMARK** on Decoding Fluency on **ANY** of the NLM Reading Benchmarks.

RECOMMENDATIONS**Reading Fluency**

Students who need high intensity intervention for decoding fluency, accuracy, and prosody should receive 5-15 minutes of practice multiple times a week, in addition to other classroom-based literacy instruction. Reading fluency interventions should supplement other interventions designed to teach word recognition. Once students have learned to decode at least 85% of the words in a passage, it can be useful to practice fluency. **If a student's accuracy is low**, then he/she needs more phonics or word recognition instruction. It is essential that fluency intervention does not exclusively focus on speed reading. There should be considerable attention on prosody and comprehension. Students should be encouraged to decode so it sounds like language, not a list of words. Repeatedly reading passages or completing short one-minute reading sprints can help students build fluency.

NLM Retell

HIGH RISK**MODERATE RISK**

If student is at **MODERATE** or **HIGH RISK** on the combined NLM Questions Score on **ALL** of the following tests, review individual sections and follow recommendations on right:

- NLM Reading Benchmark 1
- NLM Reading Benchmark 2
- NLM Listening Benchmark

BENCHMARK

No recommendations if student is at **BENCHMARK** on the combined NLM Retell Score on **ANY** of the following:

- NLM Reading Benchmark 1
- NLM Reading Benchmark 2
- NLM Listening Benchmark

SECTIONS	RECOMMENDATIONS
<p>If Episode 1 Complexity (EC1) score is 0-2 OR Episode 2 Complexity (EC2) score is 0-2:</p>	<p>Story Grammar (Basic) Provide 15-30 minutes of explicit instruction in large or small groups twice a week. Interventions should be provided by an educator who has received training in explicit language instruction. Practice retelling simple stories (e.g., Story Champs level A stories) that include a problem, an attempt, and a consequence/ending.</p> <p>Story Grammar (Advanced) Moderate intensity: 30 minutes of explicit instruction in small groups once or twice a week. Encourage to include two sets of problems, attempts, and consequences in retells. Second grade or higher should be able to retell dual episode narratives. Story Champs Level J stories and selected children's literature can be used to help.</p>
<p>If Sentence Complexity (SC) is 0:</p>	<p>Complex Sentences (Enhanced/Dual Episodes) Encourage and prompt complex language structures while retelling dual episode narratives, generating narratives, and during exposition. No need to wait until students can produce dual episodes to encourage language complexity targets. Targets: because, so that, when, after, and modifiers. Students should also be encouraged to use relative subordinate clauses, where a noun is followed by relative pronouns such as "who", "that", or "which" (e.g., the boy who was tall). Advanced intervention can be contextualized using Story Champs stories Levels C-I, children's literature, and informational text.</p>
<p>If Vocabulary Complexity (VC) is 0:</p>	<p>Complex Vocabulary (Enhanced/Dual Episodes) Encourage and prompt use of less common, academic words while retelling stories, generating stories, and exposition. Help the student provide definitions of target vocabulary words. Story Champs level J stories and children's literature can be useful. Use narratives and informational texts from the student's curriculum.</p>

NLM Questions

Second Grade +

HIGH RISK

MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on the combined NLM Questions Score on **ALL** of the following tests, review individual sections and follow recommendations on right:

- NLM Reading Retell 1
- NLM Reading Retell 2
- NLM Listening Retell

BENCHMARK

No recommendations if student is at **BENCHMARK** on the combined NLM Questions Score on **ANY** of the following:

- NLM Reading Benchmark 1
- NLM Reading Benchmark 2
- NLM Listening Benchmark

SECTIONS	RECOMMENDATIONS
If Factual Questions (FQ) is 0-8:	Factual Questions Students should receive repeated practice during retell intervention sessions to answer questions about story grammar elements. Use the following questions as needed: 1) Who was the story about? 2) What was his/her problem? 3) How did he/she feel about his/her problem? 4) What did he/she do to fix his/her problem? 5) How did the story end?
If the expository question (last question from the Factual Questions section) is 0 across all of the NLM Questions subtests:	Expository Provide explicit instruction that will help the student identify important information and comprehend specific discourse structures. Provide instruction on how concepts are connected. Pre-reading, during reading, and post-reading strategies that emphasize key words, including new tier 3 and tier 2 words, graphic organizers, asking questions, marking text, summarizing, and discussion are helpful.
If Inferential Vocabulary (IR) is 0-4 across all of the NLM Questions subtests:	Inferential Vocabulary Encourage use of clues in the story to infer meaning of words and provide definitions of target vocabulary words.
If Inferential Reasoning (IR) is 0-6 across all of the NLM Questions subtests:	Inferential Reasoning Teach the student how to make inferences from the text and how to make elaborative inferences based on background knowledge.

DDM: Phonemic Awareness (PA) and Phoneme Manipulation (PM)

Second Grade +

HIGH RISK**MODERATE RISK**

If student is at **MODERATE** or **HIGH RISK** on **ANY** PA and PM targets, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** across **ALL** PA and PM targets.

TARGET	RECOMMENDATIONS
Phonemic Awareness	Phonemic awareness is a meta-linguistic skill that enables word recognition and spelling. Performance on phonemic awareness tasks can help predict whether a student will likely meet future decoding/word-recognition expectations. Instruction in speech-sound awareness can prevent and mitigate spelling difficulties (Adams, Foorman, Lundberg, & Beeler, 1998; Gillon, 2004; NICHD, 2000; Rath, 2001). Explicit instruction in speech sounds also accelerates learning of the alphabetic code.
Phoneme Segmentation and Phoneme Blending	Students who need to work on phoneme segmentation and/or blending should practice segmenting and blending words orally. The focus should be on the individual sounds (phonemes) of each word beginning with simple consonant-vowel (e.g., see, me), vowel-consonant (e.g., if, on), and consonant-vowel-consonant words (e.g., man, sun). It may be helpful to teach students to say words the slow way without stopping between sounds before teaching them to isolate each sound in the word. For example, first teach, "Say 'man' the slow way." "mmmaaannn." Then teach, "Say all the sounds in the word man." "/mm/ /aa/ /nn/." Interventionists may choose to use visuals such as holding up a finger or moving a small chip each time a different sound in the word is produced. Phoneme segmentation can be targeted alongside oral phoneme blending, letter sounds, and letter names.
Phoneme First Sounds and Continuous Phoneme Blending	Students who need to work on identifying the first sound in words should receive repeated practice with a variety of words. It may be helpful to begin first sound instruction with onset-rime segmentation in which the same ending has many different onset sounds. For example, many initial sounds can be added to the ending –an to make tan, pan, man, can, fan, and ran. To the extent possible, this activity should be integrated with letters so that the visuals can help students understand that each letter makes its own sound. As students are able to identify the first sound of simpler, single-syllable words, it is appropriate to have them practice identifying first sounds of more complex words. First sounds can be targeted alongside letter sounds and letter names.
Phoneme Manipulation	<p>"Phonological manipulation tasks are the best measures of the phonological awareness skills needed for reading because they are the best predictors of word-level reading proficiency" (Kilpatrick, 2015; p.155)</p> <ul style="list-style-type: none"> • Adding, deleting, and substituting phonemes is the layer of phonemic awareness that is the most closely related to reading connected text (Kilpatrick, 2015) • Phoneme manipulation might be helpful for students who are not able to orthographically map words.

DDM: Orthographic Mapping (OM)

Second Grade +

HIGH RISK**MODERATE RISK**

If student is at **MODERATE** or **HIGH RISK** on **ANY** of the OM targets, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** across **ALL** OM targets.

TARGET	RECOMMENDATIONS
Irregular Words	<p>Students who need intervention for irregular words should receive explicit instruction in small groups or individually multiple times a week, in addition to other classroom-based literacy instruction. The smaller the group size the more opportunities to respond. An empirically supported decoding curriculum should be used so that the instruction is systematic, intensive, and effective.</p> <p>Irregular words are words that do not follow the standard phonics rules. This includes high frequency words with irregular spellings (e.g., the, said, are, come) as well as words for which the phonics rules will be taught later. For example, the word like is irregular for a kindergartener who has not yet learned the silent –e rule, but it is not irregular for a first grader who has learned the silent –e rule. Because a sounding out strategy cannot be used to read all of the parts of irregular words, students must memorize the oral word or part of that oral word that corresponds to the written word or part of that written word and be able to produce it in an automatized manner. It can be helpful to use flash cards or other drill type instruction to teach irregular words, but it is recommended that, to the extent possible, students practice irregular words while they read books instead of in isolation. Irregular words should be taught and practiced as they appear in the books students read rather than learning a large set of sight words before students have seen them in books. It is also important not to introduce irregular words before students are consistently using a sounding out strategy for decodable words. Struggling readers may default to guessing with all words before they have attempted a sounding out strategy. Therefore, interventionists should be careful not to encourage early readers to approach decodable words in the same manner they approach irregular words. It is conceptually this: the irregular portions of a word are explicitly taught while the decodable parts of a word are read in the same manner as any other decodable word.</p>
Letter Sounds	<p>Students who need to work on letter sounds should practice saying the sounds that correspond to each letter. This can be taught and practiced using flashcards, repeated one-minute timings, and any other repeated practice strategy. When introducing letter sounds, it is important that visually and auditorily similar letters are separated. For example, the sounds /f/ and /v/, /t/ and /d/, /b/ and /d/, /b/ and /p/ are auditorily similar and the letters b and d, b and p, q and p, n and m are visually similar. Their introduction should be separated by several sessions. The more useful letters of s, a, t, m, and i should be introduced first because students will be able to decode many words with them. The first letter sounds should be continuous sounds (e.g., m, s, f, l, r, n). Students should be encouraged to hold the sound for 2 seconds. Begin teaching letter sounds using lower case letters instead of upper-case letters. Introduce one sound for each letter at first, usually the most common sound (e.g., /k/ for c, not /sss/). Letter sounds can be targeted alongside letter names, first sounds, and oral phoneme segmenting.</p>

DDM: Decoding Inventory (DI) – Closed Syllables target

HIGH RISK

MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on Closed Syllables target, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** on Closed Syllables target.

RECOMMENDATIONS

Decoding (CVC)

Students who are unable to blend simple consonant-vowel-consonant (CVC) words should be taught to decode simple words with V-C, C-V, or CVC patterns (e.g., am, me, man) before reading words with letter combinations and more complex patterns (e.g., sh, th, ea, ou, ar, ir). They should receive intervention that teaches a letter-by-letter sounding out strategy because it has several advantages over word family and analogy decoding strategies. One advantage of the letter-by-letter sounding out strategy is that students are taught to observe each letter and not rely on an auditory rime (e.g., cat, sat, mat, fat). Another advantage is the letter-by-letter strategy enables transfer of the decoding skill to words that have not been taught.

DDM: Decoding Inventory (DI) – All other targets

HIGH RISK

MODERATE RISK

If student is at **MODERATE** or **HIGH RISK** on **ANY** of the other DI targets, follow recommendations on right:

BENCHMARK

No recommendations if student is at **BENCHMARK** on **ALL** other DI targets.

RECOMMENDATIONS

Decoding (Higher Level Targets)

Students who can read simple CVC words but not words with letter combinations or more complex patterns should be taught various word patterns beginning with patterns that occur most frequently in words they will encounter. There are several types of letter combinations, including consonant digraphs (e.g., sh, th, ph), vowel digraphs (e.g., ee, ea, oo), diphthongs (e.g., oi, ou), and r- and l-controlled vowels (ar, ir, ol). Digraphs consists of two letters that represent one sound. In a diphthong, two consecutive vowels contribute to the unique sound. Vowels followed by an r or an l that influence the way in which it is spoken are called r- or l-controlled vowels. Before teaching the silent –e rule, students need to know the long and short sounds associated with each vowel. Once teaching of the silent –e rule, it is helpful for students to decode CVC words and then decode the same word with the –e added to the end. For example, students should be able to change rat to rate and sit to site. It is also appropriate to point to the –e at the end of the word before students begin to decode it. This draws attention to the –e and its influence on the vowel. As a letter combination is introduced, students will need many opportunities to read lists of words with these patterns in them. The Decoding Inventory subtest of the CUBED can provide an inventory of the syllable types a student can decode, use the information from this subtest to guide instruction.

TECHNICAL INFORMATION

Development of CUBED-3 Test Items

In this section, we provide a detailed account of the development process of the CUBED-3. This information offers evidence of content-description validity. This evidence of validity provides a rationale for the behaviors the test assesses and establishes how those behaviors are important to the construct being measured.

Construct Identification, Measured Behaviors, and Test Organization

As discussed in the beginning of this manual, we identified two superordinate constructs that we intended to measure with the CUBED-3: *word recognition* and *language*. To measure the construct of word recognition, we identified four core behaviors that we wanted to measure based on a thorough review of the research. We further analyzed those behaviors for underlying skills and processes that would help identify a student's zone of proximal development. Those four word-recognition related behaviors were *phonemic awareness* (with phoneme segmentation, phoneme blending, first sound identification, and phoneme blending and three phoneme manipulation tasks: substitution, addition, and deletion), *orthographic mapping* (with irregular word reading, letter-sound identification, and letter-name identification), decoding (with multiple syllable types and affixes), and reading fluency (with decoding fluency as an index of the correct words read per minute, accuracy, and prosody). To measure the construct of academic language, we identified core behaviors that we wanted to measure based on the curriculum standards and a thorough review of the research. Those behaviors were narrative and expository retelling (assessing the comprehension and production of narrative discourse, vocabulary complexity, and sentence complexity), comprehension of factual questions (primarily focused on discourse structure), inferential word learning (assessing the ability to infer the meaning of unfamiliar words through context), inferential reasoning (text-to-text and text-to-self/world inferencing), and oral and written narrative production (assessing expressive oral and written language).

Development of the DDM Phonemic Awareness and Phoneme Manipulation Subtests

For the development of the DDM Phonemic Awareness measure, 544 words comprised of two, three, four, and five sounds were selected from the Dolch high frequency word list. These words were categorized according to the number of phonemes in each word and according to whether they contained continuous sounds. Words were then randomly selected from each category and randomly assigned to the Phoneme Segmentation, Phoneme Blending, First Sounds, and Phoneme Continuous Blending targets. This resulted in 35 total words. The Phoneme Segmentation target initially had 15 words, the First Sounds target had 10 words, and the Phoneme Continuous Blending target had five words. Field trials with kindergarten, first, and second grade students indicated that words with five sounds were too complex for the phoneme segmentation task. Thus, all of the words with five sounds were removed, resulting in 10 total words for the Phoneme Segmentation target. Ten words were initially selected for the First Sounds target, and two of those words were replaced in order to reduce initial sounds redundancy. The five words included in the Phoneme Continuous Blending target were randomly selected from the list of Dolch high frequency words that contained continuous sounds.

Field trials with young students resulted in minor changes to the words, primarily to ease the process for the examiner.

Development of the DDM Orthographic Mapping Subtest

For the development of the Irregular Words target in the Orthographic Mapping subtest, 135 irregular words were selected from the Dolch sight word list and then ordered by frequency. Information from Carnine et al., (2004), Kameenui and Simmons (1990), the Common Core State Standards, and several commercially available reading curricula were also reviewed, and the sequence in which irregular words were introduced in those curricula was documented. Because none of the curricula followed the same sequence for introducing irregular words, we ordered the words as best as possible according to any identifiable overlap in words and patterns across programs and research. Several school administrators and teachers also reviewed the irregular words in the DDM Word Identification measure. These educators made recommendations for the inclusion or extraction of irregular words and word order. This process resulted in a slight reordering of the words, and the inclusion of five additional words. Subsequent field trials with kindergarten, first, second, and third grade students resulted in additional changes in specific words and in the order of words. Previous versions of the CUBED required students to read as many words as they could in two minutes. This provided considerable data on the words most students could read at each time period in each grade. We analyzed those data and concluded that a student's ability to read temporarily and permanently irregularly spelled words could be validly measured in 1 minute as opposed to 2 minutes. Thus, we reduced the time limit from 2 minutes to 1 minute in the CUBED-3 to increase efficiency.

For the development of the Letter Sounds target in the Orthographic Mapping subtest, a review of several commercially available reading curricula indicated that an average of 6 upper and lower case sounds were introduced within the first month or two of kindergarten, and that by mid-year, approximately 16 letter sounds had been taught. By the end of the kindergarten school year, after approximately 38 weeks of instruction, all 52 upper-case and lower-case letter sounds had been taught. End of kindergarten Common Core expectations indicate that students should *“demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant [and] associate the long and short sounds with the common spellings (graphemes) for the five major vowels.”* Thus, children should at least know the common sound for each of the consonants and major vowels of English at the end of kindergarten. The standards also indicate that at the end of first grade, students should *“know the spelling-sound correspondences for common consonant digraphs.”* We documented the sequence in which different letter sounds were typically introduced across different reading curricula. Because no two curricula followed the same sequence of letter sounds, we consulted with several school administrators and teachers across the U.S., as well as reviewed research on letter sound acquisition. These additional investigations resulted in the current sequence of upper- and lower-case letter sounds found in the CUBED-3. In later pilot research, teachers and administrators recommended the inclusion of 10 upper- and lower-case digraphs, expanding the total number of letter sounds to 62. As was the case with the Irregular Words target, previous versions of the CUBED-3 required students to produce as many letter sounds as they could in two minutes. After several years of research, we concluded that a student's ability to identify letter sounds could be validly measured in 1 minute instead of 2 minutes.

For the development of the Letter Names target in the Orthographic Mapping subtest, all upper- and lower-case letters were identified and then sequenced according to several published preschool and kindergarten curricula. Because no two curricula followed the same sequence of letter names, we consulted with several administrators and teachers, as well as reviewed research on letter name acquisition. These additional investigations resulted in the current sequence of upper- and lower-case letter names found in the CUBED-3. In the updated CUBED-3 assessment, letter sounds are not affiliated with benchmark expectations.

Development of the DDM Decoding Inventory Subtest

For the DDM Decoding Inventory, we reviewed the scope and sequence of syllable type and affix instruction across multiple published curriculums, including Orton Gillingham-based curriculums, 95% Group, and CKLA. We created multiple nonsense words that included increasingly more advanced patterns within each syllable type and affix category. Initial trials included a larger pool of items in each target area from which 6 words that included patterns typically introduced in the beginning, middle, and end of year were identified. Those 6 words were placed at the beginning of the word list for each target area and benchmark expectations were established.

Development of the DDM Dynamic Assessment of Decoding *(Available only through Insight)*

For the DDM Dynamic Assessment of Decoding subtest, we randomly generated a list of closed vowel CVC and consonant cluster closed vowel CCVC nonsense words using the majority of English consonants and vowels. Any words that did not meet common English orthographic and phonotactic properties were eliminated. A total of 136 nonsense words were selected and then organized by CVC and CCVC patterns and vowel groupings. These nonsense words were then randomly placed into groups of four. The nonsense words used in the Silent 'e' target were constructed by randomly selecting nonsense words not included in the CVC and CCVC targets, and appending an 'e' at the end of each word. If the resulting word was indeed nonsensical (to the best of our discernment), and was orthographically and phonotactically probable, then it was included in the potential list of silent 'e' words. After constructing the silent 'e' word list, words were randomly selected for final item inclusion and several field trials were conducted.

Development of the DDM Rapid Automatized Naming Subtest *(Available only through Insight)*

We conducted a thorough review of the research and modified a rapid automatized naming task investigated by Catts et al. (2001) and Petersen & Gillam (2015).

Development of the NLM Listening and NLM Reading Subtests

Each NLM story was constructed following precise narrative structure guidelines. Narrative structure, or story grammar, is comprised of specific structural elements. The story grammar in the NLM stories follows a pattern outlined by Stein and Glenn, (1979), which tends to match academic expectations. Story grammar elements are combined to form episodes in a narrative. The key story grammar elements of a basic episode include a problem, an attempt to solve the problem, and a consequence. NLM Preschool stories have very basic story grammar, with a main character, setting information with an activity and a location, a problem, the character's feeling about the problem, an attempt to solve the problem, a consequence resulting from the attempt to solve the problem, and an ending. The NLM kindergarten through eighth grade stories have the inclusion of a plan that is stated right before

the character's attempt to solve the problem, and end feelings describing how the character feels at the end of the story. Additional complexity is embedded in second through eighth grade stories in the form of multiple episodes, including a complication in which the first attempt to solve the problem does not work. All kindergarten through eighth grade stories include both informational and persuasive expository language.

A narrative, like any other type of discourse, is also built from language complexity. Language complexity used in narration can be evaluated according to the extent that more complex and precise structures and vocabulary are present. A story can be produced using very basic vocabulary and grammar, but more successful, academically related narratives involve complex sentence structures with a clear time sequence and causal connections between events. Language complexity also increases with age. Average sentence length increases, and syntax becomes more complex. Language features such as openings, dialogue, adjectives, and temporal and adversative conjunctions (then, but) are earlier emerging. Adverbs, temporal subordinate clauses (e.g., after he got scared, he ran away), relative and nominal (including complemental) subordinate clauses, and multiple subordination increase in frequency and complexity as children's language grows. Several linguistic features that mark high level oral language capabilities such as additional subordinate clauses, adverbs, adjectives, and low frequency vocabulary words are increasingly more prevalent as the NLM grade levels increase.

The above guidelines were helpful in crafting parallel stories that are socially appropriate and cross-culturally relevant. Criteria for story grammar complexity and language complexity were initially drafted after a thorough review of the research on narrative developmental expectations and preliminary normative data from approximately 1000 preschool, kindergarten, first, second, and third grade students. Several empirical studies brought to light the extent to which typically developing students and students with language impairment could improve narrative structure and language complexity after narrative-based language instruction and intervention. Concurrently, a thorough review of the Common Core State Standards and other state standards further shaped passage criteria, increasing language complexity and influencing the stories to reflect both narrative and expository language properties. Lexile indices primarily derived from the Common Core State Standards were calculated for each story, and editing took place to structure each passage until a Lexile range was consistent within grade level. Each final story underwent careful editing by linguists, speech-language pathologists, and the authors. For the NLM Listening measure, feedback was elicited in field trials with teachers and speech-language pathologists in several states. Awkward wording and any additional editing suggestions were noted and the passages were revised, processed through the strict a-priori development criteria, and molded to yield the appropriate Lexile index. For the NLM Reading, all 25 within grade-level stories were administered to several first, second, third, fourth, and fifth grade students. The number of correct words read in one minute was documented, as was accuracy, specific word errors, prosody, and the total time required to read the entire passage. Variability within and across students was noted, and consistently outlying stories were identified and revised. Revised stories were then administered to naïve students and again assessed for outlying status.

Each NLM Listening and NLM Reading story, within grade level, has nearly the exact same number of words (varying only from 2 to 10 words). Each story within grade level also consistently has the omission or inclusion of an exact, pre-specified number of story grammar elements, character name references, episodes, single pre-noun adjectives, double pre-noun adjectives, pre-verb adverbs, post-verb adverbs, adverbs of likelihood, non-overlapping tier-2 vocabulary words to the greatest extent possible, the temporal conjunction *then*, the adversative conjunction *but*, the continuative conjunction *so then*, left-branching temporal subordinate clauses with the subordinating conjunction *when*, left-branching temporal subordinate clauses with the subordinating conjunction *after*, right-branching causal subordinate clauses with the subordinating conjunction *because*, right-branching causal subordinate clauses with the subordinating conjunction *so that*, left-branching adverbial subordinate clauses with the subordinating conjunction *although*, adjectival (relative) subordinate clauses using *that* or *who*, two or more subordinate clauses in the same utterance not associated with dialogue, dialogue, and appositives with and without relative clauses. Each story is written with ‘universal’ personal themes in mind that can transcend culture (e.g., getting hurt), with specific accounts that are plausible to have occurred in the lives of preschool and school-age children in the U.S. and other countries.

Each NLM Listening and NLM Reading story has also been equated using the Lexile index. The first several utterances of the first grade, second grade, and third grade NLM Reading stories have a lower Lexile index to accommodate beginning readers, but the entire story still matches the Lexile index of the NLM Listening passages. See table below.

Development of the NLM Comprehension Questions Section of the NLM

For development of the Comprehension Questions section of the NLM Listening and the NLM Reading measures, items that assessed factual story grammar information were included. The initial questions underwent minor revisions after preliminary field trials to better elicit specific story grammar elements.

Development of the NLM Vocabulary Questions Section of the NLM

For development of the Vocabulary Questions section of the NLM Listening and the NLM Reading measures, three tier-2 (less common, academic) vocabulary words previously embedded in the narratives of each passage according to the a-priori development criteria were identified and then examined for distant and adjacent contextual support within the passage. In the event that two editors (usually the authors of this test) deemed the contextual support insufficient to facilitate inferential word learning, or the contextual support was too adjacent (proximal to the vocabulary target) or too distant (three or more sentences from the vocabulary target) the story was modified to provide additional contextual support for that word and/or the contextual support was moved within the story. Any modification of a story to provide greater contextual support of a tier-2 vocabulary word sparked a new round of careful editing and examination to ensure that any modified story met parallel forms and Lexile criteria. The extent to which the NLM Listening and NLM Reading grade-level stories are parallel is reported in the reliability section of this manual.

Development of the NLM Inferential Reasoning Questions Section of the NLM

The Inferential Reasoning questions include text-to-text and text-to-self/world questions. Each NLM passage was carefully engineered to include references that would either support text-to-text inferencing or topics that would support text-to-self or text-to-world inferencing.

Development of the NLM Vocabulary Use Section of the NLM

For development of the Vocabulary Use section of the preschool NLM Listening, three tier-2 vocabulary words that were embedded in each passage per story composition guidelines described above were identified in each passage. These “tier-2 words” were initially selected from a large database of low frequency words and were then embedded in each grade-level passage based on the extent to which the words would be unfamiliar to the students in that grade. The objective was to include words that would be more commonly used in academic oral language reflective of written language as opposed to casual conversation.

Development of the NLM and ELM Flowcharts

As a companion to the *NLM Listening* and *Reading* subtests, the *NLM Flowchart* includes similar items related to story structure (i.e., character, setting, problem, emotion, plan, attempt, consequence, ending) and sentence complexity (i.e., causal and temporal ties. Initial items for the *ELM Flowchart* were generated through an exhaustive review of literature related to expository academic language. Indispensable to this review were corpus analyses of the language structures encountered in academic textbooks and in the productive academic language (oral and written) of children and adolescents (Biber et al., 1999). Ultimately, most of the items from the *Sentence Complexity* subscale of the *NLM Flowchart* were retained, but the *Passage Structure* subscale contained novel items relevant to the expository discourse research literature.

The new *NLM* and *ELM Flowcharts* for the CUBED-3 were iteratively developed and refined over the course of two years. In multiple cycles, at least two raters used the draft versions of the Flowcharts to score sets of 50-100 language samples. Based on interrater reliability and item total correlation results, items were either eliminated or revised. Additionally, this iterative refinement informed the development of the *NLM Flowchart* and *ELM Flowchart* scoring guides that were used to score the language samples used for the psychometric analyses in this manual. The final versions of the Flowcharts contain the subscales and items presented in Figure 2 and Figure 3.

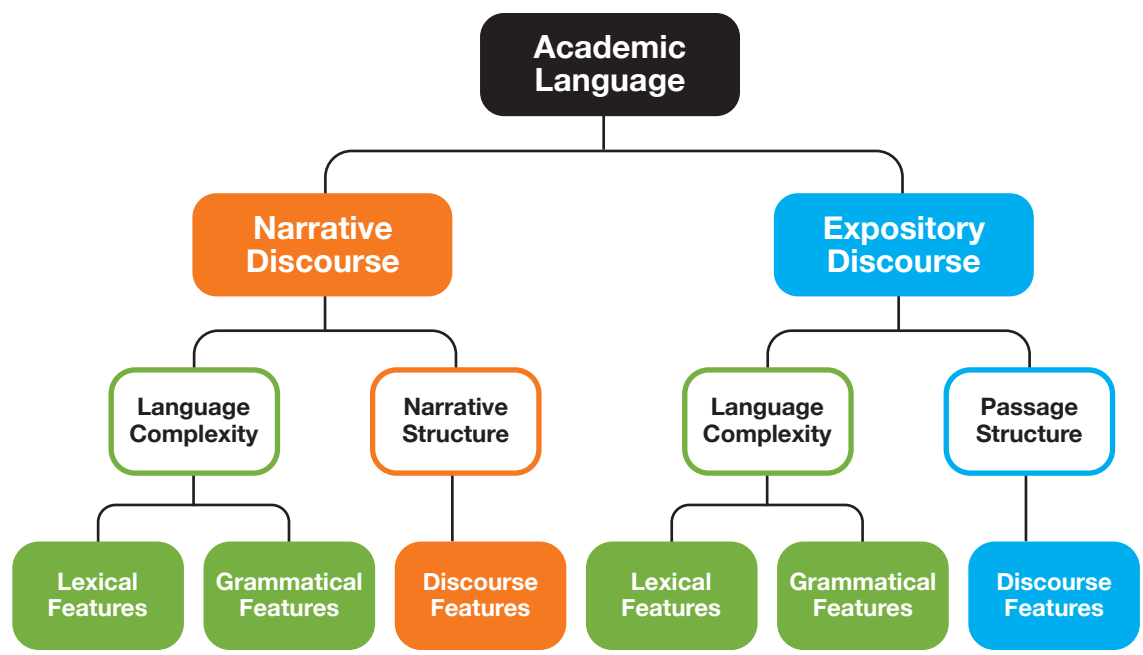


Figure 2. Conceptual Map of Academic Language via the NLM and ELM Flowcharts

Language Complexity subscale	Narrative Structure subscale (NLM only)	Passage Structure subscale (ELM only)
<ul style="list-style-type: none">• Relative Pronouns• Verb/Noun Modifiers• Vocabulary/Rhetoric• Temporal Ties• Causal Ties• Dialogue (NLM Flowchart) or Transition Words (ELM Flowchart).	<ul style="list-style-type: none">• Episode Complexity• Character• Setting• Problem• Plan/Attempt• Consequence• Ending• Sequence• Emotion	<ul style="list-style-type: none">• Main Idea• Information Units• Definitions and Examples• Passage Cohesion• Concluding Statement• Exposition Type

Figure 3. NLM and ELM Flowchart subscales

BENCHMARK CRITERION SELECTION

Where clear curriculum standards are not outlined, we used the 40th percentile from normative data as the benchmark expectation. Further research support for the 40th percentile. As noted by Mellard & Johnson (2008): “because screening does not directly result in a diagnosis, it is better for a screening instrument to err on the side of false positives (identify students as at risk that might not be at risk). Therefore, a wider net with which to capture potentially at-risk students can be cast with screening measures,” (p. 25). As noted above, using the 40th percentile as a benchmark does cast a wider net. Related, Nelson writes that, “the current state of affairs is one in which to achieve high sensitivity an allowance must be made for substantial false positives rates” (p. 6). Therefore, a higher number of false positives when using the 40th percentile as the cut score is both advantageous and expected. For cut points for risk, we designated scores between the 16th and 39th percentile as moderate risk and the 15th percentile and lower is high risk. Data collected from 2015 to 2023 with over 5000 students across the U.S. were used to identify cut points for risk. It should be noted that we use the term “risk” (i.e., moderate risk, high risk) as indicators of how far below the benchmark expectation a student’s performance falls.

DDM Phonemic Awareness Criterion Selection

The two DDM Phonemic Awareness subtests assess *Phonemic Awareness* and *Phoneme Manipulation*. The Phonemic Awareness targets are Phoneme Segmentation, Phoneme Blending, First Sounds, and Continuous Phoneme Blending. The *Phoneme Manipulation* targets are Deletion, Addition, and Substitution.

Phonemic awareness tends to follow a developmental progression. Although there are several ways to assess phonemic awareness, the CUBED-3 includes approaches that are scalable, efficient, and valid markers of progress. Students tend to be able to identify first sounds in a word (e.g., *what sound does milk start with?*) and blend sounds orally before they can segment phonemes (Adams et al., 1998; Gillon, 2004; Goswami, 2000; Paulson, 2004; Rath, 2001). Approximately 85% of five-year-old students can identify the initial sounds in words, and orally blend phonemes presented slowly into a cohesive word. Approximately 30% of 5 year olds can blend single phonemes into words, yet most children who are between the ages of 6;0 (months;years) and 6;5 can blend two and three phonemes together. Approximately 85% of six year-old students can segment words that have two or three phonemes – a task that approximately 90% of 5 years old cannot do. Most children who are six and a half can segment words with more than three phonemes, including phonemes represented with grapheme blends (e.g., *sh*). Also at about 6;6, most children can substitute phonemes in simple syllables to create new words. At age 7, children can delete phonemes at the initial and final position and at 8 years of age, children can delete phonemes initial from blends, and at 9 years of age, children can delete phonemes from medial and final positions (Moats & Tolman, 2009; Paulson, 2004). These normative data are quite revealing and serve as a starting point for establishing benchmark expectations. Yet they are only just a starting point. The CUBED-3 has been administered to thousands of children across the world, and the wealth of data obtained from our research partners further guide us in the identification of the appropriate benchmark and cut points for risk for each of the Phonemic Awareness targets.

Continuous Phoneme Blending

Starting at the simplest task, Continuous Phoneme Blending, data indicate that kindergarteners at the beginning of the school year had scores with a mode of 10 (out of 10 possible points), and that the mean performance was 7.01 with a standard deviation of 3.33. The 50th percentile score was 8, and the 16th percentile was a score of 3. In the middle and end of year, the mode and the mean was 10 with a standard deviation of .80. Students at the 16th percentile scored a 9 in the middle and end of the year, and those at the 7th percentile scored 7.6. These data are confounded by the fact that the majority of children administered the Continuous Phoneme Blending target were first identified as at risk on the First Sounds target. In other words, the modes, means, and standard deviations obtained for the Continuous Phoneme Blending target are from a sub sample of students ($n = 165$) who had weaker phonemic awareness. National norms indicate that approximately 85% of five-year-old students can orally blend phonemes presented slowly into a cohesive word.

Taking all of these data into consideration, we determined that the beginning kindergarten benchmark expectation for the Continuous Phoneme Blending target should be 7 (40th percentile), with moderate risk ranging between 3 to 6 (around the 16th percentile to the 39th percentile) and high risk assigned to students whose scores ranged from 0-2 (performance below the 16th percentile). Kindergarten students who score a 10 at the beginning of the year are performing at the 75th percentile, and are designated as advanced. Kindergarten benchmark expectations for the middle of year for this target were set at 10 (the ceiling), with moderate risk assigned to scores of 9, and high risk assigned to scores of 0-8. End of year benchmark expectations for kindergarten students was also set at 10, with high risk assigned to scores ranging from 0-9. These end of year kindergarten expectations and cut points for risk extend through first grade (and all grades above).

First Sounds

Identifying first sounds in words is generally a more difficult task than the continuous phoneme blending task in the CUBED-3, yet data indicate that kindergarteners at the beginning of the school year had scores with a mode of 20 (out of 20 possible points), and that the mean performance was 15.49 with a standard deviation of 4.97. The 50th percentile score was 17, the 40th percentile was 16, the 25th percentile was a score of 14, and the 16th percentile was a score of 10, the 10th percentile was 7. The 75th percentile was a score of 19. Middle of year data for first sounds is not representative of a normal sample because first sounds was only administered to students who were at moderate or high risk on phoneme segmentation. Nevertheless, the data indicate that even for students who struggle with phoneme segmentation, first sounds in the middle of the school year is a fairly simple task. Across two studies, the means were 17.28, (mode = 20) and 17.83 (SD= 3.22, Mode = 20). The 50th percentile was 19, the 40th percentile was 18, and the 16th percentile was 15.8 and the 10th percentile was 12.5 and 12.7 (respectively). The 75th percentile was a score of 20.

Phoneme Blending

Phoneme blending is a new target for the revised CUBED-3. Initial benchmarks for phoneme blending were established using research data from Paulson (2004), Moats and Tolman (2009), and preliminary trials with 222 kindergarten and first grade students. Preliminary data for MOY for 195 kindergarten students indicated that the mean was 3.88 (SD 1.16) with a mode of 5. The 16th percentile was 3.00.

The 10th percentile was 2.00. The 5th percentile was 1.00. The 40th and 50th percentile was 4.00. The 75th percentile was 5.00. Phoneme blending MOY for first grade students indicated a mean of 3.93 and a standard deviation of 1.17. The mode was 4.00. The 16th and 25th percentile was 3.00. The 10th percentile was 2.00. The 40th and 50th percentiles were 4.00. The 75th percentile was 5.00.

Phoneme Segmentation

We used Phoneme Segmentation (the first target in Phonemic Awareness) as a general outcome measure for younger grades because we did not find floor effects. Our phoneme segmentation findings from a sample of 1,721 students are in line with developmental expectations and current curriculum expectations. Scores below the 16th percentile were categorized as high risk. Scores ranging from the 16th percentile to the 39th percentile were categorized as moderate risk. Scores ranging from the 40th to the 74th percentile were categorized as at benchmark. Scores at or above the 75th percentile were categorized as advanced. When mastery of phoneme segmentation was noted and expected (e.g., end of first grade and with second grade students+), we set the benchmark at 90% accuracy for end of first grade and ~95% accuracy for second grade and higher.

Phoneme Substitution

The Phoneme Substitution subtest is a new addition to the CUBED-3 revision. Initial benchmarks for Phoneme Substitution were established using research data from Paulson (2004), Moats and Tolman (2009), and preliminary trials with 224 first and second grade students. First grade MOY data revealed a mean of 2.70 (.93), with a mode of 2 (maximum of 5). The 10th to the 40th percentiles were a score of 2. The 50th and the 75th percentiles were a score of 3. The 90th percentile was a score of 4.00. Second grade BOY data revealed a mean of 3.21 (1.05), with a mode of 3. The 5th to the 25th percentiles was a score of 2.00. The 40th percentile was a score of 3.00. The 75th percentile was a score of 4. Second grade MOY data revealed a mean of 3.88 (1.26) and a mode of 5. The 16th percentile was 2.72. The 40th percentile was 3.80. The 50th percentile was 4.00. The 75th percentile was 5.00.

Phoneme Addition

The Phoneme Addition subtest is a new addition to the CUBED-3 revision. Initial benchmarks for Phoneme Addition were established using research data from Paulson (2004), Moats and Tolman (2009), and preliminary trials with 126 second grade students. BOY Second Grade data indicated a mean of 3.93 (1.00) with a mode of 4. The 16th percentile was 3.00. The 40th percentile was 4.00. The 75th percentile was 5.00.

Phoneme Deletion

The Phoneme Deletion subtest is a new addition to the CUBED-3 revision. Initial benchmarks for Phoneme Deletion were established using research data from Paulson (2004), Moats and Tolman (2009), and preliminary trials with 99 second grade students. BOY second grade data indicated a mean of 4.10 (1.03) with a mode of 5 (max 5). The 10th to the 25th percentile was a score of 3.00. The 40th percentile was a score of 4.00. The 75th percentile was a score of 5.00.

DDM Orthographic Mapping Criterion Selection

The DDM Orthographic Mapping subtest provides a means to measure three different aspects of sound-symbol recall: The recognition of temporarily and permanently irregularly spelled words, letter sounds, and letter names. These skills do not necessarily follow a developmental sequence, although word recognition is certainly the more complex task due to the sheer number of words students need to decode. The extent to which a student knows a certain letter name, a certain letter sound, or a certain word has much to do with what the student is taught and has been exposed to. Parents and preschool and kindergarten teachers tend to focus first on letter names with young children, they will also focus occasionally on letter sounds and on certain words, such as the child's name. This sequence isn't based on developmental expectations, per se, but more on cultural and pedagogical trends. Because of this, the targets in the Orthographic Mapping subtest are not necessarily hierarchical, and examiners may wish to administer all three targets to a student regardless of performance on any target. The Orthographic Mapping subtest targets are all timed. Students are given 1 minute to complete the Irregular Words and Letter Sounds targets. Student are given 2 minutes to complete the optional Letter Names target. This time restriction is to allow for the measurement of automaticity. We are not only interested in whether a student can recall words, letter sounds, and letter names, but that they can do so quickly so that reading fluency can ensue. Thus, when administering the Orthographic Mapping subtest to students, it is very important that the examiner follows the standardized administration procedures and does not allow a student to struggle with a word, letter sound, or letter name for more than 3 seconds. A more comprehensive inventory can be obtained by continuing to administer the test after 1 minute, yet the data from this lengthier administration is for information purposes only. The benchmark expectations and cut points for risk are always based on student performance in 1 minute.

Although all three Orthographic Mapping targets reflect a similar construct, we provide benchmark scores for only two of the three targets (Irregular Words and Letter Sounds) to drive specific instruction necessary for learning to decode. With our initial sample of 1,512 students, we found floor effects with the Irregular Words target with preschool and early kindergarten students, yet with the Letter Sounds and Letter Names targets we found adequate distribution of scores. The case was reversed with students at the end of kindergarten and in first and second grade, where ceiling effects were noted with Letter Sounds and Letter Names targets, but Irregular Words had good dispersion of scores. These findings align with current curriculum expectations.

Thus, we used data from our sample of students to guide the development of risk criteria. Scores below the 16th percentile were categorized as high risk. Scores ranging from the 16th percentile to the 39th percentile were categorized as moderate risk. Scores ranging from the 40th to the 74th percentile were categorized as at benchmark. Scores at or above the 75th percentile were categorized as advanced. When mastery of any of the Orthographic Mapping targets was noted and expected (e.g., with third grade students), we set the benchmark for irregular words at 90% and the benchmark for letter sounds was set at 95% accuracy.

Letter Names

Although we do not provide benchmark expectations or cut points for risk for the Letter Names target, the following table can be useful for examiners to reference. Note that the majority of students who were administered Letter Names were at moderate or high risk on Letter Sounds. This means that the data in the tables below represents the means and standard deviations for students who are not a representative sample of the population.

Kindergarten BOY Letter Names National Norms. Normative data from several sources on letter naming at the beginning of kindergarten indicate that the 50th percentile ranges from 12 to 16 correct letter names. National data for the 10th percentile at the beginning of the year ranges from 1 to 2. For the middle of the kindergarten year, the 50th percentile national norms range from 35 to 39, and the national norms for the 10th percentile range from 13 to 14. The national norms 50th percentile at the end of the kindergarten year range from 45 to 52 and the end of year letter names at the 10th percentile range from 28 to 29. Piasta, Petscher, and Justice (2021) noted that at the beginning of kindergarten, 10 letter names indicated that students were at low risk. According to national norms, about 50% of letters can be identified on average by kindergarten students at the beginning of the school year.

Kindergarten Letter Names CUBED Data. The scores at the 40th percentile, 16th percentile, and 10th percentile for the normative sample are displayed in the DDM Orthographic Mapping table on page 128. The CUBED-3 Letter Names target was only administered to students at risk on Letter Sounds. Therefore, if the CUBED-3 Letter Names is administered to all kindergarten students at the beginning of the school year, we would expect the CUBED-3 40th percentile to be higher than what is reported in the table.

Letter Sounds

We conducted several studies to identify the benchmark and cut points for letter sounds for kindergarten and first grade students. National normative data indicate that at the beginning of kindergarten, letter sounds mean scores are around 2, and the 10th percentile is 0 (20th percentile is 1). At the middle of the year, kindergarteners increase their ability to identify letter sounds ranging from 18 to 25, with the 10th percentile ranging from 6 to 14. At the end of kindergarten, letter sounds means range from 34 to 36, with the 10th percentile ranging from 17 to 18. These normative data are somewhat difficult to interpret because letter sound knowledge is so dependent on the instruction a student receives (for example, data from one instructional program has BOY norms for kindergarten at 1-13 and EOY kindergarten norms ranging from 6-19, starkly different from other assessment norms.

Our research with a 2-minute time limit with approximately 2000 students indicate that middle of kindergarten CUBED-3 Letter Sounds (with a maximum score of 61) resulted in means and standard deviations of 43.42 (14.77). The 50th percentile was 50. The 40th percentile was 46. The 16th percentile was 26, and the 10th percentile was 19. The 75th percentile was 54. Referencing these data and the national normative data, we set the benchmark for MOY kindergarten at 15, moderate risk at 6-14, and high risk at 5 or lower. For end of kindergarten, data with a 2-minute time limit with 153 students indicated that the mean was 56.08 (9.46) and the 50th percentile was 59. The 16th percentile

was 53 and the 10th percentile was 46.40. Because many of the students were able to complete the entire list of 61 letters in less than 2 minutes, benchmark data for the 1-minute task is higher than a simple calculation of 50% of the 2-minute data. Consequently, end of kindergarten benchmark was set at 30, with moderate risk at 19-29, and high risk at 18 or lower.

The beginning of first grade CUBED-3 Letter Sounds mean with a 2-minute time limit was 52.60 (12.64). The 50th percentile was 57, the 40th percentile was 55, the 16th percentile was 49. The 75th percentile was 59. Benchmark for the beginning of first grade with a 1-minute time limit was set at 30, with moderate risk at 19-29, and high risk at 18 or lower.

The middle of first grade CUBED-3 Letter Sounds mean with a 2-minute time limit was 52.39 (12.93). 50th percentile was 57. 40th percentile 57. 16th percentile was 40.32. 75th percentile is 60. Benchmark for MOY first grade with a 1-minute time limit was set at 35, with moderate risk at 27-34 and high risk at 26 or lower.

End of first grade data for letter sounds with a 2-minute time limit were only collected with 22 students who were having considerable difficulty with decoding. Even so, their mean performance was 53.23 (16.02) with the 50th percentile at 59, the 16th percentile at 50, and the 10th percentile at 21. End of first grade benchmark with a 1-minute time limit was set at 43, with moderate risk at 31-42 and high risk at 30 or lower.

Second grade BOY benchmark with a 1-minute time limit was set at 43, moderate risk 31-42, and high risk 30 or lower. MOY and EOY second grade benchmark with a 1-minute time limit was set at 45, with moderate risk at 40-44, and high risk at 39 or lower.

Irregular Words

We conducted several studies with a 2-minute time limit to identify the benchmark and cut points for Irregular Words for kindergarten, first, and second grade students. For end of kindergarten, the mean was 28.97 (15.04), with the 50th percentile at 28, the 40th percentile was 25, the 16th percentile 12, and the 10th percentile 9. For middle of kindergarten with the 2-minute time limit, the 75th percentile was 26, the 40th percentile was 13, the 16th percentile was 11, and the 10th percentile was 10. Benchmark expectations for MOY kindergarten with the 1-minute time limit was set at 7, moderate risk was 4-6, and high risk was set at 0-3.

EOY kindergarten with the 1-minute time limit was set at 12, with moderate risk set at 8-11 and high risk set at 7 or lower.

For the beginning of first grade with the 2-minute time limit, the mean for Irregular Words was 30.72 (17.82). 50th percentile was 32. 40th percentile was 26. 16th percentile was 8. 10th percentile was 3. 75th percentile was 49. The benchmark expectations for the 1-minute time limit was set at 12, with moderate risk set at 8-11 and high risk set at 7 or lower.

For middle of first grade with the 2-minute time limit, the mean for Irregular Words was 41.62 (14.57). The 50th percentile was 49. The 40th percentile was 45. The 16th percentile was 24.44. The 10th percentile was 17. The 75th percentile was 53. The benchmark expectations for the 1-minute time limit was set at 30, with moderate risk set at 15-29 and high risk set at 14 or lower.

For the end of first grade with the 2-minute time limit, the mean was 49.55 (8.37), with the 50th percentile at 52, the 16th percentile at 47.56, and the 10th percentile at 38. The benchmark expectations for the 1-minute time limit was set at 35, with moderate risk set at 20-34 and high risk set at 19 or lower.

For second grade, benchmark expectations for the 1-minute time limit was set at 35, with moderate risk set at 20-34 and high risk set at 19 or lower.

For MOY and EOY second grade, benchmark expectations were set 40, with 35-39 at moderate risk and 34 and lower reflecting high risk.

DDM Decoding Inventory Criterion Selection

The Decoding Inventory is a new subtest in the revised CUBED-3. We conducted a systematic review of the research literature and carefully examined several reading curricula that had an explicit, systematic, and sequential approach to phonics instruction to identify the number of syllable types and affixes kindergarten through third grade students were expected to decode in the beginning, middle, and end of the school year. We identified eight phonics categories (Beck & Beck, 2013): *Individual consonants, short vowels, consonant blends, consonant digraphs, long vowels in CVCE words, long vowels in CVVC words, r-controlled vowels, other vowel patterns, and multisyllabic words*. We cross-referenced this with the six syllable types outlined by Moats and Tolman (2009): *Closed syllables, open syllables, vowel-consonant-silent-e, vowel teams, r-controlled, and consonant-le*. We created nonsense words that included each of these patterns following guidelines outlined by Colenbarnder, Nickels, and Kohneni (2011), with some limitations due to the need for the development of an efficient screener. These nonsense words were then ordered into a generalized scope and sequence within and across grades (e.g., Sedita, 2020), categorized under what we refer to as “targets”: *Closed Syllables, Vowel-Consonant-E, Basic Affixes, Advanced Affixes, Vowel Teams, Vowel-R-Controlled, Complex Vowels, Advanced Word Forms, and Multisyllabic Words in Context* (Table 8). For each target, examiners are able document how well a student can recode each specific target embedded in the nonsense words and examiners can document how well the student can blend each word correctly, which provides information on whether a student can recode initial and final blends, digraphs, double consonants, open syllables, final stable syllables, silent consonants, and miscellaneous patterns that are embedded in the words (Table 9).

Table 8. DDM Decoding Inventory Categories and General Scope and Sequence of Test Items

Target	Scope and Sequence
Closed Syllables	min, sal, fap, deg, gib, les, pag, rud, tus, baf, shil , het, jom, vun, wan, kex, zick, chom , thuz , quim, whav , vill, cass, noff
Vowel-Consonant-E	naze, gude, jime, tebe, goke, fene, mepe, sule, vome, rame, sove, wonkide, atane
Basic Affixes	hezes, pafed, fotting, unron , repog, miver, senest , bruful, dutless, giply, temness, premiv
Advanced Affixes	mubtion, discla, bimog, trizom, nonplut, zikable, misdut, gobic, mavible, transbub, uniquin, virupt, gopture, gepous
Vowel Teams	feep, naig, zay, loak, zoon , soud , wook , poig, whaw , hieb, touv , keat , roef, zow, bewk, pauk, heag , goupaik
Vowel-R-Controlled	klar, ner, tor, wir, ploor , rark , air, kear, zur, theer , foarp, mour, glier , searc, lourt, vour, slore , lare , lirparg
Complex Vowels	vind, nild, vost, grolld , figh , pight , wought , zough , keigh , pough , glaught , glaugh , kighdost
Advanced Word Forms	wecent , smink , brism , grunk , mank , lomb, glistle, ghosl , ohong , grombacent , futle
Multisyllabic Words in Context	tembog, stodrun , groupaik , lirparg , kighdost , ungobers , bimudgeic , poughtigild , grombacent , ponerate , lirmarves

Table 9. DDM Decoding Inventory Categories and General Scope and Sequence of Test Items

Initial and final Blends	ploor , glier , slore , trizom , plut , klar , grolld , glaught , glaugh , virupt , senest , wecent , smink , brism , grunk , mank , glistle , ohong , groupaik , kighdost , poughtigild , grombacent
Basic Consonant Digraphs	shil , zick , chom , thuz , quim , theer , whav , whaw ,
Double Consonants	vill, cass, noff
Open Syllables	repog, *miver, bruful, *wecent, ohong, *stodrun, bimog, bimudgeic, trizom, *gobic, *virupt, *gepous, *uniquin <i>*Can be pronounced with a short or long vowel</i>
Final Stable Syllables	mavible, mubtion, gopture, glistle, futle, ponerate
Silent Consonants	lomb , ghosl , eigh , glistle , futle , pight , wought , glaught , poughtigild
Miscellaneous Patterns	ti and ci for 'sh': mubtion tu for ch: gopture Soft/hard c & g: wecent , grombacent k/ck zick , ge/dge bimudgeic , ch/tch variant plurals: lirmarves

Note: Red font indicates overlapping targets (excluding closed syllables)

We established benchmark expectations for each target for BOY, MOY, and EOY for kindergarten through third grade. We then ran preliminary trials with representative samples of students from kindergarten to third grade ($n \sim 200$) with the full set of items. To improve efficiency, we selected two representative targets from the beginning, middle, and end of the list to determine whether those six targets would be representative of a student's ability to decode all of the targets listed, serving as a general screener. Those six screener words are in boxes in Table 8 above. For first grade BOY, the correlation between the closed syllables screener score (total possible points = 6) and the total score was .90. The R^2 was .81. For second grade BOY, the correlation between the closed syllables screener score and the total score was .88. The R^2 was .77. For second grade, the correlation between the VCE syllables screener score and the total score was .88. The R^2 was .78. For second grade, the correlation between the Basic Affixes syllables screener score and the total score was .83. The R^2 was .69.

Because of these very strong correlations and R^2 estimates, we used the six words for each syllable type and basic and advanced affixes to generate a new set of benchmarks and cut points for risk for the screener items. The entire list of all possible combinations for each syllable type is still available for reference for examiners wishing to obtain a more comprehensive inventory of a student's ability to decode across all syllable types and affixes.

NLM Listening and NLM Reading Retell and Questions Criterion Selection

We used current curriculum standards to establish NLM Retell and NLM Questions benchmark expectations for kindergarten through sixth grade (see tables on following pages). Seventh and eighth grade benchmark expectations were based on performance at or above the 40th percentile. To identify cut points for risk, we analyzed the data from over 5000 preschool through eighth grade students from Arizona, Colorado, Connecticut, Kansas, Michigan, Missouri, Utah, and Wyoming and used scores below the 16th percentile for high risk, and scores between the 16th percentile and benchmark for moderate risk.

ESTABLISHING NLM RETELL AND NLM QUESTIONS BENCHMARKS THROUGH ALIGNMENT WITH CURRICULUM STANDARDS

Kindergarten EOY (~5;9-6;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NDC	EDC	NLM Retell SC	VC	EC
CCSS.ELA-LITERACY.RL.K.2 With prompting and support, retell familiar stories, including key details. CCSS.ELA-LITERACY.RL.K.3 With prompting and support, identify characters, settings, and major events in a story. CCSS.ELA-LITERACY.SL.K.4 Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. ----- - Abbreviated Episode - Classic Narrative/End at High Point - True Narrative - “Provides aims or intentions of a character but does not explicitly state the character’s plan to achieve aims; planning must be inferred.” (p.121). More than one P-A-C is often incomplete.	Character = 2 Problem (P) = 2 Feeling = 1 Attempt (A) = 2 Conseq. (C) = 0	Main Idea = 1	Adverbial Subordinating Conjunctions = 1 Advanced Connection Words = 0 Relative Pronouns = 0		P+A / P+C / A +C = 2
CCSS.ELA-LITERACY.L.K.1.B Use frequently occurring nouns and verbs. CCSS.ELA-LITERACY.L.K.1.F Produce and expand complete sentences in shared language activities.				VC = 0	
Subtotal	7	1	1	0	2
	NLM Questions Score = 11				
Standards and Developmental Expectations	NLM Questions				
	Factual (F)	IV	IR		
CCSS.ELA-LITERACY.RL.K.1 With prompting and support, ask and answer questions about key details in a text. CCSS.ELA-LITERACY.SL.K.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.	Factual NDC Questions = 10 Expository Question = 1		Prediction = 1 Reasoning = 1 Inference from Text = 0 Reasoning = 0 Elaborative Inference = 1 Reasoning = 1		
CCSS.ELA-LITERACY.RL.K.4 Ask and answer questions about unknown words in a text. CCSS.ELA-LITERACY.L.K.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content.		Question A: Two/three partially correct = 4 Question B: One correct = 1			
Subtotal	11	5	4		
	NLM Questions Score = 20				
	NLM Composite Score = 31				

NLM = Narrative Language Measures Listening and Reading; EOY = End of Year; NDC = Narrative Discourse Structure (i.e., Story Grammar); EDC = Expository Discourse Structure; VC = Vocabulary Complexity; EpC = Episode Complexity; Factual Q = Factual Questions; IVQ = Inferential Vocabulary Questions; IRQ = Inferential Reasoning Questions. Narrative macrostructure developmental data summarized from Hughes, McGilivray, & Schmedek (1997). Standards from Common Core State Standards, www.corestandards.org (bold text added for emphasis).

First Grade EOY (~5;9-6;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NLM Retell				
	NDC	EDC	SC	VC	EC
CCSS.ELA-LITERACY.RL.1.2 Retell stories, including key details , and demonstrate understanding of their central message or lesson. CCSS.ELA-LITERACY.RL.1.3 Describe characters, settings, and major events in a story , using key details . CCSS.ELA-LITERACY.RL.1.4 Identify words and phrases in stories or poems that suggest feelings or appeal to the senses. CCSS.ELA-LITERACY.RL.1.6 Identify who is telling the story at various points in a text. CCSS.ELA-LITERACY.RL.1.7 Use illustrations and details in a story to describe its characters, setting, or events . CCSS.ELA-LITERACY.RI.1.2 Identify the main topic and retell key details of a text. CCSS.ELA-LITERACY.RI.1.7 Use the illustrations and details in a text to describe its key ideas . CCSS.ELA-LITERACY.SL.1.4 Describe people, places, things, and events with relevant details , expressing ideas and feelings clearly. ----- - Complete Episode - Classic Narrative - True Narrative - States planning, one or more of PAC is missing. "Uses words like decided to." (pg. 121)	Character = 2 Setting = 1 Problem (P) = 2 Feeling = 2 Plan (PL) = 0 Attempt (A) = 2 Conseq. (C) = 1	Main Idea = 1			P+C+E / P+A+E = 3
CCSS.ELA-LITERACY.RI.1.3 Describe the connection between two individuals, events, ideas, or pieces of information in a text. CCSS.ELA-LITERACY.SL.1.6 Produce complete sentences when appropriate to task and situation. CCSS.ELA-LITERACY.L.1.1.G Use frequently occurring conjunctions (e.g., <i>and</i> , <i>but</i> , <i>or</i> , <i>so</i> , <i>because</i>). CCSS.ELA-LITERACY.L.1.1.J Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts. CCSS.ELA-LITERACY.L.1.6 Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., <i>because</i>).			Adverbial Subordinating Conjunctions = 1 Advanced Connection Words = 0 Relative Pronouns = 0		
CCSS.ELA-LITERACY.RL.1.4 Identify words and phrases in stories or poems that suggest feelings or appeal to the senses . CCSS.ELA-LITERACY.L.1.1.F Use frequently occurring adjectives . CCSS.ELA-LITERACY.L.K.1.F Produce and expand complete sentences in shared language activities. CCSS.ELA-LITERACY.L.1.5.D Distinguish shades of meaning among verbs differing in manner (e.g., <i>look</i> , <i>peek</i> , <i>glance</i> , <i>stare</i> , <i>glare</i> , <i>scowl</i>) and adjectives differing in intensity (e.g., <i>large</i> , <i>gigantic</i>) by defining or choosing them or by acting out the meanings. CCSS.ELA-LITERACY.L.1.6 Use words and phrases acquired through conversations, reading and being read to , and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., <i>because</i>).				VC = 1	
Subtotal	10	1	1	1	2
NLM Questions Score = 16					

Standards and Developmental Expectations	NLM Questions		
	Factual (F)	IV	IR
CCSS.ELA-LITERACY.RL.1.1 Ask and answer questions about key details in a text. CCSS.ELA-LITERACY.SL.1.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.	Factual NDC Questions = 10 Expository Question = 1		Prediction = 2 Reasoning = 2 Inference from Text = 1 Reasoning = 1 Elaborative Inference = 1 Reasoning = 1
CCSS.ELA-LITERACY.L.1.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies. CCSS.ELA-LITERACY.L.1.4.A Use sentence-level context as a clue to the meaning of a word or phrase.		Question A: One correct, two partially correct = 7	
Subtotal	11	7	8
	NLM Questions Score = 26		
	NLM Composite Score = 31		

NLM = Narrative Language Measures Listening and Reading; EOY = End of Year; NDC = Narrative Discourse Structure (i.e., Story Grammar); EDC = Expository Discourse Structure; VC = Vocabulary Complexity; EpiC = Episode Complexity; Factual Q = Factual Questions; IVQ = Inferential Vocabulary Questions; IRQ = Inferential Reasoning Questions. Narrative macrostructure developmental data summarized from Hughes, McGillivray, & Schmidek (1997). Standards from Common Core State Standards, www.corestandards.org (bold text added for emphasis).

Second Grade EOY (~7;9-8;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NLM Retell				
	NDC	EDC	SC	VC	EC
CCSS.ELA-LITERACY.RL.2.3 Describe how characters in a story respond to major events and challenges. CCSS.ELA-LITERACY.RL.2.5 Describe the overall structure of a story , including describing how the beginning introduces the story and the ending concludes the action. CCSS.ELA-LITERACY.RL.2.6 Acknowledge differences in the points of view of characters , including by speaking in a different voice for each character when reading dialogue aloud. CCSS.ELA-LITERACY.RI.2.6 Identify the main purpose of a text, including what the author wants to answer, explain, or describe. CCSS.ELA-LITERACY.SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. CCSS.ELA-LITERACY.SL.2.4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details , speaking audibly in coherent sentences. ----- - Complete Episode - Multiple Episodes - Classic Narrative - True Narrative/Narrative Summary - Majority of stories include a complete episode. "Stories include internal goals, motivations, and reactions..." (pg. 144). Has at minimum a problem, attempt, and consequence. "Uses words like <i>decided to</i> ." (pg. 121). Uses a combination of complete and incomplete episodes.	Character = 2 Setting = 1 Problem (P) = 2 Feeling = 2 Plan (PL) = 0 Attempt (A) = 0 Conseq./ Compl. (CP) = 0 Plan-2 (PL2) = 1 Attempt (A2) = 2 Conseq. (C) = 2 Ending (E) = 1 End Feeling = 1	Main Idea = 1 Key Detail = 1			Episode 1 = 0 Episode 2 P/CP + A2+C = 4
CCSS.ELA-LITERACY.L.2.1.F Produce, expand, and rearrange complete simple and compound sentences (e.g., <i>The boy watched the movie; The little boy watched the movie; The action movie was watched by the little boy</i>).			Adverbial Subordinating Conjunctions = 2 Advanced Connection Words = 1 Relative Pronouns = 0		
CCSS.ELA-LITERACY.L.2.1.E Use adjectives and adverbs , and choose between them depending on what is to be modified. CCSS.ELA-LITERACY.L.2.5.B Distinguish shades of meaning among closely related verbs (e.g., <i>toss, throw, hurl</i>) and closely related adjectives (e.g., <i>thin, slender, skinny, scrawny</i>).				VC = 2	
Subtotal	14	2	3	2	4
NLM Questions Score = 25					

Standards and Developmental Expectations	NLM Questions		
	Factual (F)	IV	IR
CCSS.ELA-LITERACY.RI.2.1 Ask and answer such questions as <i>who, what, where, when, why,</i> and <i>how</i> to demonstrate understanding of key details in a text. CCSS.ELA-LITERACY.RI.2.6 Identify the main purpose of a text, including what the author wants to answer, explain, or describe . CCSS.ELA-LITERACY.SL.2.3 Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.	Factual NDC Questions = 10 Expository Question = 2		Prediction = 2 Reasoning = 2 Inference from Text = 2 Reasoning = 2 Elaborative Inference = 1 Reasoning = 1
CCSS.ELA-LITERACY.L.2.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies. CCSS.ELA-LITERACY.L.2.4.A Use sentence-level context as a clue to the meaning of a word or phrase. CCSS.ELA-LITERACY.RI.2.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.		Question A: Two correct, one partially correct = 8	
Subtotal	12	8	10
	NLM Questions Score = 30		
	NLM Composite Score = 55		

NLM = Narrative Language Measures Listening and Reading; EOY = End of Year; NDC = Narrative Discourse Structure (i.e., Story Grammar); EDC = Expository Discourse Structure; VC = Vocabulary Complexity; EpiC = Episode Complexity; Factual Q = Factual Questions; IVQ = Inferential Vocabulary Questions; IRQ = Inferential Reasoning Questions. Narrative macrostructure developmental data summarized from Hughes, McGillivray, & Schmedek (1997). Standards from Common Core State Standards, www.corestandards.org (bold text added for emphasis).

Third Grade EOY (~8;9-9;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NLM Retell				
	NDC	EDC	SC	VC	EC
<p>CCSS.ELA-LITERACY.RL.3.3 Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events</p> <p>CCSS.ELA-LITERACY.RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.</p> <p>CCSS.ELA-LITERACY.SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>CCSS.ELA-LITERACY.SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.</p> <p>-----</p> <ul style="list-style-type: none"> - Complete Episode - Multiple Episodes - Emerging Complex Episodes - Classic Narrative - True Narrative/Narrative Summary - Complete episodes. Emerging: elaboration of a complete episode by including multiple plans, attempts, or consequences. Complication is included. 	<p>Character = 2</p> <p>Setting = 1</p> <p>Problem (P) = 2</p> <p>Feeling = 2</p> <p>Plan (PL) = 0</p> <p>Attempt (A) = 1</p> <p>Conseq./ Compl. (CP) = 2</p> <p>Feeling = 1</p> <p>Plan-2 (PL2) = 1</p> <p>Attempt (A2) = 2</p> <p>Conseq. (C) = 2</p> <p>Ending (E) = 2</p> <p>End Feeling = 1</p>	<p>Main Idea = 1</p> <p>Key Detail = 1</p> <p>Key Detail = 1</p>			<p>Episode 1 (P + CP) = 2</p> <p>Episode 2 (P/CP + A2 + C + E) = 5</p>
<p>CCSS.ELA-LITERACY.RI.3.8 Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).</p> <p>CCSS.ELA-LITERACY.L.3.1.H Use coordinating and subordinating conjunctions.</p> <p>CCSS.ELA-LITERACY.L.3.1.I Produce simple, compound, and complex sentences.</p> <p>CCSS.ELA-LITERACY.L.3.3.A Choose words and phrases for effect.</p> <p>CCSS.ELA-LITERACY.L.3.6 Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., <i>After dinner that night we went looking for them</i>).</p>			<p>Adverbial Subordinating Conjunctions = 2</p> <p>Advanced Connection Words = 1</p> <p>Relative Pronouns = 0</p>		
<p>CCSS.ELA-LITERACY.L.3.1.C Use abstract nouns (e.g., <i>childhood</i>).</p> <p>CCSS.ELA-LITERACY.L.3.1.G Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.</p> <p>CCSS.ELA-LITERACY.L.3.3.A Choose words and phrases for effect.</p> <p>CCSS.ELA-LITERACY.L.3.5.C Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., <i>knew, believed, suspected, heard, wondered</i>).</p> <p>CCSS.ELA-LITERACY.L.3.6 Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., <i>After dinner that night we went looking for them</i>).</p>				VC = 3	
Subtotal	19	3	3	3	7
NLM Questions Score = 35					

Standards and Developmental Expectations	NLM Questions		
	Factual (F)	IV	IR
CCSS.ELA-LITERACY.RL.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. CCSS.ELA-LITERACY.RL.3.2 Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message , lesson, or moral and explain how it is conveyed through key details in the text . CCSS.ELA-LITERACY.RL.3.6 Distinguish their own point of view from that of the narrator or those of the characters. CCSS.ELA-LITERACY.RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. CCSS.ELA-LITERACY.RI.3.6 Distinguish their own point of view from that of the author of a text. CCSS.ELA-LITERACY.SL.3.1.D Explain their own ideas and understanding in light of the discussion. CCSS.ELA-LITERACY.SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. CCSS.ELA-LITERACY.SL.3.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail .	Factual NDC Questions = 10 Expository Question = 2		Prediction = 2 Reasoning = 2 Inference from Text = 2 Reasoning = 2 Elaborative Inference = 2 Reasoning = 2
CCSS.ELA-LITERACY.RL.3.4 Determine the meaning of words and phrases as they are used in a text , distinguishing literal from nonliteral language. CCSS.ELA-LITERACY.RI.3.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a <i>grade 3 topic or subject area</i> . CCSS.ELA-LITERACY.L.3.4 Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies. CCSS.ELA-LITERACY.L.3.4.A Use sentence-level context as a clue to the meaning of a word or phrase.		Question A: Two correct, one partially correct = 8	
Subtotal	12	8	12
	NLM Questions Score = 32		
	NLM Composite Score = 67		

NLM = Narrative Language Measures Listening and Reading; EOY = End of Year; NDC = Narrative Discourse Structure (i.e., Story Grammar); EDC = Expository Discourse Structure; VC = Vocabulary Complexity; EpiC = Episode Complexity; Factual Q = Factual Questions; IVQ = Inferential Vocabulary Questions; IRQ = Inferential Reasoning Questions. Narrative macrostructure developmental data summarized from Hughes, McGillivray, & Schmidek (1997). Standards from Common Core State Standards, www.corestandards.org (bold text added for emphasis).

Fourth Grade EOY (~9;9-10;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NLM Retell				
	NDC	EDC	SC	VC	EC
<p>CCSS.ELA-LITERACY.RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>CCSS.ELA-LITERACY.RL.4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.</p> <p>CCSS.ELA-LITERACY.RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>CCSS.ELA-LITERACY.RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).</p> <p>CCSS.ELA-LITERACY.RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.</p> <p>CCSS.ELA-LITERACY.RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.</p> <p>CCSS.ELA-LITERACY.SL.4.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>CCSS.ELA-LITERACY.SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p> <p>CCSS.ELA-LITERACY.L.4.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <p>CCSS.ELA-LITERACY.L.4.5.A Explain the meaning of simple similes and metaphors (e.g., as pretty as a picture) in context.</p> <p>CCSS.ELA-LITERACY.L.4.5.B Recognize and explain the meaning of common idioms, adages, and proverbs.</p> <p>-----</p> <p>- Complete Episode - Multiple Episodes - Emerging Complex Episodes - Classic Narrative - True Narrative/Narrative Summary/Complex Narrative - Complete episodes. Emerging: elaboration of a complete episode by including multiple plans, attempts, or consequences. Complication is included.</p>	<p>Character = 2 Setting = 1 Problem (P) = 2 Feeling = 2 Plan (PL) = 1 Attempt (A) = 2 Conseq./ Compl. (CP) = 2 Feeling = 1 Plan-2 (PL2) = 1 Attempt (A2) = 2 Conseq. (C) = 2 Ending (E) = 2 End Feeling = 1</p>	<p>Main Idea = 1 Key Detail = 1 Key Detail = 1</p>			<p>Episode 1 (P + A + CP) = 4</p> <p>Episode 2 (P/CP + A2 + C + E) = 5</p>
<p>CCSS.ELA-LITERACY.SL.4.6 Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.</p> <p>CCSS.ELA-LITERACY.L.4.1.A Use relative pronouns (<i>who, whose, whom, which, that</i>) and relative adverbs (<i>where, when, why</i>).</p> <p>CCSS.ELA-LITERACY.L.4.1.F Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.</p>			<p>Adverbial Subordinating Conjunctions = 3 Advanced Connection Words = 1 Relative Pronouns = 0</p>		

<p>CCSS.ELA-LITERACY.SL.4.6 Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.</p> <p>CCSS.ELA-LITERACY.L.4.1.D Order adjectives within sentences according to conventional patterns (e.g., a <i>small red bag</i> rather than a <i>red small bag</i>).</p> <p>CCSS.ELA-LITERACY.L.4.3.A Choose words and phrases to convey ideas precisely. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., <i>knew, believed, suspected, heard, wondered</i>).</p> <p>CCSS.ELA-LITERACY.L.4.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <p>CCSS.ELA-LITERACY.L.4.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <p>CCSS.ELA-LITERACY.L.4.5.A Explain the meaning of simple similes and metaphors (e.g., <i>as pretty as a picture</i>) in context.</p> <p>CCSS.ELA-LITERACY.L.4.5.B Recognize and explain the meaning of common idioms, adages, and proverbs.</p> <p>CCSS.ELA-LITERACY.L.4.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., <i>quizzed, whined, stammered</i>) and that are basic to a particular topic...</p>				VC = 4	
Subtotal	21	3	4	4	9
	NLM Questions Score = 41				
Standards and Developmental Expectations	NLM Questions				
	E	IV	IR		
<p>CCSS.ELA-LITERACY.RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>CCSS.ELA-LITERACY.RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.</p> <p>CCSS.ELA-LITERACY.RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>CCSS.ELA-LITERACY.RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.</p> <p>CCSS.ELA-LITERACY.RI.4.8 Explain how an author uses reasons and evidence to support particular points in a text. Explain their own ideas and understanding in light of the discussion.</p> <p>CCSS.ELA-LITERACY.SL.4.1.C Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>CCSS.ELA-LITERACY.SL.4.1.D Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p> <p>CCSS.ELA-LITERACY.SL.4.3 Identify the reasons and evidence a speaker provides to support particular points.</p>	<p>Information = 2 Persuasion = 2</p>			<p>Prediction = 1 Reasoning = 1 Inference from Text = 2 Reasoning = 2 Elaborative Inference = 2 Reasoning = 1</p>	

<p>CCSS.ELA-LITERACY.RL.4.4 Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).</p> <p>CCSS.ELA-LITERACY.RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a <i>grade 4 topic or subject area</i>.</p> <p>CCSS.ELA-LITERACY.L.4.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.</p> <p>CCSS.ELA-LITERACY.L.4.4.A Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.</p> <p>CCSS.ELA-LITERACY.L.4.4.B Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., <i>telegraph</i>, <i>photograph</i>, <i>autograph</i>).</p> <p>CCSS.ELA-LITERACY.L.4.5.C Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).</p>		<p>Question A: Two correct, one partially correct = 8</p>	
Subtotal	4	8	10
	NLM Questions Score = 22		
	NLM Composite Score = 63		

NLM = Narrative Language Measures Listening and Reading; EOY = End of Year; NDC = Narrative Discourse Structure (i.e., Story Grammar); EDC = Expository Discourse Structure; VC = Vocabulary Complexity; EpiC = Episode Complexity; Factual Q = Factual Questions; IVQ = Inferential Vocabulary Questions; IRQ = Inferential Reasoning Questions. Narrative macrostructure developmental data summarized from Hughes, McGillivray, & Schmidek (1997). Standards from Common Core State Standards, www.corestandards.org (bold text added for emphasis).

Fifth Grade EOY (~10;9-11;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NLM Retell				
	NDC	EDC	SC	VC	EC
<p>CCSS.ELA-LITERACY.RL.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>CCSS.ELA-LITERACY.RL.5.2 Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.</p> <p>CCSS.ELA-LITERACY.RL.5.3 Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).</p> <p>CCSS.ELA-LITERACY.RL.5.10 By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4-5 text complexity band independently and proficiently.</p> <p>CCSS.ELA-LITERACY.RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>CCSS.ELA-LITERACY.RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.</p> <p>CCSS.ELA-LITERACY.SL.5.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>CCSS.ELA-LITERACY.SL.5.3 Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.</p> <p>CCSS.ELA-LITERACY.SL.5.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p> <p>CCSS.ELA-LITERACY.SL.5.6 Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.</p> <p>CCSS.ELA-LITERACY.L.5.3.A Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.</p> <p>-----</p> <p>- Complete Episode - Multiple Episodes - Emerging Complex Episodes - Classic Narrative - True Narrative/Narrative Summary/Complex Narrative - Complete episodes. Emerging: elaboration of a complete episode by including multiple plans, attempts, or consequences. Complication is included.</p>	<p>Character = 2</p> <p>Setting = 2</p> <p>Problem (P) = 2</p> <p>Feeling = 2</p> <p>Plan (PL) = 1</p> <p>Attempt (A) = 2</p> <p>Conseq./ Compl. (CP) = 2</p> <p>Feeling = 1</p> <p>Plan-2 (PL2) = 1</p> <p>Attempt (A2) = 2</p> <p>Conseq. (C) = 2</p> <p>Ending (E) = 2</p> <p>End Feeling = 2</p>	<p>Main Idea = 1</p> <p>Key Detail = 1</p> <p>Key Detail = 1</p>			<p>Episode 1 (P + A + CP) = 4</p> <p>Episode 2 (P/CP + A2 + C + E) = 5</p>
<p>CCSS.ELA-LITERACY.SL.5.6 Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.</p> <p>CCSS.ELA-LITERACY.L.5.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <p>CCSS.ELA-LITERACY.L.5.1.E Use correlative conjunctions (e.g., <i>either/or</i>, <i>neither/nor</i>)</p> <p>CCSS.ELA-LITERACY.L.5.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition).</p>			<p>Adverbial Subordinating Conjunctions = 3</p> <p>Advanced Connection Words = 1</p> <p>Relative Pronouns = 1</p>		

CCSS.ELA-LITERACY.RL.5.4 Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. CCSS.ELA-LITERACY.SL.5.6 Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. CCSS.ELA-LITERACY.L.5.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. CCSS.ELA-LITERACY.L.5.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition).				VC = 4	
Subtotal	23	3	5	4	9
	NLM Questions Score = 44				
Standards and Developmental Expectations	NLM Questions				
	E	IV		IR	
CCSS.ELA-LITERACY.RL.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. CCSS.ELA-LITERACY.RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. CCSS.ELA-LITERACY.RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text. CCSS.ELA-LITERACY.RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. CCSS.ELA-LITERACY.RI.5.8 Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s). CCSS.ELA-LITERACY.SL.5.3 Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.	Information = 2 Persuasion = 3			Prediction = 2 Reasoning = 2 Inference from Text = 2 Reasoning = 2 Elaborative Inference = 2 Reasoning = 2	
CCSS.ELA-LITERACY.RL.5.4 Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. CCSS.ELA-LITERACY.RI.5.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area. CCSS.ELA-LITERACY.L.5.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. CCSS.ELA-LITERACY.L.5.4.A Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. CCSS.ELA-LITERACY.L.5.4.B Use common, grade-appropriate Greek and Latin affixes and roots asclues to the meaning of a word (e.g., photograph, photosynthesis).		Question A: Two correct, one partially correct = 8			
Subtotal	5	8		12	
	NLM Questions Score = 25				
	NLM Composite Score = 69				

NLM = Narrative Language Measures Listening and Reading; EOY = End of Year; NDC = Narrative Discourse Structure (i.e., Story Grammar); EDC = Expository Discourse Structure; VC = Vocabulary Complexity; EpiC = Episode Complexity; Factual Q = Factual Questions; IVQ = Inferential Vocabulary Questions; IRQ = Inferential Reasoning Questions. Narrative macrostructure developmental data summarized from Hughes, McGillivray, & Schmidek (1997). Standards from Common Core State Standards, www.corestandards.org (bold text added for emphasis).

Sixth Grade EOY (~11;9-12;2)

NLM Content and Score Alignment with Developmental Expectations and State Standards

Standards and Developmental Expectations	NLM Retell				
	NDC	EDC	SC	VC	EC
<p>CCSS.ELA-LITERACY.RL.6.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.</p> <p>CCSS.ELA-LITERACY.RL.6.3 Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.</p> <p>CCSS.ELA-LITERACY.RL.6.10 By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.</p> <p>CCSS.ELA-LITERACY.RI.6.5 Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.</p> <p>CCSS.ELA-LITERACY.SL.6.1.D Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.</p> <p>CCSS.ELA-LITERACY.SL.6.4 Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.</p> <p>CCSS.ELA-LITERACY.SL.6.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.</p> <p>CCSS.ELA-LITERACY.L.6.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <p>-----</p> <ul style="list-style-type: none"> - Complete Episode - Multiple Episodes - Complex Episodes - Classic Narrative - True Narrative/Narrative Summary/Complex Narrative - "Includes elaboration of a complete episode by including multiple plans, attempts, or consequences within an episode; includes an obstacle to the attainment of a goal." (pg. 121). Embeds episodes. 	<p>Character = 2</p> <p>Setting = 2</p> <p>Problem (P) = 2</p> <p>Feeling = 2</p> <p>Plan (PL) = 1</p> <p>Attempt (A) = 2</p> <p>Conseq./ Compl. (CP) = 2</p> <p>Feeling = 1</p> <p>Plan-2 (PL2) = 1</p> <p>Attempt (A2) = 2</p> <p>Conseq. (C) = 2</p> <p>Ending (E) = 2</p> <p>End Feeling = 2</p>	<p>Main Idea = 1</p> <p>Key Detail = 1</p> <p>Key Detail = 1</p>			<p>Episode 1 (P + A + CP) = 4</p> <p>Episode 2 (P/CP + A2 + C + E) = 5</p>
<p>CCSS.ELA-LITERACY.SL.6.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.</p> <p>CCSS.ELA-LITERACY.L.6.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p>			<p>Adverbial Subordinating Conjunctions = 4</p> <p>Advanced Connection Words = 1</p> <p>Relative Pronouns = 1</p>		
<p>CCSS.ELA-LITERACY.SL.6.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.</p> <p>CCSS.ELA-LITERACY.L.6.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <p>CCSS.ELA-LITERACY.L.6.5.C Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., <i>stingy</i>, <i>scrimping</i>, <i>economical</i>, <i>unwasteful</i>, <i>thrifty</i>).</p> <p>CCSS.ELA-LITERACY.L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>				VC = 5	
Subtotal	23	3	6	5	9
NLM Questions Score = 46					

Standards and Developmental Expectations	NLM Questions		
	E	IV	IR
<p>CCSS.ELA-LITERACY.RL.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>CCSS.ELA-LITERACY.RL.6.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.</p> <p>CCSS.ELA-LITERACY.RI.6.3 Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).</p> <p>CCSS.ELA-LITERACY.RI.6.6 Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.</p> <p>CCSS.ELA-LITERACY.RI.6.8 Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.</p> <p>CCSS.ELA-LITERACY.SL.6.1.C Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.</p> <p>CCSS.ELA-LITERACY.SL.6.1.D Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.</p> <p>CCSS.ELA-LITERACY.SL.6.3 Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</p>	<p>Information = 3 Persuasion = 3</p>		<p>Prediction = 2 Reasoning = 2</p> <p>Inference from Text = 2 Reasoning = 2</p> <p>Elaborative Inference = 2 Reasoning = 2</p>
<p>CCSS.ELA-LITERACY.RL.6.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.</p> <p>CCSS.ELA-LITERACY.RI.6.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.</p> <p>CCSS.ELA-LITERACY.L.6.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.</p> <p>CCSS.ELA-LITERACY.L.6.4.A Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.</p> <p>CCSS.ELA-LITERACY.L.6.4.B Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).</p> <p>CCSS.ELA-LITERACY.L.6.5.B Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.</p>		<p>Question A: Two correct, one partially correct = 8</p>	
Subtotal	6	8	12
	NLM Questions Score = 26		
	NLM Composite Score = 72		

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NLM and ELM Flowcharts

We provide preliminary normative data that can be used to help determine whether a student is performing as expected on the NLM and ELM Flowcharts. Participants were recruited from 60 before/after school care and summer care programs operated by one of the largest school districts in the US, which had a student population that closely represents the national student population. Any student currently in or entering (if data were collected in summer) into K-3rd grade in the subsequent fall semester was eligible to participate. Enrollment of sites and students was rolling and took place over 15 months. In total, data from 1,179 K-3rd grade students were collected. See Table x for a summary of demographic characteristics.

Instrument	Factor	Indicator	Range	Generation			Retell		
				<i>M</i> (<i>SD</i>)	<i>Skewness</i>	<i>Kurtosis</i>	<i>M</i> (<i>SD</i>)	<i>Skewness</i>	<i>Kurtosis</i>
NLM Flowchart	Sentence Complexity	Relative Pronouns	0 - 3	.14 (.45)	3.61	14.24	.17 (.47)	3.26	11.65
		Verb/ Noun Modifiers	0 - 3	.85 (1.16)	0.81	-1.02	1.35 (1.29)	0.09	-1.71
		Vocabulary/ Rhetoric	0 - 3	.21 (.50)	2.82	8.94	.67 (.88)	1.21	0.56
		Temporal Ties	0 - 3	.48 (.86)	1.79	2.21	.58 (.89)	1.45	1.09
		Casual Ties	0 - 3	.47 (.82)	1.74	2.15	.54 (.86)	1.55	1.44
		Dialogue	0 - 3	.14 (.43)	3.35	10.67	.44 (.70)	1.30	0.34
		<i>Sentence Complexity</i>	0 - 18	2.29 (.70)			3.75 (.85)		
	Narrative Structure	Episode Complexity	0 - 8	3.10 (1.96)	-0.27	-0.85	3.92 (2.18)	-0.50	-0.67
		Character	0 - 3	.97 (.61)	0.26	0.55	1.77 (1.38)	-0.39	-1.72
		Setting	0 - 3	.81 (.82)	0.68	-0.37	1.03 (.91)	0.41	-0.80
		Problem	0 - 4	2.62 (1.02)	-1.84	2.14	2.71 (1.04)	-1.79	2.39
		Sequence	0 - 3	1.43 (.91)	-0.93	-1.10	1.54 (.85)	-1.26	-0.37
		Plan/ Attempt	0 - 4	2.31 (1.31)	-0.98	-0.58	2.80 (1.19)	-1.41	1.13
		Consequence	0 - 4	2.27 (1.25)	-1.05	-0.47	2.53 (1.27)	-1.14	0.05
		Ending	0 - 2	.81 (.93)	0.38	-1.74	.99 (.97)	0.02	-1.93
		Emotion	0 - 3	.78 (1.04)	0.82	-0.90	.73 (1.03)	0.91	-0.79
		<i>Narrative Structure</i>	0 - 34	15.10 (1.10)			18.02 (1.81)		
		Total	0 - 42	17.38 (1.80) *			21.76 (2.66) **		
ELM Flowchart	Sentence Complexity	Relative Pronouns	0 - 3	.41 (.80)	2.01	3.22	.30 (.67)	2.45	5.77
		Verb/ Noun Modifiers	0 - 3	1.26 (1.32)	0.24	-1.73	1.06 (1.26)	0.50	-1.51
		Vocabulary	0 - 3	.73 (.92)	1.08	0.14	.84 (.91)	0.84	-0.22
		Temporal Ties	0 - 3	.60 (.99)	1.46	0.74	.37 (.83)	2.27	3.99
		Casual Ties	0 - 3	.96 (1.18)	0.78	-1.00	.96 (1.18)	1.53	1.04
		Transitions	0 - 4	.02 (.21)	12.65	184.62	.01 (.13)	16.99	307.81
		<i>Sentence Complexity</i>		3.98 (.90)			3.53 (.83)		
	Passage Structure	Main Idea	0 - 3	.22 (.56)	2.51	5.26	.18 (.53)	2.93	7.70
		Definitions & Examples	0 - 3	.47 (.88)	1.46	0.42	.46 (.89)	1.54	0.72
		Passage Cohesion	0 - 3	1.42 (.69)	0.15	-0.17	1.30 (.76)	0.09	-0.37
		Concluding Statement	0 - 1	.04 (.20)	4.64	19.58	0.04 (.19)	4.99	22.91
		<i>Passage Structure</i>		2.15 (.58)			1.99 (.59)		
		Total		6.13 (1.48) ***			5.52 (1.42) ****		

* $n = 1,966$; ** $n = 1,966$; *** $n = 2,008$; **** $n = 1,947$

NLM Reading Fluency Criterion Selection

The Reading Fluency section of the NLM is a particularly informative measure because it contextualizes the decoding process and provides the most realistic index of a student's ability to convert written, arbitrary symbols into language. Three important scores are obtained from Reading Fluency, a) the correct words read in one minute (Decoding Fluency), b) Accuracy, and c) Prosody. Decoding Fluency and Accuracy scores provide meaningful information on a student's automatic word recognition and decoding ability, and Prosody scores provide information on the extent to which a student is able to convert the written code to oral language (yet high scores on any of these measures does not necessarily indicate that a student is understanding what they are decoding).

Two factors need to be considered when determining whether a student is at benchmark or needs additional help with decoding fluency: a) the student cannot understand what he or she decodes because the language-conversion process is not sufficiently fluent, and b) the student cannot read with sufficient fluency to keep up with the core curriculum.

We referenced Hasbrouck and Tindal's (2017) national data on oral reading fluency for grades 1 to 6 and Hasbrouck and Tindal's (2006) national data for grades 7 and 8. We also referenced Rasinski et al, (2002) to establish an upper ceiling for older grades and examined normative data from several commonly used assessments and examined our preliminary data from the CUBED-3 to determine benchmark expectations for the Decoding Fluency sections of the NLM Reading. The Decoding Fluency assessment benchmark is set at the 40th percentile. Scores between the 11th and 39th percentile represent moderate risk, and scores at or below the 10th percentile represent high risk. Decoding fluency scores at or above the 75th percentile are characterized as advanced.

Composite Scores

CUBED-3 composite scores provide an estimate of a student's overall reading ability because they reflect the product of word recognition and oral language. The primary purpose of the CUBED-3 composite scores is to predict future reading performance. The CUBED-3 composite scores can also be used to grossly characterize a student's reading ability, yet because specific needs cannot be identified using composite scores, they should not be used to place students into intervention groups.

For statistical purposes in earlier studies, we calculated composite CUBED-3 scores by converting raw scores to z-scores, transforming those z-scores to scaled scores, and then combining those scaled scores together. Scaled scores are standard scores with a mean of 10 and a standard deviation of 3. Z-scores can be transformed into scaled scores by multiplying a z-score by 3 (the standard deviation of the distribution of scaled scores) and adding 10 (the mean of the distribution of scaled scores) to this product. For example, a z-score of -1 equals a scaled score of 7 [$10 + 3(-1) = 7$]. This approach was used for the data displayed in Tables 10, 11, and 12 in the Criterion-Related Validity section of this manual.

The composite scores that examiners calculate are derived from logistic regression analyses. In our series of logistic regression models for each grade, we saved the multiple predictor variables from the CUBED as a single probability index, and that probability index was used as the predictor in our ROC analyses, which provided AUC and sensitivity and specificity estimates. This single probability score

is not easy to calculate nor is it particularly easy to interpret. We were able to identify the predictor variables that were most predictive in each model, weight those variables accordingly, and sum all of the appropriate predictors together. This resulted in a composite score that had similar predictive power as the probability index. The formulas for calculating the composite scores are displayed below.

Calculating Reading Composite Scores

Kindergarten: BOY

DDM Letter Sounds x 2

DDM Phoneme Segmentation

NLM Listening Composite +

Reading Composite Score

Kindergarten: MOY/BOY

DDM Letter Sounds x 2

DDM Phoneme Segmentation

DDM DI Closed Syllables

NLM Listening Composite +

Reading Composite Score

Grade 1: BOY / MOY / EOY

NLM Decoding Fluency

NLM Reading Fluency Accuracy

NLM Reading Composite x 2 +

Reading Composite Score

Grades 2-3: BOY / MOY / EOY

NLM Decoding Fluency

NLM Reading Fluency Accuracy

NLM Reading Composite x 3 +

Reading Composite Score

RELIABILITY AND VALIDITY

Special Psychometric Considerations for Criterion-Referenced Assessments

A criterion-referenced test is defined more by the way in which its results are interpreted than by any necessary special content, administration, or scoring procedures. Criterion-referencing entails examining the results of a test and determining if those results meet a predefined expectation or standard – often referred to as a benchmark. With a norm-referenced test, a student's results are referenced to the performance of other students usually to determine how far from the mean that student's scores fall. Thus, results interpreted through norm-referencing are reported in a relative manner, such as at the 2nd percentile (essentially meaning that relative to the normative group, a student's performance was better than 2% of the sample). With criterion-referencing, the interpretation is absolute, not relative, and student performance is most often expressed as raw scores (e.g., 20), percent correct (e.g., 67%), or in a descriptive manner (e.g., student told a story with beginning, middle, and end information). With a criterion-referenced test, the question is whether a student meets the expectations established. Meeting this expectation is irrelevant to whether all, some, or none of the other students meet that expectation. If the criterion is very high, few students may meet it. In contrast, if the criterion is low, many or all the students will meet it.

Although it is the interpretation of scores that defines a criterion-referenced or norm-referenced test, criterion-referenced tests often do have unique characteristics that help them meet certain screening and progress monitoring purposes.

Multiple characteristics of reliability and validity were investigated for the CUBED-3. We first examined reliability, including alternate form reliability and standardized administration and scoring. We then examined validity, including the extent to which the CUBED-3 measures socially meaningful behaviors. Estimates of reliability and evidences of validity are extremely important to consider when deciding whether a test is appropriate for an examiner's needs. If a test isn't reliable, then the examiner cannot have confidence that the results of the test are an accurate estimate of a student's abilities. Evidence of validity provides the examiner with information on how well the test measures what it is supposed to measure, and helps the examiner know how well the test will likely satisfy his or her purpose for administering the test. An examiner should always evaluate the information about a test's validity while keeping in mind his or her purpose for administering the test, and, most importantly, the examiner's purpose for using the test should align with the test's intended purpose. After examining multiple evidences of reliability and validity, we analyzed the efficiency and ease of use of the CUBED-3 and the extent to which is it sensitive to change over time.

RELIABILITY

Reliability refers to how consistently a test can measure something across different conditions and situations. If a test lacks reliability, then the examiner will have limited confidence in the results of that test. It is common to calculate reliability using several methods.

A Special Note on Reliability for Universal Screeners and Progress Monitoring Tools

Universal screening and progress monitoring tests are not focused on comparing an individual student's score to the performance of a larger population. Instead, such criterion-referenced tests have the purpose of comparing student scores to a criterion or to their own previous scores. These tests are designed to compare a student's performance to a benchmark or cut point that is typically aligned with curriculum expectations and to monitor progress within each student. The benchmark expectation does not have to have anything to do with how the greater population of students is performing. The benchmark is instead a goal or expectation that presumably the majority of students can and should meet after evidence-based instruction. Thus, with a progress monitoring tool, educators are not interested in having student performance spread out across a normal distribution, where the performance of some students is significantly below others. On the contrary, universal screening and progress monitoring tools are designed to document student progress due to instruction over time on parallel forms of the test. This implies that it is desirable that student performance on a universal screening and progress monitoring assessment end up at the high end of the score distribution, forming a negative skew close to the ceiling (e.g., 100%). Conversely, it can also be expected that there will be a positively skewed distribution when the majority of students perform poorly on a criterion-referenced test, such as at the beginning of the school year prior to instruction. This aggregation of scores at the top or bottom of the distribution is not at all in alignment with the normal curve and causes significant problems with correlation analysis. Correlation requires variance. And when there is little variance in scores, the correlation will be low and not representative of the reliability of the test.

Another problem with relying on traditional, correlation analyses for the reliability of universal screening and progress monitoring assessments is that we are interested in raw values of scores, not just whether scores are correlated. For example, four different students could receive scores of 9, 10, 12, and 14 correct out of a 25 point test, and then score 20, 21, 23, and 25 correct on a second administration of that test. The test-retest (or parallel forms) correlation would be 1.0, or perfect. But the students' scores are not consistent at all. The perfect correlation coefficient would, under classical test theory, indicate that the test is perfectly reliable, yet such an interpretation would be very wrong. The opposite situation could occur where a weak correlation may indicate that a test is not very reliable, when in fact scores from the test administered at time one and then again at time two are very consistent. For example, four different students could receive scores of 7, 9, 10, and 11 on a first test administration, and then receive scores of 6, 10, 11, and 9 on a second test administration. The correlation between these scores would be very low, yet from a progress monitoring perspective, the test scores are probably highly related – or reliable (Brown, 1990). Because of the distribution of scores, and the way in which scores are interpreted in progress monitoring tests, alternative estimates of reliability that do not rely on correlations are needed.

Thus, in addition to common approaches to examining reliability, such as the examination of **inter-rater reliability**, **fidelity of administration**, and **alternate forms reliability**, we calculated estimates of reliability using **threshold-loss agreement** and **squared-error loss agreement** (Brown, 1990; Brown & Hudson, 2002).

Threshold-loss agreement.

The threshold-loss agreement estimate of reliability is used with benchmark assessments. This analysis uses a procedure very similar to what is used to obtain evidence of validity for a norm-referenced language test: sensitivity and specificity. Threshold-loss agreement is very similar to sensitivity (master) and specificity (non-master) conceptually, yet it is used as a measure of reliability as opposed to validity. With threshold-loss agreement, students are administered a progress monitoring test at time one, and then are administered a parallel form of the test, or the same test again, at time two. Students who were classified as meeting the benchmark expectation (masters) at time one should also be found to meet the benchmark expectation at time two. The same pattern should be found for students who did not meet the benchmark expectations. Classification should be aligned between the two test administrations. The resultant data, which we acquired through logistic regression and receiver operator characteristic analyses, provides evidence of reliability. Below we report threshold-loss agreement analyses for the NLM Retell, NLM Questions, and the Reading Fluency subtests for beginning of year data (BOY from a random sample of approximately 200 students from a pool of approximately 5000 students) in first grade, second grade, and third grade.

- **NLM retell threshold-loss agreement.** Because there is a practice effect with the NLM Reading measure with younger students (e.g., < fourth grade), where time 1 performance is typically lower than time 2 performance, examiners are directed to select the highest NLM Reading score if two are administered. This practice effect does have an influence on the threshold-loss agreement reliability estimate. Furthermore, the data for the NLM for time 1 and time 2 only reflect performance from students who were not at benchmark on the first NLM benchmark. Even so, when benchmark 1 and benchmark 2 from NLM Reading BOY are dichotomized as 1 = at or above benchmark and 0 = at-risk, logistic regression indicates that time 1 is a significant predictor for time 2, with 29% of the variance accounted for in first grade, 45% of the variance accounted for in second grade, and 31% of the variance accounted for in third grade. Receiver operator characteristic (ROC) analyses reveal that with time 1 predicting time 2, the area under the curve (AUC) for first grade is .79 with 69% sensitivity and 89% specificity, for second grade the AUC is .86 with 75% sensitivity and 97% specificity, and for third grade the AUC is .76 with 67% sensitivity and 85% specificity.
- **NLM Question threshold-loss agreement.** When NLM Questions data from BOY 1 and BOY 2 are dichotomized, logistic regression indicates that time 1 is a significant predictor for time 2, with 40% of the variance accounted for in first grade, 30% of the variance accounted for in second grade, and for third grade, 43% of the variance was accounted for. ROC analysis indicated that the AUC for first grade was .79 with 70% sensitivity and 89% specificity, for second grade the AUC was .77 with 67% sensitivity and 87% specificity, and for third grade the AUC was .90 with 83% sensitivity and 97% specificity.

- **NLM Reading Fluency threshold-loss agreement.** When NLM Decoding Fluency data (CWPM) from BOY 1 and BOY 2 are dichotomized, logistic regression indicates that time 1 is a significant predictor for time 2, with 76% of the variance accounted for in first grade, 81% of the variance accounted for in second grade, and for third grade, 90% of the variance was accounted for. ROC analysis indicated that the AUC for first grade was .96 with 94% sensitivity and 98% specificity, for second grade the AUC was .96 with 91% sensitivity and 100% specificity, and for third grade the AUC was .97 with 94% sensitivity and 100% specificity.

Squared-error loss agreement.

Squared-error loss agreement provides information on how well a progress monitoring test consistently classifies students along a continuum of scores, not just a binary met/not met classification. Squared-error loss agreement provides information on the distance from which a student is from a cut-point (benchmark). Statistical procedures such as the phi(lambda) dependability index (Figure 4; Brennan, 1980, 1984) are used. Written in statistical notation, the formula for the phi(lambda) dependability index may look daunting, yet conceptually it is simple and requires only a few items of information: the number of test items, the benchmark expectation (cut point) expressed as a proportion (e.g., .80 or 80% of test items correct), the mean performance on the test by a group of students, also expressed as a proportion (e.g., .90 or 90%), and the standard deviation of proportion scores. This procedure yields a coefficient that provides information on how well the test consistently ranks a student along the continuum of possible test scores from time one to time two.

Figure 4

$$\Phi(\lambda) = 1 - \frac{1}{k-1} \left[\frac{\bar{X}_p(1 - \bar{X}_p) - S_p^2}{(\bar{X}_p - \lambda)^2 + S_p^2} \right]$$

The diagram shows the formula for the phi(lambda) dependability index. Arrows point from labels to specific parts of the formula:

- '# of items' points to the 'k' in the denominator of the fraction.
- 'Mean of proportion scores' points to the \bar{X}_p in the numerator and denominator of the fraction.
- 'Cut-point' points to the λ in the denominator of the fraction.
- 'Standard deviation of proportion scores' points to the S_p^2 in the numerator and denominator of the fraction.

- **NLM retell squared-error loss agreement.** For first grade BOY NLM Retell, the cut point as expressed as a proportion is .26 (λ) out of a total of 46 possible points (k). The mean proportion was .2685 and the standard deviation of proportion scores was .1369, resulting in a phi(lambda) dependability index of .74.

For second grade BOY NLM Retell, the cut point as expressed as a proportion is .30 (λ) out of a total of 60 possible points (k). The mean proportion was .3449 and the standard deviation of proportion scores was .1531, resulting in a phi(lambda) dependability index of .87.

For third grade BOY NLM Retell, the cut point as expressed as a proportion is .41 (λ) out of a total of 61 possible points (k). The mean proportion was .4102 and the standard deviation of proportion scores was .12450, resulting in a phi(lambda) dependability index of .76.

- **NLM questions squared-error loss agreement.** For first grade BOY NLM Questions, the cut point as expressed as a proportion is .73 (λ) out of a total of 30 possible points (k). The mean proportion was .7299 and the standard deviation of proportion scores was .17782, resulting in a phi(lambda) dependability index of .82.

For second grade BOY NLM Questions, the cut point as expressed as a proportion is .75 (λ) out of a total of 32 possible points (k). The mean proportion was .7470 and the standard deviation of proportion scores was .16907, resulting in a phi(lambda) dependability index of .82.

For third grade BOY NLM Questions, the cut point as expressed as a proportion is .81 (λ) out of a total of 32 possible points (k). The mean proportion was .8444 and the standard deviation of proportion scores was .11670, resulting in a phi(lambda) dependability index of .74.

- **Decoding Fluency squared-error loss agreement.** For first grade BOY Decoding Fluency (CWPM), the cut point as expressed as a proportion is .06 (λ) out of a total of 175 possible words (k). The mean proportion was .1730 and the standard deviation of proportion scores was .17480, resulting in a phi(lambda) dependability index of .99.

For second grade BOY Decoding Fluency (CWPM), the cut point as expressed as a proportion is .26 (λ) out of a total of 178 possible words (k). The mean proportion was .4286 and the standard deviation of proportion scores was .22542, resulting in a phi(lambda) dependability index of .95.

For third grade BOY Decoding Fluency (CWPM), the cut point as expressed as a proportion is .39 (λ) out of a total of 186 possible words (k). The mean proportion was .4564 and the standard deviation of proportion scores was .20053, resulting in a phi(lambda) dependability index of .97.

Inter-Rater Reliability.

For inter-rater reliability, two independent examiners should assign similar scores to the same student response. This type of reliability is very important especially for the NLM subtests of the CUBED-3 because there is a certain amount of subjectivity involved in scoring a student's language in real-time, despite clear scoring procedures. Inter-rater reliability at or above 80% is acceptable, and at or above 90% is preferred. We focused considerable resources on collecting inter-rater reliability of the CUBED-3 subtests. Inter-rater reliability of real-time scoring of the NLM subtests was analyzed with over 60 independent examiners. Results of this analysis, reported in the reliability section of the CUBED-3 Examiner's Manual, indicated that the NLM can be scored with excellent reliability. Furthermore, because two parallel forms of the NLM Listening and NLM Reading subtests (with appropriate grade levels) are administered, and the highest score from those test administrations is recorded, measurement error is minimized, and the examiner can have greater confidence that the results of the test approximate a student's "true" score.

- **DDM inter-rater reliability.** Approximately 100 graduate and undergraduate students, general and special education teachers, and speech-language pathologists, ranging from no prior experience to over 30 years experience administering standardized assessments, administered the DDM to 1,746 kindergarten through eighth grade students. These 26 examiners participated in approximately 2

hours of training prior to test administration. Seven undergraduate students in speech-language pathology independently scored the DDM for inter-rater reliability. These 7 students received approximately 1 hour of training on how to score the DDM. These students then listened to and independently scored 10% of DDM administrations. *Point-to-point inter-rater reliability, shown in Table 10, was excellent for all DDM targets.*

- **NLM inter-rater reliability.** For the NLM Listening and NLM Reading, inter-rater reliability was calculated from 25% NLM stories retold by 898 school-age children and 163 preschool children. Seventy-eight examiners, the majority of whom had minimal experience administering and scoring language assessments independently, scored the NLM. Examiners underwent approximately 2 hours of training. *Inter-rater reliability for scoring the NLM, shown in Table 10, was excellent for the narrative retell and factual story questions, and acceptable for inferential vocabulary and inferential reasoning questions.*

Table 10. Point-to-Point Inter-rater Reliability of CUBED-3 Measures

CUBED-3 Measures	Point-to-Point Inter-rater Reliability (Range)
DDM Phonemic Awareness	
Phoneme Segmentation	96.1% (77-100)
Phoneme Blending	100%
First Sounds	97.4% (94-100)
Phoneme Blending	100%
DDM Phoneme Manipulation	
Phoneme Deletion	100%
Phoneme Addition	100%
Phoneme Substitution	98.7% (96-100)
DDM Orthographic Mapping	
Irregular Words	95.8% (70-100)
Letter Sounds	97.7% (90-100)
Letter Names	98% (94-100)
DDM Decoding Inventory	
All Targets Combined	98.2% (96-100)
NLM Listening and NLM Reading	
Real-Time Narrative Retell Scoring	95% (64%-100%)
Factual Questions	96% (93%-100%)
Inferential Vocabulary Questions	82% (75%-100%)
Inferential Reasoning Questions	93% (86%-100%)

- **NLM Flowchart and ELM Flowchart inter-rater reliability.** For the NLM and ELM Flowcharts, inter-rater reliability was calculated by two independent raters from 25% of language samples collected from 1,179 kindergarten through third grade students. Point-by-point percent agreement scores and Cohen's kappa coefficients (Cohen, 1960) were calculated to indicate the level of agreement among scorers (Cooper et al., 1987). Cohen's kappa (Cohen, 1960) was calculated to account for the possibility of chance agreement between raters. Reliability data for the NLM Flowchart and ELM Flowchart are shown in Table 11. Interrater agreement for individual NLM Flowchart items ranged between 51% and 96% (mean = 85%). Interrater agreement on individual ELM Flowchart items ranged between 40% and 99% (mean = 84%). The majority of Kappa coefficient values suggest substantial agreement between raters.

Table 11. Reliability data for the NLM and ELM Flowcharts

Instrument	Scale	Item	Retell			Generation		
			% Agreement	Kappa	p-value	% Agreement	Kappa	p-value
<i>NLM Flowchart</i>	Sentence Complexity	Relative Pronouns	0.89	0.67	<.001	0.93	0.52	<.001
		Verb/Noun Modifiers	0.86	0.74	<.001	0.86	0.80	<.001
		Vocabulary	0.87	0.61	<.001	0.88	0.78	<.001
		Temporal Ties	0.90	0.87	<.001	0.93	0.82	<.001
		Causal Ties	0.86	0.74	<.001	0.89	0.75	<.001
		Dialogue	0.90	0.76	<.001	0.96	0.80	<.001
		<i>Sentence Complexity</i>	0.88	0.73		0.91	0.75	
	Narrative Structure	Episode Complexity	0.46	0.39	<.001	0.51	0.36	<.001
		Character	0.95	0.88	<.001	0.94	0.91	<.001
		Setting	0.84	0.74	<.001	0.82	0.77	<.001
		Problem	0.80	0.53	<.001	0.85	0.49	<.001
		Sequence	0.89	0.63	<.001	0.85	0.69	<.001
		Plan/Attempt	0.79	0.54	<.001	0.76	0.63	<.001
		Consequence	0.64	0.44	<.001	0.72	0.38	<.001
		Ending	0.75	0.42	<.001	0.68	0.56	<.001
		Emotion	0.85	0.75	<.001	0.86	0.70	<.001
		<i>Narrative Structure</i>	0.77	0.59		0.78	0.61	
		Total	0.83	0.66		0.78	0.68	
	Sentence Complexity	Relative Pronouns	0.92	0.68	<.001	0.87	0.73	<.001
		Verb/ Noun Modifiers	0.77	0.57	<.001	0.74	0.59	<.001
		Vocabulary	0.87	0.84	<.001	0.90	0.80	<.001
		Temporal Ties	0.97	0.86	<.001	0.93	0.90	<.001
		Casual Ties	0.88	0.76	<.001	0.86	0.77	<.001
		<i>Sentence Complexity</i>	0.88	0.74		0.86	0.76	

Standard Error of Measurement.

A student's raw score on the NLM is unlikely to be their true score. To account for this test error, the standard error of measurement (SEM) and confidence intervals were calculated. SEM was calculated by grade level for fall and winter by multiplying the standard deviation (15) by the square root of $1-r$, where r was the inter-rater reliability coefficient (i.e., .95). One SEM is equal to 68% confidence, 1.65 SEMs are equal to 90% confidence, and 1.96 SEMs are equal to 95% confidence. This range (band or interval) around the student's raw score provides additional confidence in the results of the test. Results of these analyses can be found in the CUBED-3 Norm Referenced Technical Manual.

Fidelity of Administration

Fidelity of administration refers to the extent that examiners administer a test following outlined procedures. The results of a test may not be reliable if the test is administered differently each time it is given or if it is administered differently by multiple examiners. This type of reliability is typically measured using a checklist or some other documented form of observation that measures how closely the examiner adheres to the administration procedures outlined in the test manual. It is often reported as the percent of administration steps completed correctly. The CUBED-3 test developers observed 65 examiners who underwent 1 to 4 hours of training ($M = 2.4$ hours) and documented fidelity of test administration using fidelity checklists. *Fidelity of administration was excellent at 94% (87%-100%).* For the NLM and ELM Flowcharts, fidelity checks were conducted regularly to ensure elicitation and transcription integrity. An independent RA listened to 26% ($n = 1,060$) of recordings of language sample elicitations and used a checklist to document adherence to the protocol. Using this procedure, elicitation fidelity was determined to be 99%. Additionally, 24% ($n = 955$) of the total samples were transcribed by a second, independent RA. A third person then reviewed the first and second transcriptions, calculated percent agreement between the two, and documented adherence to transcription procedures for each transcriber. A mean transcription fidelity score for transcriber one was calculated at 99%. Transcribed content was identical between transcribers an average of 93% of the time. Any language samples with an agreement score below 80% underwent a reconciliation process, wherein a third transcriber listened to recordings and used best judgement to decide on a final transcription.

Alternate Forms Reliability

Alternate or parallel-forms reliability refers to the extent to which two forms of a test are similar to each other. Because the CUBED-3 is designed for progress monitoring, there are multiple forms that are parallel in content, length, and complexity. When alternate forms of a test are parallel, gains a student makes over time can be attributed to factors unrelated to differences between the alternate forms. Pearson product-moment correlation coefficients (r) can be calculated to provide information on the strength and direction of the linear relationship between alternate forms. Correlation coefficients need to be interpreted differently than simple calculations of percent agreement (e.g., 90%), which is what we used for inter-rater reliability and fidelity of administration. Positive correlation coefficients range from .01 (negligible) to 1.0 (perfect). Coefficients ranging from .20 to .29 are considered weak, coefficients ranging from .30 to .39 are considered moderate, coefficients ranging from .40 to .69 are considered strong, and coefficients at or above .70 are considered very strong. Alternate forms correlation coefficients for the CUBED-3 are described below and displayed in Table 12.

- **NLM Alternate Forms Reliability.** The alternate forms of the CUBED-3 NLM Listening and the NLM Reading measures are designed to be parallel within and across subtests. Considerable evidence of the parallel nature of the NLM passages can be found in the rubric used to write each story, the Lexile scores assigned to each story, and the mean length of utterance (MLU) for each story. The process whereby the NLM forms were equated is described in detail in the CUBED-3 Development section of this manual. Correlation coefficients were calculated to provide additional evidence of the parallel nature of the NLM Listening and NLM Reading forms.

For 212 preschool children, the correlation coefficient between all 25 passages of the NLM Listening was .71. For personal story generations, the correlation coefficient was .61. Correlation coefficients for 1077 kindergarten, first, second, and third grade students for Fall NLM 1 and Fall NLM 2 passages was .55. Correlation coefficients for 1062 kindergarten, first, second, and third grade students for Winter NLM 1 and Winter NLM 2 passages was .59. Correlation coefficients for 696 kindergarten, first, second, and third grade students for the first and second Fall NLM Reading benchmark stories was .67. Correlation coefficients for 611 kindergarten, first, second, and third grade students for the first and second Winter NLM Reading stories was also .67.

For school-age stories, the correlation between the NLM Listening and NLM Reading stories was analyzed in the fall with a total of 110 participants (55 second grade students and 55 third-grade students). The students attended a school where they received half-day instruction in English and half day instruction in either Spanish or Navajo. The sample consisted of 48% (n=53) Hispanic, 28% (n=31) Native American, 20% Caucasian (n=22), 3% (n=3) who reported two or more ethnicities, and .01% (n=1) African American students. Of the 53 Hispanic students, 60% (n=32) were Spanish language dominant. All other students were English language dominant. The correlation between the NLM Listening and NLM Reading for all participants was .75. The correlation was .74 for Hispanic students, .67 for Native American students, and .74 for Caucasian students. Correlations for all second-grade students was .72 and for all third-grade students it was .73. *The results described above, and outlined in Table 8, indicate that alternate form reliability within and across the NLM Listening and NLM Reading measures is excellent.*

Summary of Reliability Results

Estimates of the CUBED-3 overall reliability, relative to several different methods used to measure reliability (inter-rater reliability, fidelity of test administration, alternate forms reliability) strongly suggest that the CUBED-3 has minimal test error and that examiners can have confidence in its results.

Table 12. Alternate Forms Correlation Coefficients.

CUBED-3 Measures	Alternate Forms Correlation Coefficient
NLM:L Listening Retell	.64
NLM:R Reading Retell	.67
NLM:R Decoding Fluency	.92
NLM:R Story Questions	.70
NLM:R Vocabulary Questions	.45
Between NLM Listening and NLM Reading Retells	
Grades 2-3: All Ethnicities	.75
Grades 2-3: Hispanic	.74
Grades 2-3: Native American	.67
Grades 2-3: Caucasian	.74

VALIDITY

Validity, according to the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 1999) is the “degree to which evidence and theory support the interpretation of test scores entailed by proposed uses of tests.” (p. 9). As pointed out by Gall et al. (2007), and Messick (1995), it is the *interpretation* of test scores that hold validity. That is, the results of a GOM instrument need to be interpretable, meaningful, and actions based on test results need to be appropriate (Gall et al., 2007; Messick, 1989, 1995). Test validity can be measured by accumulating evidence to support the proposed application of test results. Evidence of validity has traditionally been organized according to content-description validity, criterion-prediction validity, and construct-identification validity, which correspond to overlapping (rather than alternative) empirical and logical approaches taken during a test’s development and use. This section of the CUBED-3 technical manual provides detailed information related to each of those evidences of validity.

A Note on Bias

There is a high degree of impartiality in the expectations set forth in curricula across the U.S. The standards are for *all* students, including those who are culturally, linguistically, and economically diverse. Thus, with a criterion-reference assessment, the concern is not whether the items are biased against a certain group (e.g., ethnicity), but instead whether any group might have particular difficulty learning to perform as expected. Across the DDM and NLM measures, we have found that explicit, systematic decoding and language instruction, regardless of ethnicity, gender, or socio-economic status, has resulted in students achieving the benchmark expectations of the CUBED-3. Although we expect some groups to initially perform lower than other groups on some of the CUBED-3 measures, we consider this to be a temporary state, and expect that with instruction, the vast majority of students will learn to decode, and produce and understand complex language.

Criterion-Related Validity

Concurrent Validity

Evidence of validity can be derived by examining the relationship between the CUBED-3 and the results of other assessments administered at approximately the same time. This examination is designed to demonstrate the extent that the CUBED-3 results are comparable to results from previously validated instruments that measure similar constructs (convergent evidence of validity; Bachman, 1990; McNamara, 2000) or that the CUBED-3 results differ considerably from results of a test that measures different constructs (divergent evidence of validity). This convergent and divergent evidence of validity, often represented as *concurrent criterion-related validity* (concurrent validity for short), is highly dependent on the existence of valid, external tests. In this section, the results of six studies with 1,146 preschool through third grade students that examined evidence of convergent and divergent concurrent validity for the CUBED-3 are reported. Sixty nine percent of the participants were white, 13% were Hispanic, 5% were African American, 3% were Native American, 1% were Asian, and 3% were other. Six percent of the participants had a language disorder. Again, we considered positive correlation coefficients ranging from .20 to .29 to be weak, coefficients ranging from .30 to .39 to be moderate, coefficients ranging from .40 to .69 to be strong, and coefficients at or above .70 to be very strong.

Student performance reported in the studies used to evidence criterion-related validity most likely does not represent the full range of performance on the criterion measures. This restricted range in test scores tends to underestimate the correlations (Hunter & Schmidt, 1990; Henriksson & Wolming, 1998; Thorndike, 1949). Thus, coefficients were corrected for range and attenuation. Corrected and uncorrected coefficients are reported in Tables 13, 14, 15, and 16.

In the following analyses, we compared the CUBED-3 NLM Listening retell highest score to scores from several criterion measures of language (Table 9). We also compared CUBED-3 composite scores to the Measures of Academic Progress (MAP) assessment (Tables 14, 15, and 16). CUBED-3 composite scores were calculated by converting z-scores to scaled scores, and then summing those scaled scores to reflect decoding, language, and reading constructs. *The majority of these comparisons, presented in correlation coefficients, offer strong evidence of concurrent and divergent, criterion-related validity for the CUBED-3.*

Table 13. Unattenuated/Corrected (Uncorrected) Correlation Coefficients Between the NLM Listening and Language-Related Criterion Measures, evidencing convergent validity.

Criterion Measures	n	r	r
		Preschool	Grades K-3
NLM Listening Retell Composite and Writing			
Writing			
Curriculum-Based Assessment for Writing	86		.69 (.51)
MAP Fall Language Writing	1085		.56 (.48)
NLM Listening Retell Composite Language Samples			
Narrative Language Sample (Frog Where Are You?)			
FWAY Episode Complexity	50		.69 (.53)
FWAY Story Grammar	50		.67 (.52)
FWAY NDW*	112	.55 (.44)	.61 (.54)
FWAY NDW**	166	-	.65 (.58)
FWAY TNW*	112	.51 (.41)	.58 (.49)
FWAY TNW**	166		.25 (.21)
FWAY MLU*	112	.35 (.28)	.60 (.53)
FWAY MLU**	166		.49 (.44)
FWAY TNU*	112	.36 (.29)	.58 (.52)
FWAY TNU**	166		.47 (.42)
FWAY SI**	166		.24 (.21)
FWAY WPM**	166		.48 (.41)
NLM Listening Retell Variables with Language Sample Variables			
NLM NDW and FWAY NDW**	166		.65 (.58)
NLM TNW and FWAY TNW**	166		.27 (.23)
NLM MLU and FWAY MLU**	166		.63 (.56)
NLM TNU and FWAY TNU**	166		.54 (.48)
NLM SI and FWAY SI**	166		.44 (.39)
NLM WPM and FWAY WPM**	166		.63 (.54)
NLM Listening Retell Composite and Processing Tasks			
NLM Retell Score and Nonword Repetition	275		.36 (.34)
NLM Retell Score and DA Pretest	313		.65 (.63)
NLM Retell Score and DA Posttest	313		.66 (.64)
NLM Retell Score and DA Modifiability Rating	313		.55 (.53)
NLM Listening Retell Composite and General Language			
General Language Outcome			
MAP RIT*	1086		.57 (.49)
Clinical Evaluation of Language Fundamentals Preschool (CELF-P)			
CELF-P Core*	62	.59 (.47)	
Renfrew Bus Story			
Information	5	.95 (.88)	
NLM Listening Retell Composite and Expository Language			
Expository Language			
Information Retell*	917	.42 (.32)	.68 (.50)
NLM Total Retell and Researcher Expository Retell	85		.51 (.41)
NLM Total Retell and MAP Expository (Literature Informational)	548		.29 (.25)
NLM Listening Retell Composite and Vocabulary			
Vocabulary			
NLM Total Retell and MAP Vocabulary (Use)	538		.26 (.22)
NLM Total Retell and MAP Vocabulary (Functions)	1085		.53 (.46)

Note: NLM = Narrative Language Measures; FWAY = Frog Where Are You; NDW = Number Different Words; TNW = Total Number of Words; MLU = Mean Length of Utterance; TNU = Total Number of Utterances; SI = Subordination Index; WPM = Words per Minute. All correlations were significant, $p < .05$. For corrected coefficients, estimates for Frog reliability were estimated to be .79 unless specified in Heilmann, Miller, Iglesias, Fabiano-Smith, Nockerts, & Andriacchi (2008), (NDW = .79, NTW = .70, WPM = .74). Reading Street reading comprehension end of unit test reliability data and reliability for the district writing assessment were not available. We estimated .70 for those tests. Writing reliability was .70. Expository was .70. Bus Story reliability for Information was .79 according to the Bus Story Manual. Average reliability for the CELF was .80. Average reliability for the nonword repetition task was .89. * study 1; ** study 2

Table 14. Corrected (uncorrected) correlations between BOY CUBED-3 Scaled Score Decoding Composite and BOY MAP, evidencing divergent validity.

Note: All correlations significant, $p < .05$. The CUBED-3 Scaled Score Decoding Composite is the sum of scaled scores from the DDM Word Identification, DDM Letter Sounds, and DDM Phoneme Segmentation fall targets. MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit. For corrected coefficients, MAP reliability was obtained from the Northwest Evaluation Association (2004) publication on reliability and validity estimates (.80).

Criterion Measures	<i>n</i>	<i>r</i> Grades K-3
BOY CUBED-3 Scaled Score Decoding Composite		
Measuring Academic Progress (MAP) BOY		
RIT Score	935	.16 (.13)
MAP Foundational Skills	558	.14 (.12)
MAP Language and Writing	934	.14 (.12)
MAP Informational and Literature	558	.12 (.11)
MAP Vocabulary Use and Functions	1,143	.16 (.13)

Table 15. Corrected (uncorrected) correlations between BOY CUBED-3 Scaled Score Language Composite and BOY MAP, evidencing convergent validity

Note: All correlations were significant, $p < .05$. The CUBED-3 Scaled Score Language Composite is the sum of scaled scores from the highest NLM Listening retell, NLM Reading retell, Vocabulary Questions, and Decoding Fluency fall targets. MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit.

Criterion Measures	<i>n</i>	<i>r</i> Grades K-3
BOY CUBED-3 Scaled Score Language Composite		
Measuring Academic Progress (MAP) BOY		
RIT Score	1,146	.88 (.78)
MAP Foundational Skills	566	.79 (.71)
MAP Language and Writing	1,143	.85 (.76)
MAP Informational and Literature	566	.74 (.66)
MAP Vocabulary Use and Functions	1,143	.83 (.74)

Table 16. Corrected (uncorrected) correlations between BOY CUBED-3 Scaled Score Reading Composite and BOY MAP, evidencing convergent validity.

Note: All correlations significant, $p < .05$. The CUBED-3 Scaled Score Reading Composite is the sum of scaled scores from the DDM Word Identification, DDM Letter Sounds, and DDM Phoneme Segmentation fall targets, and the highest NLM Listening retell, NLM Reading retell, Vocabulary Questions, and Decoding Fluency fall targets. MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit.

Criterion Measures	<i>n</i>	<i>r</i> Grades K-3
BOY CUBED-3 Scaled Score Reading Composite		
Measuring Academic Progress (MAP) BOY		
RIT Score	1,146	.44 (.39)
MAP Foundational Skills	566	.64 (.57)
MAP Language and Writing	1,143	.43 (.38)
MAP Informational and Literature	566	.59 (.53)
MAP Vocabulary Use and Functions	1,143	.42 (.37)

For the NLM and ELM Flowcharts, a bivariate correlation analysis was conducted in SPSS to determine correlations between scores from the Woodcock-Johnson IV Test of Oral Language (WJ-IV TOL) and the NLM and ELM Flowcharts, respectively. A small, positive correlation was observed between WJ-TOL CALP scores and the NLM (generation = 0.22; retell = 0.29) and ELM Flowcharts (generation = 0.26; retell = 0.25). Correlation values and 95% confidence intervals are reported in Table 17.

Table 17. Correlations with WJ-TOL CALP Scores

Factor		Generation		Retell	
		<i>r</i>	95% CI	<i>r</i>	95% CI
NLM Flowchart	Sentence Complexity	0.144	.100-.187	0.238	.195-.279
	Narrative Structure	0.21	.167-.251	0.283	.242-.323
	Total	0.221*	.178-.262	0.294**	.253-.334
ELM Flowchart	Sentence Complexity	0.219	.177-.260	0.205	.162-.247
	Passage Structure	0.247	.205-.288	0.215	.172-.257
	Total	0.264***	.223-.304	0.249****	.207-.291

* $n = 1,966$; ** $n = 1,966$; *** $n = 2,008$; **** $n = 1,947$

Predictive Validity

Evidence of validity can be derived by examining how well the CUBED-3 relates to future performance on other tests designed to measure similar constructs (Anastasi & Urbina, 1997). Because results on the CUBED-3 in the fall were used to place students into language and decoding interventions, the predictive validity analyses are confounded by having used the predictive criteria to help prevent failure on the criterion measures. Clearer conclusions may have been possible if this biasing relationship were not present, although given earlier research, failure to intervene would have had negative ethical implications and a negative impact on student performance. To demonstrate the predictive validity of the CUBED-3, we studied its relationship to the Measures of Academic Progress (MAP) and Wyoming PAWS reading assessments. We used regression, correlation, and discriminant function analyses to examine the predictive validity of the CUBED-3.

In Table 18, we report R^2 coefficients of determination to indicate the extent to which combinations of CUBED-3 raw scores collected in the fall with 1,512 kindergarten through third grade students were predictive of the MAP assessment in the winter. R^2 interpretation is highly dependent upon the testing context. For predicting reading, we consider R^2 values above .10 (10% accounted variance) to be meaningful.

In Tables 19, 20, and 21, we report correlation coefficients (r) to indicate the relationship between fall CUBED-3 composite scores and winter MAP scores. We consider coefficients ranging from .20 to .29 to be weak, coefficients ranging from .30 to .39 to be moderate, coefficients ranging from .40 to .69 to be strong, and coefficients at or above .70 to be very strong.

In Table 22, we report sensitivity and specificity derived from discriminant function analyses that examined the predictive validity of the combined NLM Listening Retell and the NLM Reading Retell for end of year PAWS and MAP results. These analyses included 71 third grade students attending two different elementary schools in Wyoming and 681 third grade students from across the U.S. Sensitivity in this case represents the extent to which the combined NLMs accurately identified students who were at risk on PAWS and MAP, and specificity refers to the extent to which the combined NLMs accurately identified students who were not at risk on PAWS and MAP. For diagnostic instruments, such as norm-referenced standardized language assessments, sensitivity and specificity at or above 80% are generally considered acceptable. For universal screeners such as the CUBED-3, sensitivity and specificity are often expected to be lower. Sensitivity and specificity provide evidence of both predictive validity and construct validity.

In Table 23, we report sensitivity and specificity derived from discriminant function analyses that examined the predictive validity of the CUBED-3 for end of year PAWS results. These analyses included 71 third grade students attending two different elementary schools in Wyoming. Sensitivity in this case represents the extent to which the CUBED-3 accurately identified students who were at risk on PAWS, and specificity refers to the extent to which the CUBED-3 accurately identified students who were not at risk on PAWS. For diagnostic instruments, such as norm-referenced standardized language assessments, sensitivity and specificity at or above 80% are generally considered acceptable. For universal screeners such as the CUBED-3, sensitivity and specificity are often expected to be lower. Sensitivity and specificity provide evidence of both predictive validity and construct validity (see below). *The results of the regression, correlation, and discriminant analyses indicate that the CUBED-3 is moderately to strongly predictive of the MAP and PAWS assessment.*

Table 18. Regression analyses using BOY CUBED-3 raw scores to predict MOY MAP performance

Note: All correlations were significant, $p < .01$; NLML = NLM Listening retell; NLMR = NLM Reading retell; MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit.

Criterion Measures	<i>n</i>	<i>R</i> ²
		Grades K-3
BOY CUBED-3 Scaled Score Language Composite		
NLML and NLMR Predicting MAP RIT	1,512	.43
NLML/R Vocab and DDM Irregular Words Predicting MAP Vocabulary Use and Functions	1,512	.55
All CUBED-3 Measures Predicting MAP Foundational Skills	1,512	.64
Decoding Fluency and Phoneme Segmentation Predicting MAP Language and Writing	1,512	.78
DDM Irregular Words, Vocabulary Questions, and Phoneme Segmentation Predicting MAP Literature and Informational	1,512	.69

Table 19. Corrected (uncorrected) correlations between BOY CUBED-3 Scaled Score Decoding Composite and MOY MAP

Note: All correlations significant, $p < .05$. The CUBED-3 Scaled Score Decoding Composite is the sum of scaled scores from the DDM Word Identification, DDM Letter Sounds, and DDM Phoneme Segmentation fall targets. MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit.

Criterion Measures	<i>n</i>	<i>r</i>
		Grades K-3
BOY CUBED-3 Scaled Score Decoding Composite		
Measuring Academic Progress (MAP) MOY		
RIT Score	935	.16 (.13)
MAP Foundational Skills	558	.14 (.12)
MAP Language and Writing	934	.14 (.12)
MAP Informational and Literature	558	.12 (.11)
MAP Vocabulary Use and Functions	1,143	.16 (.13)

Table 20. Corrected (uncorrected) correlations between BOY CUBED-3 Scaled Score Language Composite and MOY MAP

Note: All correlations were significant, $p < .05$. The CUBED-3 Scaled Score Language Composite is the sum of scaled scores from the highest NLM Listening retell, NLM Reading retell, Vocabulary Questions, and Decoding Fluency fall targets. MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit.

Criterion Measures	<i>n</i>	<i>r</i>
		Grades K-3
BOY CUBED-3 Scaled Score Language Composite		
Measuring Academic Progress (MAP) MOY		
RIT Score	935	.16 (.13)
MAP Foundational Skills	558	.14 (.12)
MAP Language and Writing	934	.14 (.12)
MAP Informational and Literature	558	.12 (.11)
MAP Vocabulary Use and Functions	1,143	.16 (.13)

Table 21. Corrected (uncorrected) correlations between BOY CUBED-3 Scaled Score Reading Composite and MOY MAP

Note: All correlations significant, $p < .05$. The CUBED-3 Scaled Score Reading Composite is the sum of scaled scores from the DDM Word Identification, DDM Letter Sounds, and DDM Phoneme Segmentation fall targets, and the highest NLM Listening retell, NLM Reading retell, Vocabulary Questions, and Decoding Fluency fall targets. MAP = Measures of Academic Progress fall administration; RIT = Rasch Unit.

Criterion Measures	<i>n</i>	<i>r</i>
		Grades K-3
BOY CUBED-3 Scaled Score Reading Composite		
Measuring Academic Progress (MAP) MOY		
RIT Score	935	.16 (.13)
MAP Foundational Skills	558	.14 (.12)
MAP Language and Writing	934	.14 (.12)
MAP Informational and Literature	558	.12 (.11)
MAP Vocabulary Use and Functions	1,143	.16 (.13)

Table 22. Sensitivity and Specificity of the Combined NLM Listening Retell and NLM Reading Retell Third Grade BOY Assessment for EOY PAWS Reading Assessment and MOY MAP Reading Assessment.

Note: PAWS = State of Wyoming Reading Assessment administered in March; Poor performance on PAWS = at or below basic. MAP = Administered in January; Poor performance on MAP = at or below basic.

BOY CUBED-3 Scaled Score Reading Composite				
EOY Reading Criterion Measure	N	AUC	Sensitivity	Specificity
NLM Reading and NLM Listening Combined predicting PAWS EOY	71	.86	77%	100%
NLM Reading and NLM Listening Combined predicting MAP MOY	681	.76	76%	70%

Table 23. Sensitivity and Specificity of CUBED-3 Third Grade Fall Assessment for End of Year PAWS Reading Assessment

Note: PAWS = State of Wyoming Reading Assessment administered in March; Predictor = CUBED-3 third grade fall combined NLM Listening, NLM Reading, NLM Vocabulary, and NLM Decoding Fluency measures, Wilks' Lambda = .770, $p < .01$.

CUBED-3 Third Grade BOY Assessment		
EOY Reading Criterion Measure	Sensitivity	Specificity
PAWS (end of year) Below Basic = At Risk	100%	83%

Longitudinal Cohort Study: Kindergarten to Fifth Grade

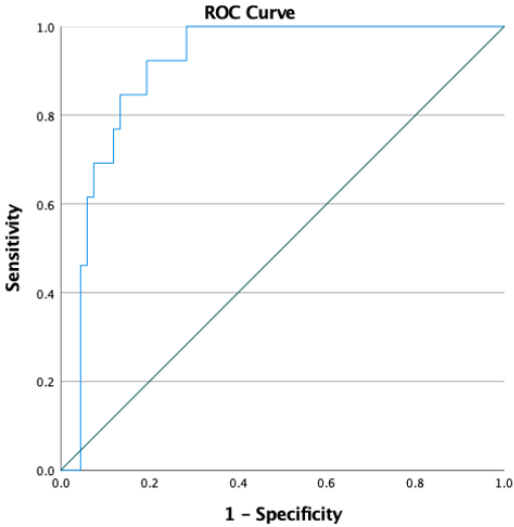
In a separate longitudinal study, we administered the CUBED-3 assessment to 162 kindergarten students in a school district in the Midwest and then administered the CUBED-3 to those same students every year until third grade. We used binary logistic regression and receiver operator characteristic (ROC) analyses to examine their performance in fifth grade on the WYTOPP state reading assessment, with poor performance indicated as a summative score below the 16th percentile (local norms). We integrated three steps in each model, with the first step including the word recognition-related subtests of the CUBED-3, the second step including the language-related subtests of the CUBED-3, and the third step combining both word recognition and language subtests together, reflecting the simple view of reading.

Kindergarten. We used the kindergarten *CUBED-3 Letter Sounds* and *Phoneme Segmentation* subtests as word recognition-related measures, and the *NLM Listening Composite Score* (sum of NLM Retell and NLM Questions) as language-related measures to predict performance on the state reading assessment five years later in fifth grade.

Table 24. Sensitivity and Specificity for BOY Kindergarten CUBED-3 Word Recognition Measures Only (Step 1) and Word Recognition and Language Measures Combined (Step 2) for Predicting Fifth Grade State Reading Test Performance (WYTOPP).

	R ²	AUC	Sensitivity	Specificity
Kindergarten CUBED BOY predicting Fifth Grade WYTOPP State Reading Assessment				
Step 1 CUBED Word Recognition Measures Only	.19	.76	71%	73%
Step 2 CUBED Language Measures	.09	.67	63%	71%
Step 3 CUBED Word Recognition and Language Measures	.41	.89	85%	85%

Note: Risk = WYTOPP performance below the 16th percentile (local norms).

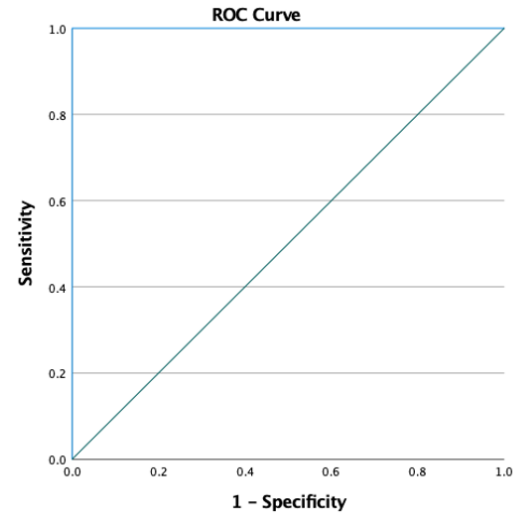


First Grade. We used the first grade *CUBED-3 Phoneme Segmentation, Closed Syllables (CVC, CCVC) Correct Sounds, Irregular Words, Decoding Fluency (CWPM)*, and *Reading Fluency Accuracy* as word recognition-related measures, and the *NLM Reading Retell* as the language-related measure to predict performance on the state reading assessment in fifth grade.

Table 25. Sensitivity and Specificity for BOY First Grade CUBED-3 Word Recognition Measures Only (Step 1) and Word Recognition and Language Measures Combined (Step 2) for Predicting Fifth Grade State Reading Test Performance (WYTOPP).

	R ²	AUC	Sensitivity	Specificity
First Grade CUBED BOY predicting Fifth Grade WYTOPP State Reading Assessment				
Step 1 CUBED Word Recognition Measures Only	.44	.87	89%	80%
Step 2 CUBED Language Measures	.19	.81	100%	68%
Step 3 CUBED Word Recognition and Language Measures	1.00	1.00	100%	100%

Note: WYTOPP performance below the 16th percentile (local norms) = Risk.

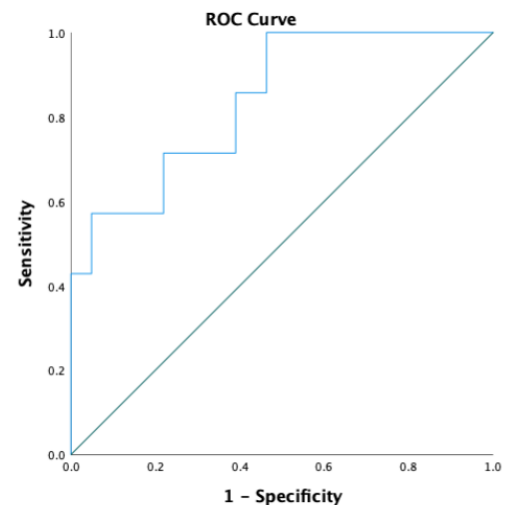


Second Grade. We used the second grade *CUBED-3 Decoding Fluency (CWPM)* and *Reading Fluency Accuracy*, as the word recognition-related measure, and the *NLM Reading Retell, Factual Questions, and Inferential Vocabulary Questions* as the language-related measures to predict performance on the state reading assessment in fifth grade.

Table 26. Sensitivity and Specificity for Fall Second Grade CUBED-3 Word Recognition Measures Only (Step 1) and Word Recognition and Language Measures Combined (Step 2) for Predicting Fifth Grade State Reading Test Performance (WYTOPP).

	R ²	AUC	Sensitivity	Specificity
Second Grade CUBED BOY predicting Fifth Grade WYTOPP State Reading Assessment				
Step 1 CUBED Word Recognition Measures Only	.16	.74	70%	67%
Step 2 CUBED Language Measures	.24	.78	86%	73%
Step 3 CUBED Word Recognition and Language Measures	.43	.86	86%	71%

Note: WYTOPP performance below the 16th percentile (local norms) = Risk.

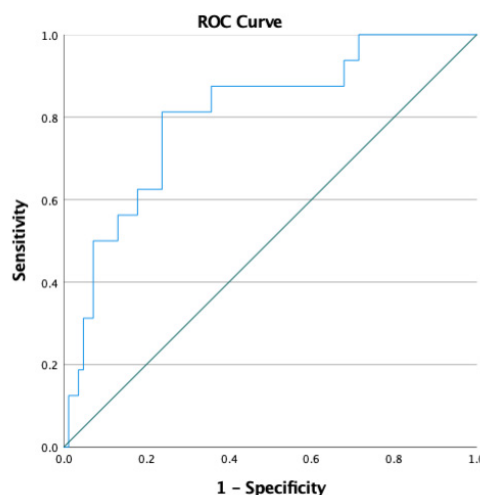


Third Grade. We used the third grade *CUBED-3 Decoding Fluency* (CWPM), as the word recognition-related measure, and the *NLM Reading Retell*, *Factual Questions*, and *Inferential Vocabulary Questions* as the language-related measures to predict performance on the state reading assessment in fifth grade.

Table 27. Sensitivity and Specificity for Fall Second Grade CUBED-3 Word Recognition Measures Only (Step 1) and Word Recognition and Language Measures Combined (Step 2) for Predicting Fifth Grade State Reading Test Performance (WYTOPP).

	R ²	AUC	Sensitivity	Specificity
Third Grade CUBED BOY predicting Fifth Grade WYTOPP State Reading Assessment				
Step 1 CUBED Word Recognition Measures Only	.12	.72	76%	66%
Step 2 CUBED Language Measures	.14	.72	75%	62%
Step 3 CUBED Word Recognition and Language Measures	.25	.80	81%	76%

Note: WYTOPP performance below the 16th percentile (local norms) = Risk.



Construct Validity

Evidence of construct validity supports the theoretical construct that a test purports to measure. We provide several forms of evidence that support the construct validity of the CUBED-3, including evidence that the CUBED-3 is sensitive to growth over time, reflects both oral and written language, and is sensitive to growth due to intervention. We also provide evidence that the CUBED-3 reflects the underlying traits pertaining to decoding and language (using factor analysis). Evidence that the CUBED-3 accurately classifies students who have reading difficulty, which is provided in the Predictive Validity section of this manual, also offers evidence of construct validity.

Measuring Academic Language

The NLM is designed to provide information on academic oral and written language. An initial question is whether the NLM includes the items needed to measure this proposed construct. The fact that the NLM elicits narrative language samples goes a long way in establishing that such a construct is indeed being measured. A language sample certainly has the advantage of transparency – it is without question a sample of language. For this very reason, a language sample is absolved from traditional internal structure analyses. The relationship between the test items (e.g., the narrative structure and the language complexity used to construct that narrative) is perfectly related to a narrative language construct. Of course, a language sample is just that – a sample – and it may not fully represent a student’s language ability (Shohamy, 1995). It is important to examine the authenticity of the language samples elicited, and the extent to which the test measures a student’s ability to use that language in the academic setting. Morrow (1979) suggested that language tests should examine the performance of purpose-driven, interactive, authentic language in a natural context which is at times unpredictable.

In the NLM, model narratives are constructed so that they reflect the very same language complexity found in an academic context. This deliberate design means that there is a very real possibility that asking students to listen to or read those passages and then retell them will provide information on their ability to understand and produce such academic language. An NLM narrative retell is conveyed with communicative purpose in an interaction between the examiner and the child. The focus is on behavioral performance that attempts to replicate a real-life, non-testing situation.

Based on the assertions we have outlined for the CUBED-3 assessment, the NLM subtest should measure the construct of academic oral and written language for preschool and school-age students for the purpose of universal screening, progress monitoring, and informing instruction. This is a pretty tall order, especially since the ability to produce and comprehend language is dependent on multiple factors. For example, how can an assessment measure language and reading comprehension when comprehension is not a single unitary construct (Catts, 2015)? Comprehension is so dependent upon multiple factors, that a single assessment cannot ever fully measure reading comprehension across an apparently infinite combination of contextual and content variables. It may be possible to test a student across many different contexts and obtain a comprehension profile (Kamhi, 2019), yet this would not be feasible for a universal screener or progress monitoring tool that has efficiency requirements. Furthermore, it would not be accurate to suggest that prior knowledge is absolutely necessary for comprehension. Students can gain new knowledge when listening to or reading content that is unfamiliar to them. This requires, among several things, motivation, working memory, attention, morphological awareness, inferential word learning skills, and familiarity with complex

syntactic constructions. Acquiring knowledge is also facilitated through mental schemas, such as story grammar. Note that learning something new is less related to specific content and more related to generalized skills. Students who can learn these skills without unusual difficulty are the very same students who do not have language disorder. Conversely, students with a language disorder, by the very nature of the construct itself, will have difficulty learning language. Progress monitoring over time can measure this language learning potential.

We propose that a criterion-referenced measure of language designed to assess academic language in a universal screening and progress monitoring application should focus on learning potential and general processes. Such a construct could be measured using a response to intervention or multi-tiered systems of support process, or through dynamic assessment or progress monitoring coupled with explicit instruction. The NLM is designed to be an integral part of a multi-tiered system of support and uses progress monitoring procedures. The NLM measures a student's ability to learn academic language over time, which is less focused on specific content and more focused on what will best indicate which students will struggle with understanding and producing academic language.

Measuring Word Recognition

The DDM is specifically designed to measure key skills required for word recognition, including phonemic awareness, identification of letter-sound correspondences, orthographic mapping of temporarily and permanently irregularly spelled words, recoding of different syllable types, recognition of affixes, and reading fluency (CWPM). The three lower strands and subordinate strands of Scarborough's reading model are specifically addressed in the CUBED-3, and the fact that the DDM specifically measures those strands goes a long way in establishing that word recognition-related skills are indeed being measured. Measures of word recognition that most accurately reflect that construct are nonsense word recoding tasks, as found in the Decoding Inventory subtest, irregular word reading tasks, as found in the Irregular Words subtest, and a reading fluency task, where connected text is read. In fact, reading fluency, whether with contrived decodable texts or with 100% "authentic" texts, clearly reflects the construct of word recognition. Of course, written text is bound by specific vocabulary which can vary greatly, and a particular passage may not fully represent a student's ability to recognize all words. We controlled for this variance to a degree by constructing nearly 100% decodable passages for the first and second grade NLM Reading benchmark and progress monitoring subtests. This allows for a tighter control over the measurement of what has likely been specifically taught and allows examiners to determine whether a student is responding to instruction. We contend that measuring a student's ability to decode syllable types and patterns that they have not yet learned is not a productive use of time.

A Special Note on Response Processes for Comprehension

Test content includes themes, wording, format of test items, tasks, and questions. Administration and scoring can also be relevant to content-based evidence. A language sample that elicits complex, academic language that is representative of a student's language ability probably won't have construct underrepresentation or construct-irrelevance, but the way the language sample is analyzed most certainly could. The constraints imposed by the purposes of universal screening and progress monitoring preclude a deep analysis. When a test is designed to be administered and scored by examiners who have limited formal training in language sample analysis, the complexity

of the analysis has to be reduced. Here is where the NLM most certainly is most at risk for construct underrepresentation. We have attempted to identify general processes or schema that can be recognized by a teacher or paraprofessional, for example, who may not have a strong language background. The NLM expects examiners to score a student’s inclusion of major story grammar elements, score important temporal and causal subordinating conjunctions, relative pronouns that indicate relative subordination, vocabulary complexity, and calculate the extent to which a complete episode has been produced. The NLM also measures a student’s ability to answer factual questions and make text-to-text and text-to-self/word inferences. There is always tension between reliability, efficiency, ease of administration, ease of scoring, and validity for a language progress monitoring tool, nevertheless, when compared to the early comprehension measures currently being used in many of the schools across the U.S., we are confident that the NLM is a step in the right direction (Petersen & Stoddard, 2018).

There is also the question of what task we want the students to perform in a criterion-referenced language test. Language samples can be elicited in a variety of ways. The generation of fictional or personal stories can be prompted, or the elicitation of retells could be the focus. Pictures can also be used to elicit language samples. A narrative retell of a personal-themed story is the response we expect from students on the NLM retell portion of the CUBED-3. This was purposefully chosen for several reasons. First a retell task allows for there to be carefully constructed parallel forms. Second, a retell can be scored in real time because the examiner has prior exposure to the story and can anticipate the content and its structure. Third, a personal story themed on universally applicable events (e.g., getting lost, getting hurt) can help mitigate the confound of prior exposure or experience with the test content. Although no doubt some stories will resonate stronger with some students than others, at the very least the stories are generally relatable. Also, there is a primer story or more than one story elicited. This is particularly important because we found that the first administration of an NLM subtest is a “shock to the system” for many students, and their responses did not reflect their language potential. We noted that a second NLM administration immediately after the first administration consistently yielded more complex and complete narrative retells. Finally, a retell is the integration of receptive and expressive language – of which empirical evidence is beginning to demonstrate are not separate constructs. For example, unless a student has a mental model of what they are trying to produce expressively, they will not be able to produce it (Leonard in AJSLP).

Table 28. Means and standard deviations for NLM Listening retell and writing samples across multiple language measures, evidencing convergent validity. (n = 196).

Language Feature	NLM Listening Retell	Writing
Verbs	18.17 (3.44)	18.71 (4.10)
Preposition	5.93 (2.89)	6.55 (3.72)
Adjectives	0.97 (1.23)	1.29 (1.73)
Complement Clauses	1.04 (1.27)	0.86 (1.35)
Coordinating Conjunctions	1.45 (1.66)	0.71 (1.37)
Pronouns	4.54 (4.53)	4.31 (4.54)
Relative Subordinate Clauses	0.21 (.49)	.24 (.78)

Note: No significant differences between the NLM Listening retell means and the Writing means, indicating that NLM Listening retell performance will reflect a student’s ability to write.

Sensitivity to growth due to change over time

An assessment with measures that are designed to test skills that improve with age or with general instruction should show this progression during which those skills are developing or being taught. Means and standard deviations of some of the CUBED-3 measures that are consistently administered at different time points throughout the year are presented in Table 29. A one-way repeated measures ANOVA indicated a significant difference in narrative retell scores from the beginning to the middle of the year for kindergarten ($F(1, 214) = 127.92, p < 0.001, \eta^2 = .37$), first grade ($F(1, 208) = 35.03, p < 0.001, \eta^2 = .14$), second grade ($F(1, 195) = 97.55, p < 0.001, \eta^2 = .33$), and third grade ($F(1, 186) = 46.71, p < 0.001, \eta^2 = .06$). The data show that as students advance through the grades, the mean performance on the CUBED-3 measures also increases as expected. More specific data on mean performance on the CUBED-3 measures, including different group performance (e.g., ethnicity) at different time points can be found in the supplemental technical manual on norm-referenced interpretation of the CUBED-3.

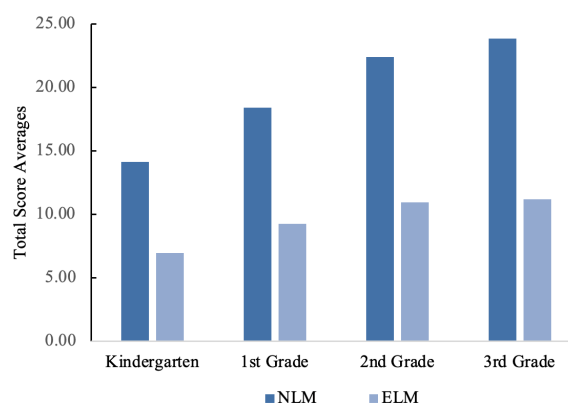
Table 29. Means (and Standard Deviations) for the CUBED-3 Fall Benchmark Scores at Beginning of the Year and the Middle of the Year for Kindergarten Through Third Grade

Grade	NLM Listening Retell	NLM Reading Retell	NLM Decoding Fluency	Sentence Complexity	Vocabulary Complexity	NLM Questions	Phoneme Segmentation
Kindergarten BOY	11.48 (6.16)	-	-	0.68 (1.20)	0.32 (.64)	19.71 (6.13)	17.03 (11.73)
Kindergarten MOY	17.10 (5.76)	-	-	1.60 (1.02)	1.08 (0.73)	20.54 (5.94)	27.64 (5.48)
First Grade BOY	*13.43 (7.64)	12.35 (6.30)	34.98 (29.37)	0.79 (1.20)	0.18 (0.45)	21.90 (5.33)	29.56 (4.95)
First Grade MOY	*14.74 (8.06)	15.70 (5.69)	48.74 (28.97)	1.98 (1.19)	1.29 (0.75)	24.16 (5.34)	28.72 (4.76)
Second Grade BOY	*20.17 (8.83)	20.69 (9.19)	78.78 (38.73)	1.12 (1.45)	0.50 (0.85)	23.90 (5.41)	29.23 (5.81)
Second Grade MOY	*19.66 (9.78)	27.04 (8.16)	89.21 (33.40)	2.04 (1.69)	1.49 (0.94)	25.36 (5.61)	28.29 (5.27)
Third Grade BOY	*13.82 (7.81)	25.02 (7.60)	88.84 (35.93)	1.21 (1.52)	1.12 (1.23)	27.02 (3.73)	27.48 (7.61)
Third Grade MOY	*25.45 (9.57)	27.41 (7.68)	103.20 (27.88)	2.52 (1.67)	1.21 (0.70)	28.02 (4.49)	29.74 (3.48)

Note: *The NLM Listening and Reading passages get increasingly more complex at each grade level. Therefore, caution should be taken when comparing scores across grades. The NLM Listening is typically administered to first through eighth grade students who are not at benchmark on two consecutive NLM Reading administrations, therefore, the data from the NLM Listening represent mean performances from students who are at-risk.

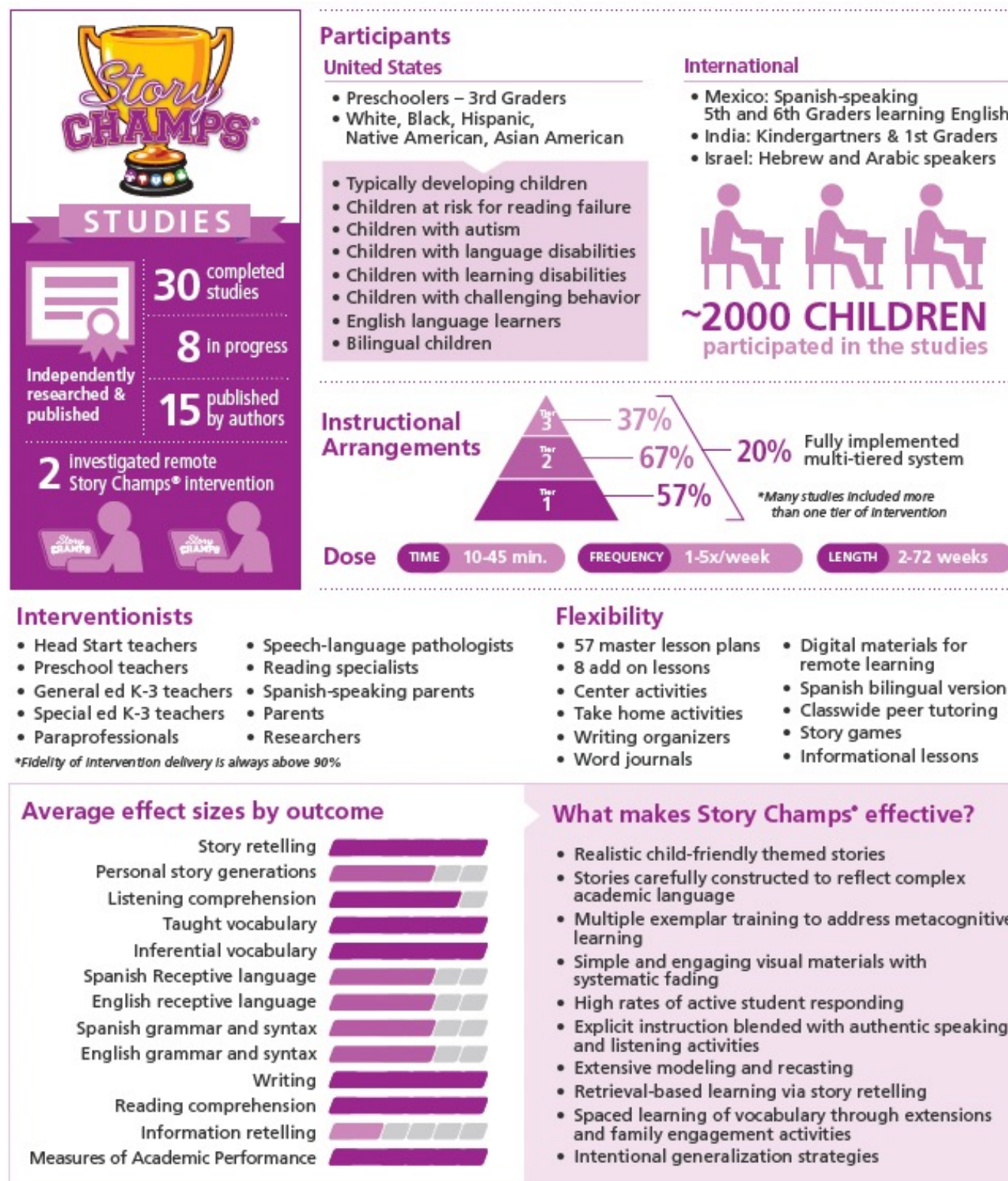
For the NLM Flowchart, mean scores were observed to increase across grade levels. The average NLM Flowchart scores were 14.2 for Kindergarteners, 18.4 for 1st graders, 22.4 for 2nd graders, and 23.9 for 3rd graders. An increasing trend for mean ELM Flowchart scores was also observed: 7.0 for Kindergarteners, 9.1 for 1st graders, 11.0 for 2nd, and 11.2 for 3rd graders. Figure 5 depicts the changes across grades in bar graph form.

Figure 5. NLM and ELM Scores across Grade Levels



Sensitivity to growth due to intervention

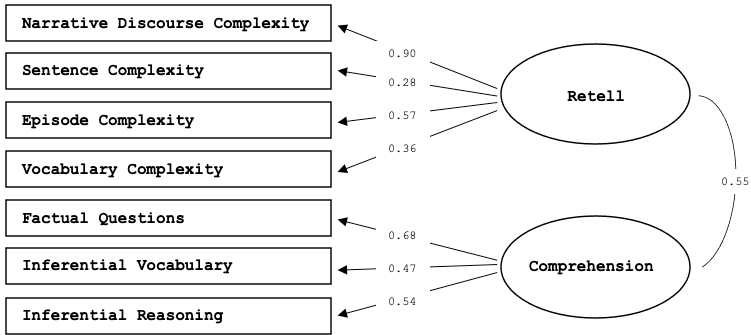
There are several peer-reviewed language intervention studies that have used the CUBED-3 NLM as an outcome measure. These studies provide considerable evidence that the CUBED-3 is sensitive to change due to intervention.



Factor Analysis

If the subtests of an assessment are significantly correlated, this can be evidence that the subtests are all measuring a related construct. The CUBED-3 is designed to measure two major constructs: word recognition and language. Therefore, subtests within those two measures should reflect this. Factor analysis is conducted to explore the degree to which underlying traits of a test can be identified and the extent to which those traits reflect the theoretical model on which the test is based. We have investigated and reported the factor loadings for the word recognition-related subtests of the CUBED-3, yet the newly revised CUBED-3 required additional investigation, particularly the NLM subtest, which reports two composites: The NLM Retell Composite score and the NLM Comprehension Composite score. These two composite scores reflect the theorized factors assessed by the NLM. The results of the factor analysis indicated that the NLM measured the two factors that were theorized. We labeled the two factors as “retell” and “comprehension”. These two factors align with the composite scores on the NLM. Figure 6 displays a path diagram of the factor analysis with completely standardized values for the two-factor solution.

Figure 6. Path Diagram of the Factor Analysis with Completely Standardized Values for the Two Factor Solution of the NLM



Factor Analysis of NLM and ELM Flowcharts

For the NLM and ELM Flowcharts, A CFA was conducted to test two-factor measurement models of the NLM and ELM Flowcharts for spoken academic language. Models of the proposed factor structures are displayed in Figure 7.

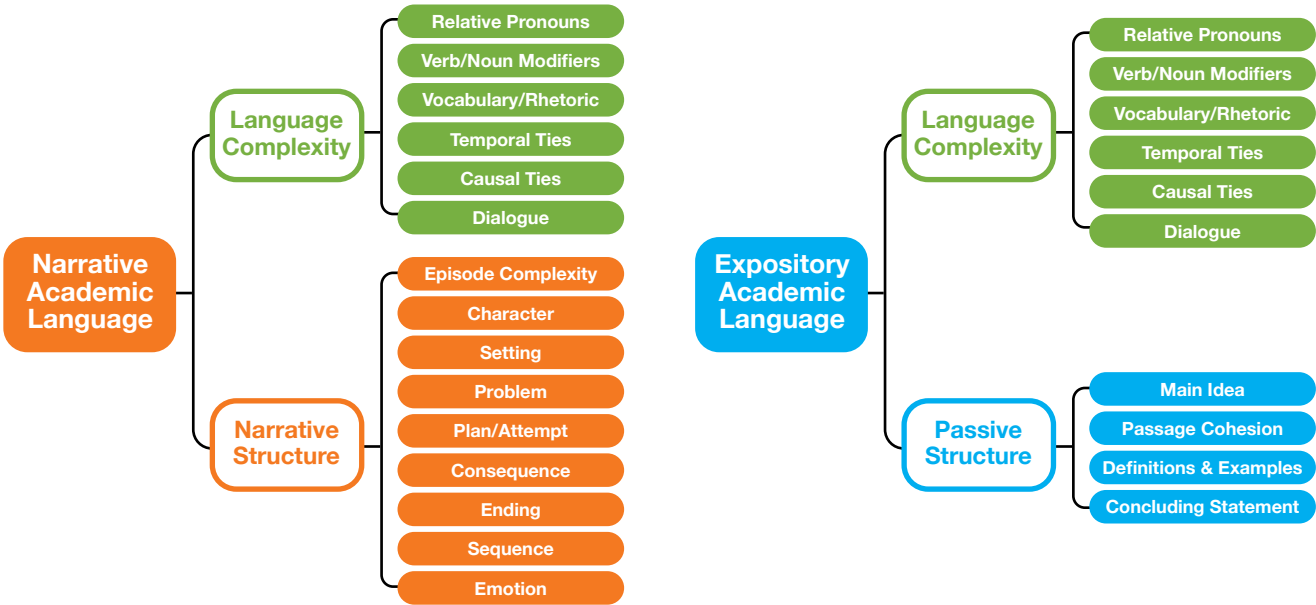


Figure 7. Proposed Factor Structure of Narrative and Expository Academic Language

A CFA was conducted to test two-factor measurement models of the *NLM* and *ELM Flowcharts*. Items were initially specified based on an evaluation of the extent to which they theoretically fit into the latent constructs. A two-factor model was hypothesized to reflect the distinctions between microstructure (grammatical/lexical features) and macrostructure (discourse features) typically employed by researchers and practitioners in the communication sciences. All models were estimated using the mean-and-variance-adjusted weighted least squares (WLSMV) estimator.

The CFA was assessed for exact fit via a maximum likelihood (ML) χ^2 appraisal. Exact model fit would be concluded if a non-significant χ^2 value ($p > .05$) was found. In case of model misspecification, approximate fit was evaluated using standardized root-mean-square residual (SRMR), comparative fit index (CFI)/ Tucker-Lewis Index (1973, TLI), and root-mean-square error of approximation (RMSEA). Hu and Bentler (1999) recommend using these calculations with ML methods to determine the extent to which a model displays sufficient evidence of fit for model misspecification. According to these studies, approximate fit may be assumed if a model achieves the following fit index values: a SRMR $<.08$ (primary criterion) and either a CFI/TLI $>.95$ or an RMSEA $>.06$ (secondary criteria). Additionally, Brown (2015) suggested factor loadings of individual items must be greater than or equal to .30 or .40 to be considered acceptable in applied research. We applied these criteria to guide decision-making regarding adjustments (e.g., item deletions or correlations) to the proposed model.

Table 30. Fits of Models That Test Different Conceptualizations of Narrative and Expository Academic Language.

Instrument	#	Model Tested	Task Type	Free parameters	Chi-Square			SRMR	CFI	TLI	RMSEA		$p \leq .05$
					χ^2	df	p -value				RMS EA	90% CI	
ELM Flowchart	1	Original model	Generation	31	169.51	34	<.001	0.05	0.91	0.88	0.06	0.053-0.071	0.02
			Retell	31	191.27	34	<.001	0.05	0.79	0.72	0.07	0.058-0.076	0.00
	3	Correlate <i>main idea</i> with <i>passage cohesion</i>	Generation	32	139.35	33	<.001	0.04	0.93	0.90	0.06	0.046-0.065	0.15
			Retell	32	192.32	33	<.001	0.05	0.79	0.71	0.07	0.059-0.078	0.00
	2	Delete main idea	Generation	28	91.67	26	<.001	0.04	0.94	0.92	0.05	0.039-0.061	0.52
			Retell	28	127.11	26	<.001	0.04	0.82	0.75	0.06	0.051-0.072	0.04
	4	Load <i>vocabulary</i> onto <i>Passage Structure</i>	Generation	31	138.42	34	<.001	0.05	0.93	0.91	0.05	0.045-0.064	0.21
			Retell	31	146.91	34	<.001	0.04	0.85	0.80	0.06	0.047-0.066	0.12
	5	Delete <i>transitions</i>	Generation	31	175.73	26	<.001	0.05	0.91	0.87	0.08	0.064-0.085	<.001
			Retell	31	159.53	26	<.001	0.05	0.79	0.71	0.07	0.060-0.081	0.00
NLM Flowchart	1	Original model	Generation	46	743.85	89	<.001	0.06	0.88	0.86	0.08	0.079-0.090	<.001
			Retell	46	784.80	89	<.001	0.05	0.91	0.90	0.09	0.081-0.092	<.001
	2	Correlate <i>problem</i> with <i>plan/attempt</i>	Generation	47	739.93	88	<.001	0.06	0.88	0.86	0.09	0.079-0.090	<.001
			Retell	47	710.23	88	<.001	0.05	0.92	0.91	0.08	0.077-0.088	<.001
	3	Correlate <i>character</i> with <i>setting</i>	Generation	47	727.34	88	<.001	0.05	0.92	0.90	0.08	.078-.089	<.001
			Retell	47	634.52	88	<.001	0.05	0.90	0.88	0.08	.072-.083	<.001

SRMR = standard root-mean-square residual; CFI = comparative fit index; TLI = Tucker Lewis Index; RMSEA = root-mean-square error of approximation

To determine model specifications, researchers reviewed CFA model fit indices, individual item factor loadings, and modification indices for the original models (Model 1 of narrative and expository academic language, respectively) in Mplus (Version 8; Muthén & Muthén, 2017). Item decisions were made by first looking at modification indices to identify indicators that were either strongly correlated with another item, or that were potentially crossloading onto the non-indicated factor. Modification index values were interpreted in light of our conceptual understanding of the indicators based on research, how they might relate to the overall construct, and how they might interact with each other in productive language. Large modification index values that were consistent with theory and prior research were tested through modified models. Modification index values that were significant but inconsistent with prior research were not tested (i.e., items were not removed or evaluated on another factor). Researchers then reviewed factor loadings to determine whether there were any items that, if removed, might make the instrument more accurate in capturing the identified construct.

For expository academic language conceived through the two-factor *ELM Flowchart* model, four additional models were specified. For the two-factor *NLM Flowchart* model, analyses were conducted for two additional models. Table 30 displays fit index values for the different models.

ELM Flowchart Model Specifications

Modification indices for *ELM Flowchart* Model 1 signaled notable correlations between the main idea and passage cohesion indicators (generation M.I. = 24.86; retell M.I. = 22.29). These two indicators are conceptually interdependent; *passage cohesion* assesses the extent to which the information units support an explicitly stated main idea. Hence in Model 2, researchers controlled for this correlation. Upon further review, it was hypothesized that *passage cohesion* may actually capture *main idea* entirely within its operational definition.

Researchers reviewed factor loadings and found that the data were consistent with this hypothesis: *main idea* loaded onto the specified factor with less power than *passage cohesion* (difference score for retell = .23; difference score for generation = .13). Hence in Model 3, we tried deleting the main idea indicator to assess any differential changes in fit index values. Modification index values also suggested that the *vocabulary* item crossloaded across Factors 1 and 2 (generation M.I. = 55.84; retell M.I. = 67.74). This relationship was somewhat expected. Vocabulary is closely related to information units in that the more an individual knows about a specific topic, the greater their vocabulary knowledge. Conceptually, this item could be grouped with the *Passage Structure* or *Linguistic Complexity* factor; however, indicators that cross-load onto multiple factors can pose threats to discriminant validity. Therefore in Model 4, *vocabulary* was grouped within the *Passage Structure* factor to assess differences of fit. Finally, in Model 5 the *transitions* item was removed due to poor loading onto the indicated factor (generation = 0.07; retell = 0.18).

There were several unexpectedly high modification index values that were inconsistent with prior research. *Causal ties* and *temporal ties* showed some evidence of correlation for retell samples only (M.I. = 31.62). Students may have used these structures in tandem when retelling expository passages because they were modeled together in the retell passage. Correlations between *concluding statement* and *main idea* scores were noted (retell M.I. = 28.97; generation M.I. = 51.88). However, the *concluding statement* item loaded poorly onto the identified factor (retell = 0.27; generation = 0.28), so it was hypothesized that altering the model to account for this correlation would not significantly impact the overall model fit.

Model 5 displayed the strongest evidence of fit with the data (generation samples $\chi^2(26) = 175.73$, $p < .001$, CFI = .91, TLI = .87, RMSEA = .08, and SRMR = .05; retell samples $\chi^2(26) = 159.53$, $p < .001$, CFI = .79, TLI = .71, RMSEA = .07, and SRMR = .05). With the *transition* item removed, the remaining factor pattern loadings for Model 5 model ranged from .27 to .79, with significant values for each item. One indicator, *concluding statement*, loaded onto its respective factor (Passage Structure) with values less than .30 (generation samples 0.27; retell samples 0.28). Factor pattern loadings for the best fitting models of narrative and expository academic language are displayed in Table 31.

Table 31. Factor Loading Analysis

Instrument	Factor	Indicator	Generation				Retell			
			Factor Loading	Standard Error	Residual Variance	p-value	Factor Loading	Standard Error	Residual Variance	p-value
NLM Flowchart	Language Complexity	Relative Pronouns	0.375	0.039	0.859	<.001	0.317	0.033	0.900	<.001
		Verb/ Noun Modifiers	0.575	0.030	0.669	<.001	0.742	0.016	0.449	<.001
		Vocabulary/ Rhetoric	0.527	0.038	0.722	<.001	0.721	0.015	0.480	<.001
	Narrative Structure	Temporal Ties	0.375	0.038	0.860	<.001	0.413	0.030	0.829	<.001
		Causal Ties	0.409	0.035	0.833	<.001	0.416	0.027	0.827	<.001
		Dialogue	0.355	0.035	0.874	<.001	0.488	0.023	0.761	<.001
		Range of Loadings:		.36 - .58			.32 - .74			
		Episode Complexity	0.957	0.006	0.085	<.001	0.967	0.004	0.065	<.001
		Character	0.538	0.023	0.710	<.001	0.607	0.024	0.632	<.001
		Setting	0.286	0.038	0.918	<.001	0.535	0.023	0.714	<.001
		Problem	0.774	0.018	0.400	<.001	0.804	0.013	0.353	<.001
		Sequence	0.846	0.014	0.285	<.001	0.873	0.010	0.238	<.001
		Plan/ Attempt	0.848	0.013	0.280	<.001	0.907	0.007	0.177	<.001
		Consequence	0.863	0.012	0.255	<.001	0.909	0.009	0.174	<.001
		Ending	0.528	0.022	0.721	<.001	0.626	0.022	0.609	<.001
		Emotion	0.241	0.031	0.942	<.001	0.377	0.023	0.858	<.001
		Range of Loadings:		.24 - .96			.38 - .97			
ELM Flowchart	Language Complexity	Relative Pronouns	0.533	0.029	0.716	<.001	0.420	0.032	0.823	<.001
		Verb/ Noun Modifiers	0.629	0.026	0.604	<.001	0.628	0.026	0.605	<.001
		Vocabulary	0.646	0.030	0.583	<.001	0.634	0.031	0.598	<.001
	Passage Structure	Temporal Ties	0.384	0.039	0.852	<.001	0.362	0.037	0.869	<.001
		Causal Ties	0.608	0.030	0.631	<.001	0.498	0.034	0.752	<.001
		Range of Loadings:		.38 - .65			.36 - .63			
		Main Idea	0.656	0.022	0.569	<.001	0.549	0.043	0.699	<.001
		Definitions & Examples	0.508	0.792	0.741	<.001	0.416	0.090	0.827	<.001
		Passage Cohesion	0.792	0.031	0.373	<.001	0.780	0.065	0.392	<.001
		Concluding Statement	0.274	0.022	0.925	<.001	0.275	0.044	0.924	<.001
		Range of Loadings:		.27 - .79			.28 - .78			

NLM Flowchart Model Specifications

Modification indices for Model 1 of narrative academic language indicated noteworthy correlations between many pairs of indicators. Correlations between nearly all of the story grammar elements showed up as significant in the modification indices. These correlations were expected, since prior research has described how the three primary story grammar elements (i.e., problem, attempt to solve the problem, and resolution) are causally related (Stein & Glenn, 1979). We chose to create modified models to control for two indicated correlations: *problem* with *plan/attempt* (Model 2; retell M.I. = 85.41; generational M.I. = non-significant) and *character* with *setting* (Model 3; retell M.I. = 55.65; generation M.I. = 99.54). Changes in fit index values were observed for models reflecting these particular correlations because (a) unusually high M.I. values were observed, and (b) conceptually they are interrelated. Specifically, for Model 2, we reasoned that a *plan/attempt* to solve a problem cannot

occur without a *problem* occurring. For Model 3, *character* and *setting* represent background details that are typically the first bits of information presented in a story.

Additionally, there were three items that slightly crossloaded onto contra-indicated factors: *setting* (retell M.I. = 59.58; generation M.I. = 81.08); *character* (retell M.I. = 74.72; generation M.I. = 37.31); and *emotion* (retell M.I. = 80.84; generation M.I. = 35.29).

Fit indices were evaluated to assess the extent to which model fit improved or got worse as changes were made to the model. Results show the original *NLM Flowchart* model of narrative academic language had the best fit to the data (generation $\chi^2(46) = 743.85$, $p < .001$, SRMR = .06, RMSEA = .08, CFI = .88, and TLI = .86; retell $\chi^2(46) = 784.80$, $p < .001$, SRMR = .05, RMSEA = .09, CFI = .91, and TLI = .90). Standardized factor loadings ranged from 0.24 to 0.96, with significant p-values for each item. Two *Narrative Structure* items loaded onto the identified factor with values less than .30: *setting* (generation = 0.29; retell = 0.54) and *emotion* (generation samples .24; retell samples .38). It is important to note that poor factor loadings for these items were below .30 for generation language samples only. Loadings exceeded the cutoff criteria in retell samples.

Intercorrelations between factor structures for the *NLM* and *ELM Flowcharts* are reported in Table 32. Research suggests that intercorrelation values of .80 and below provide sufficient evidence that factors have separate structures and are likely not unidimensional (Brown, 2015). All intercorrelation values between identified factors fell below this threshold.

Table 32. Intercorrelation Estimates

Instrument	Factors	Task	Intercorrelation	Standard Error	p-Value
ELM Flowchart	Language Complexity x	Generation	0.743	0.038	<.001
	Expository Structure	Retell	0.794	0.054	<.001
NLM Flowchart	Language Complexity x	Generation	0.657	0.032	<.001
	Narrative Structure	Retell	0.80	0.018	<.001

*Standardized factor loadings (STDYX)

Economy, Efficiency, and Ease of Administration and Scoring

A CBM must also be **economical, time efficient, and be easy to administer and score**. These requirements are somewhat unique to universal screening and progress monitoring tools, yet are very important because often, CBMs are administered to nearly every student in a school district. To function properly within the constraints of current budget allocations, a universal screening and progress monitoring tool that is designed to be administered to a large number of students needs to be economical.

Not only is money a finite resource, so also is time. Educators are expected to cover a lot of material or work with a lot of students during each day of instruction. In order to function properly in the school setting, a universal screening and progress monitoring tool needs to be time efficient. Procedures must be in place that can be realistically implemented in the school system. There are clear guidelines on how administer the CUBED-3 assessment in an efficient manner in this manual.

Finally, a language universal screening and progress monitoring tool in many cases needs to be administered by a large number of educators, including paraprofessionals who might have limited education or training, especially in an MTSS context. When this is the case, the progress monitoring tool needs to be easy to administer and score. Because the majority of students in the U.S. have difficulty meeting grade-level reading comprehension expectations, the problem is not specific to special education. The reading comprehension issue in the U.S. is a shared general and special education responsibility. This means that general education teachers and supporting staff who may not have formal education or training on language assessment will be needed to administer language and word recognition progress monitoring assessments to a large number of students. These assessments will need to be feasibly administered and scored with a reasonable amount of training.

Summary of Validity Results

There is considerable evidence to support the validity of the CUBED-3. The CUBED-3 can be used as a universal benchmark screening and progress monitoring measure of early literacy, decoding, reading fluency, and comprehension. It can identify students who need intensive intervention and can play an important role in a multi-tiered system of support for decoding and language.

Obtaining evidence of validity is an on-going process, and additional studies are warranted. We invite professionals to study this assessment using different samples of students, different statistical procedures, and different criterion measures. We welcome collaboration and encourage researchers who examine the CUBED-3's psychometric properties to share information with us.

APPENDIX A

NLM Flowchart

NLM Flowchart

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Child Name/ID#: _____
Grade: _____ Teacher: _____
School: _____
Examiner/Transcriber/Scorer: _____

YEAR	MO	DAY
Date Tested		
Date of Birth		
Child's Age		

Sampling Context:
Check all that apply

☐ Oral
☐ Written
☐ Personal Generation
☐ Fictional Generation
☐ Retell
☐ With pictures
☐ Without pictures
☐ Other: _____

Sentence Complexity Score: _____
Narrative Discourse Score: _____
Punctuation Score: _____
Capitalization Score: _____
Average Word Rating: _____

TOTAL SCORE:
(SC + ND)

WRITING CONVENTIONS (OPTIONAL)

PUNCTUATION	CAPITALIZATION	SPELLING
Number of words written _____	Number of words written _____	Sum of word ratings _____
Number of errors _____	Number of errors _____	Number of words written _____
PUNCTUATION SCORE Subtract number of errors from total number of words written.	CAPITALIZATION SCORE Subtract number of errors from total number of words written.	AVERAGE WORD RATING Divide the sum of word ratings by the total number of words written.
Calculate Errors Add up punctuation errors (up to 3 for each type) for which punctuation was needed and was used incorrectly (0 = not needed)	Calculate Errors Add up capitalization errors (up to 3 for each type)	Rating Scale Rate each word in the written sample using the rubric below
Period at end of sentence 0 1 2 3	Lowercase for regular word 1 2 3	① Unconventional symbol. Contains vertical line, dot, circle instead of letter or number.
Question mark 0 1 2 3	Uppercase I 1 2 3	② Conventional symbol. Contains at least one real letter or number, but is unrecognizable as a word. Examples: "4", "7", "15", "8N"
Apostrophe 0 1 2 3	Uppercase for first word of sentence 1 2 3	③ Phonetic representation. Contains one or more letters that are phonetically related to a recognizable word. Examples: "b" or "bd" for bird, "y" for are
Quotation mark 0 1 2 3	Uppercase for proper names 1 2 3	④ Invented spelling. Contains two or more letters that represent most of the phonemes of a recognizable word. Most have a vowel and be easy to figure out. Examples: "air" for bird, "gol" for girl
Comma in a list 0 1 2 3	Uppercase for holidays, days, and months 1 2 3	⑤ Conventional spelling. Spelled correctly.
	Uppercase for acronyms 1 2 3	

SENTENCE COMPLEXITY

RELATIVE PRONOUNS	VERB/NOUN MODIFIERS	VOCABULARY/RHETORIC	TEMPORAL TIES	CAUSAL TIES	DIALOGUE
3 + instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., My friends, <u>John</u> came to my house, and <u>very nice</u> .)	1 + instances of 2 consecutive descriptive modifiers (e.g., + <u>beautiful dog</u>) OR 2 + instances of single descriptive modifiers before a verb or a noun (e.g., We built our fort in the <u>big trees</u> . We <u>quickly</u> climbed the ladder.)	3 + less-common words/idioms/analogs/metaphors/similes (e.g., the owl <u>hissed</u> her gaze was icy)	3 + instances of temporal words (when, after, before, while, as, until)	3 + instances of causal words (because, so (that), since, unless, although, even though)	2 + instances of dialogue; either 2 speakers or 2 separate instances of the same speaker
2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., We built our <u>treasure</u> that has two rooms.)	1 instance of single descriptive modifier before a verb or a noun (e.g., + <u>big dog</u>) OR 2 instances of single descriptive modifiers after a verb (e.g., We <u>climbed</u> the ladder <u>quickly</u>)	2 less-common words/idioms/analogs/metaphors/similes	2 instances of temporal words (that are often used in complex sentences)	2 instances of causal words (that are often used in complex sentences)	1 instance of dialogue
1 instance of relative pronoun immediately after noun (that, who, which, who's) (e.g., We built our <u>fort</u> , which was needed for a successful battle.)	1 instance of single descriptive modifier after a verb (e.g., The dogs <u>ran</u> quickly.)				

NARRATIVE DISCOURSE

CHARACTER	SETTING	PROBLEM	PLAN/ATTEMPT	CONSEQUENCE	ENDING	EMOTION
Retell proper noun for main character's name (or approximation) and a proper noun for 1 + secondary characters (e.g., John and his mom) OR general nouns for main character and 3 + secondary characters (e.g., boy, dog, dog, dog, dog, dog) FWNY: (e.g., boy, dog, dog, dog, dog, dog)	all of following explicitly stated: time, activity, location FWNY: (e.g., night/morning + sleeping/wake up + bedroom) Gen: (e.g., today + skateboarding + park) OR 2 of following explicitly stated: time, activity, location FWNY: (e.g., night/morning + bedroom; sleeping/wake up + bedroom) Gen: (e.g., today + skateboarding + park) OR 1 of following: time, activity, location FWNY: (e.g., night/morning; bedroom) Gen: (e.g., today; skateboarding)	2 + 1 complete and clear FWNY: (e.g., frog is gone) Gen: (e.g., was falling off the skateboard) OR incomplete or unclear FWNY: (e.g., no frog) Gen: (e.g., couldn't do it) OR implied FWNY: (e.g., he wanted the frog) Gen: (e.g., needed band-aid)	2 + 1 complete and clear by main character or storyteller FWNY: (e.g., boy looked for frog) Gen: (e.g., I asked brother to help me skateboard; I decided to get brother's help) OR complete and clear by secondary character FWNY: (e.g., dog looked for frog) Gen: (e.g., brother helped me skateboard; brother decided to help me skateboard) OR incomplete or unclear by any character FWNY: (e.g., he went outside) Gen: (e.g., I talked to my brother; I made a plan)	2 + 1 complete and clear related to attempt or problem FWNY: (e.g., brother held my hand to help me) Gen: (e.g., brother held my hand to help me) OR incomplete or unclear related to attempt or problem FWNY: (e.g., he got it) Gen: (e.g., I got help) OR consequence-like info not related FWNY: (e.g., his dog came to him) Gen: (e.g., my mom lived it)	complete and clear FWNY: (e.g., he took baby frog home) Gen: (e.g., I had fun skateboarding) OR incomplete or unclear FWNY: (e.g., he went home) Gen: (e.g., I did it)	2 different emotions FWNY/Gen: (e.g., sad + happy) OR 1 emotion FWNY/Gen: (e.g., sad) OR general emotion or emotional behavior FWNY/Gen: (e.g., liked it) or (cared)

NARRATIVE DISCOURSE SCORE: _____
(include sequence & episode complexity)

EPISODE COMPLEXITY (ONLY SHADED POINTS qualify for episode complexity score)

3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10
6	7	8	9	10	11
7	8	9	10	11	12
8	9	10	11	12	13

NLM Flowchart

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NLM Flowchart

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Child Name/ID#: _____

Grade: _____ Teacher: _____

School: _____

Examiner/Transcriber/Scorer: _____

YEAR			MO			DAY		
Date Tested								
Date of Birth								
Child's Age								

Sampling Context:
Check all that apply

- ☐ Oral
☐ Written
☐ Personal Generation
☐ Fictional Generation
☐ Retail
☐ With pictures
☐ Without pictures
☐ Other: _____

TOTAL SCORE:
(SC + ND)

SENTENCE COMPLEXITY

RELATIVE PRONOUNS

3 + instances of relative pronouns immediately after nouns
(that, who, which, who's)
(e.g., *My friends, who came to my house, are very nice.*)
↓ NO
③ YES

2 instances of relative pronouns immediately after nouns
(that, who, which, who's)
(e.g., *We built a treehouse that has two rooms.*)
↓ NO
② YES

1 instance of relative pronoun immediately after noun
(that, who, which, who's)
(e.g., *We built a fort, which was needed for a snowball battle.*)
↓ NO
① YES

VERB/NOUN MODIFIERS

1 + instances of 2 consecutive descriptive modifiers
(e.g., *a big dirty dog*) OR
2 + instances of single descriptive modifiers before a verb or a noun
(e.g., *We built our fort in the tall trees. We easily climbed the ladder.*)
↓ NO
③ YES

1 instance of single descriptive modifier before a verb or a noun
(e.g., *a dirty dog*) OR
2 + instances of single descriptive modifiers after a verb
(e.g., *We climbed the ladder easily*)
↓ NO
② YES

1 instance of single descriptive modifier after a verb
(e.g., *The dogs ran quickly.*)
↓ NO
① YES

WRITING CONVENTIONS (OPTIONAL)

PUNCTUATION

Number of words written _____

Number of errors ➔ _____

PUNCTUATION SCORE
Subtract number of errors from total number of words written.

Calculate Errors

Add up punctuation errors (up to 3 for each type) for when punctuation was needed and was used incorrectly (0 = not needed)

Period at end of sentence

① ② ③

Question mark

① ② ③

Apostrophe

① ② ③

Quotation mark

① ② ③

Comma in a list

① ② ③

CAPITALIZATION

Number of words written _____

Number of errors ➔ _____

CAPITALIZATION SCORE
Subtract number of errors from total number of words written.

Calculate Errors

Add up capitalization errors (up to 3 for each type)

Lowercase for regular word

① ② ③

Uppercase I

① ② ③

Uppercase for first word of sentence

① ② ③

Uppercase for proper names

① ② ③

Uppercase for holidays, days, and months

① ② ③

Uppercase for acronyms

① ② ③

SPELLING

Sum of word ratings _____

Number of words written ➔ _____

AVERAGE WORD RATING
Divide the sum of word ratings by the total number of words written.

Rating Scale

Rate each word in the written sample using the rubric below

- ① Unconventional symbol. Contains vertical line, dot, circle instead of letter or number.
② Conventional symbol. Contains at least one real letter or number, but is unrecognizable as a word. Examples: "4", "j", "15", "B3n"
③ Phonetic representation. Contains one or more letters that are phonetically related to a recognizable word. Examples: "bd" or "bd" for bid, "r" for are
④ Invented spelling. Contains two or more letters that represent most of the phonemes of a recognizable word. "Must have a vowel and be easy to figure out. Examples: "htr" for girl, "gol" for girl
⑤ Conventional spelling. Spelled correctly.

VOCABULARY/RHETORIC

3 + less-common words/idioms/analogies/metaphors/similes
(e.g., *the owl snuggled; her gaze was icy*)
↓ NO
③ YES

2 less-common words/idioms/analogies/metaphors/similes
(e.g., *he lurched; black as night*)
↓ NO
② YES

1 less-common words/idioms/analogies/metaphors/similes
(e.g., *he crept to the door*)
↓ NO
① YES

TEMPORAL TIES

3 + instances of temporal words (that are often used in complex sentences)
(when, after, before, while, as, until)
↓ NO
③ YES

2 instances of temporal words (that are often used in complex sentences)
(when, after, before, while, as, until)
↓ NO
② YES

1 instance of a temporal word (that is often used in complex sentences)
(when, after, before, while, as, until)
↓ NO
① YES

CAUSAL TIES

3 + instances of causal words (that are often used in complex sentences)
(because, so (that), since, unless, although, even though)
↓ NO
③ YES

2 instances of causal words (that are often used in complex sentences)
(because, so (that), since, unless, although, even though)
↓ NO
② YES

1 instance of a causal word (that is often used in complex sentences)
(because, so (that), since, unless, although, even though)
↓ NO
① YES

DIALOGUE

2 + instances of dialogue; either 2 speakers or 2 separate instances of the same speaker
↓ NO
② YES

1 instance of dialogue
↓ NO
① YES

SENTENCE COMPLEXITY SCORE: _____

NARRATIVE DISCOURSE

CHARACTER

Retell

OR

Generation

YES

3

proper noun for main character's name (or approximation) and a proper or general noun for 1+ secondary character (e.g., John and his mom)
OR
general nouns for main character and 3+ secondary characters
FWAY: (e.g., boy, dog, frog, bees, gopher, owl)
↓ NO

YES

3

personal generation first person pronoun and proper noun (e.g., I & John)
fictional generation 2+ proper nouns (e.g., John & Miguel)
↓ NO

YES

2

personal generation first person pronoun and general noun (e.g., I and boy, me and my mom)
fictional generation 1 proper noun (e.g., John)
↓ NO

YES

2

proper noun for main character's name (or approximation) without secondary characters (e.g., John)
OR
general nouns for main character and 1-2 secondary characters
FWAY: (e.g., boy, dog, frog)
↓ NO

YES

1

personal generation first person pronoun or general noun (e.g., I or boy)
fictional generation general noun (e.g., boy)
↓ NO

YES

1

general noun only for main character (e.g., boy, sister, bird)
↓ NO

YES

1

no character/only pronoun(s) (e.g., he, she, it)
↓ NO

YES

0

fictional generation no character/only pronoun(s) (e.g., he, she, it)
↓ NO

SETTING

all of following explicitly stated: time, activity, location

YES

3

FWAY: (e.g., night/morning + sleeping/wake up + bedroom)
Gen: (e.g., today + skateboarding + park)
↓ NO

YES

2

2 of following explicitly stated: time, activity, location
FWAY: (e.g., night/morning + bedroom, sleeping/wake up + bedroom)
Gen: (e.g., today + skateboarding, skateboarding + park)
↓ NO

YES

1

1 of following: time, activity, location
FWAY: (e.g., night/morning + bedroom)
Gen: (e.g., today, skateboarding)
↓ NO

YES

1

incomplete or unclear setting-like info
FWAY: (e.g., boy in there, in bed, on the rock)
Gen: (e.g., me and my brother the skateboard, on the trampoline)
↓ NO

YES

1

PROBLEM

2+ complete and clear

YES*

4

FWAY: (e.g., frog is gone)
Gen: (e.g., was falling off the skateboard)
↓ NO

incomplete or unclear
FWAY: (e.g., no frog)
Gen: (e.g., couldn't do it)
↓ NO

YES

2

implied
FWAY: (e.g., he wanted the frog)
Gen: (e.g., needed board/sid)
↓ NO

YES

1

0

PLAN/ATTEMPT

2+ complete and clear by main character or storyteller

YES*

4

FWAY: (e.g., boy looked for frog)
Gen: (e.g., I asked brother to help me skateboard, I decided to get brother's help)
↓ NO

complete and clear by secondary character
FWAY: (e.g., dog looked for frog)
Gen: (e.g., brother helped me skateboard, brother decided to help me skateboard)
↓ NO

YES*

3

incomplete or unclear by any character
FWAY: (e.g., he went outside)
Gen: (e.g., I talked to my brother, I made a plan)
↓ NO

YES

2

plan/action not related to problem
FWAY: (e.g., he called to his dog)
Gen: (e.g., I took a picture, I decided to take a picture)
↓ NO

YES

1

If the story has 3+ episodic elements, does it have acceptable sequence?
↓ NO

YES

2

CONSEQUENCE

2+ complete and clear related to attempt or problem

YES*

4

FWAY: (e.g., boy found his frog)
Gen: (e.g., brother held my hand to help me)
↓ NO

incomplete or unclear related to attempt or problem
FWAY: (e.g., he got it)
Gen: (e.g., I got help)
↓ NO

YES

2

consequence-like info not related
FWAY: (e.g., his dog came to him)
Gen: (e.g., my mom liked it)
↓ NO

YES

1

0

ENDING

complete and clear

YES*

2

FWAY: (e.g., he took baby frog home)
Gen: (e.g., I had fun skateboarding)
↓ NO

incomplete or unclear
FWAY: (e.g., he went home)
Gen: (e.g., I did it)
↓ NO

YES

1

EMOTION

2 different emotions
FWAY/Gen: (e.g., sad + happy)

YES

3

1 emotion
FWAY/Gen: (e.g., sad)
↓ NO

general emotion or emotional behavior
FWAY/Gen: (e.g., liked it) or (cried)
↓ NO

YES

1

0

* EPISODE COMPLEXITY

(ONLY SHADED POINTS qualify for episode complexity score)

3 + 3	3 + 2	2
4 + 2 or 4 + 3 or 4 + 4 or 3 + 3 + 2	3 + 3 + 3 + 2	3
4 + 3 + 2 or 3 + 3 + 3	3 + 3 + 3	4
4 + 3 + 3 or 3 + 3 + 3 + 2	3 + 3 + 3 + 2	5
4 + 4 + 3 or 4 + 3 + 3 + 2	4 + 3 + 3 + 2	6
4 + 4 + 4 or 4 + 4 + 3 + 2	4 + 4 + 3 + 2	7
4 + 4 + 4 + 2	4 + 4 + 4 + 2	8

NARRATIVE DISCOURSE SCORE:

(include sequence & episode complexity)

APPENDIX B

ELM Flowchart

ELM Flowchart

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Child Name/ID#: _____
 Grade: _____ Teacher: _____
 School: _____
 Examiner/Transcriber/Scorer: _____

YEAR MO DAY
 Date Tested: _____
 Date of Birth: _____
 Child's Age: _____

Sampling Context:
 Check all that apply
☐ Oral
☐ Written
☐ Generation
☐ Retell
☐ With pictures
☐ Without pictures
☐ Other: _____

Sentence Complexity Score: _____
 Expository Discourse Score: _____
 Punctuation Score: _____
 Capitalization Score: _____
 Average Word Rating: _____

TOTAL SCORE:
 (SC + EC)

WRITING CONVENTIONS (OPTIONAL)

PUNCTUATION	CAPITALIZATION	SPELLING
Number of words written	Number of words written	Sum of word ratings
Number of errors	Number of errors	Number of words written
PUNCTUATION SCORE Subtract number of errors from total number of words written.	CAPITALIZATION SCORE Subtract number of errors from total number of words written.	AVERAGE WORD RATING Divide the sum of word ratings by the total number of words written.
Calculate Errors Add up punctuation errors (up to 3 for each type) for when punctuation was needed and was used incorrectly (0 = not needed)	Calculate Errors Add up capitalization errors (up to 3 for each type)	Rating Scale Rate each word in the written sample using the rubric below
Period at end of sentence 0 1 2 3	Lowercase for regular word 1 2 3	① Unconventional symbol. Contains vertical line, dot, circle instead of letter or number.
Question mark 0 1 2 3	Uppercase I 1 2 3	② Conventional symbol. Contains at least one red letter or number, but is misspelled as a word. Examples: "4", "7", "15", "83".
Apostrophe 0 1 2 3	Uppercase for first word of sentence 1 2 3	③ Phonemic representation. Contains one or more letters that are phonetically related to a recognizable word. Examples: "th" for bird, "f" for one.
Quotation mark 0 1 2 3	Uppercase for proper names 1 2 3	④ Invented spelling. Contains two or more letters that represent parts of the phonemes of a recognizable word. Examples: "lir" for bird, "gaf" for girl.
Comma in a list 0 1 2 3	Uppercase for holidays, days, and months 1 2 3	⑤ Conventional spelling. Spelled correctly.
	Uppercase for acronyms 1 2 3	

SENTENCE COMPLEXITY

RELATIVE PRONOUNS	VERB/NOUN MODIFIERS	VOCABULARY	TEMPORAL TIES	CAUSAL TIES	TRANSITIONS
3+ instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., <i>Monkeys</i> <i>live</i> in trees that have enough leaves to digest them.)	1+ instances of 2 consecutive descriptive modifiers (e.g., <i>a large, fat monkey</i>) OR 2+ instances of single descriptive modifiers before a verb or a noun (e.g., <i>The large monkeys</i>) OR 2+ instances of single descriptive modifiers after a verb (e.g., <i>Monkeys on food in the trees</i>)	3+ less-common domain-specific words related to the topic (e.g., <i>their natural habitat</i> , they change their form during metamorphosis.)	3+ instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	3+ instances of causal words (that are often used in complex sentences) (because, so, then, since, unless, although, even though)	2+ instances of transition words/phrases (e.g., <i>therefore</i> , <i>similarly</i> , <i>as a result</i> , <i>however</i> , <i>for example</i> , <i>likewise</i> , <i>in contrast</i>)
2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., <i>Many crocodiles live in rivers that have enough leaves to digest them.</i>)	1 instance of single descriptive modifier before a verb or a noun (e.g., <i>The large monkeys</i>) OR 2+ instances of single descriptive modifiers after a verb (e.g., <i>Monkeys on food in the trees</i>)	2 less-common domain-specific words related to the topic (e.g., <i>do it</i>)	2 instances of temporal words (that are often used in complex sentences)	2 instances of causal words (that are often used in complex sentences) (because, so, then, since, unless, although, even though)	1 instance of a transition word/phrase
1 instance of relative pronoun immediately after a noun (that, who, which, who's) (e.g., <i>Early humans began building cities, which allowed them to stay in one place.</i>)	1 instance of single descriptive modifier after a verb (e.g., <i>Monkeys swing easily in the trees.</i>)				
YES 3 NO 2 NO 1 0	YES 3 NO 2 NO 1 0	YES 3 NO 2 NO 1 0	YES 3 NO 2 NO 1 0	YES 3 NO 2 NO 1 0	YES 4 NO 3 NO 2 NO 1 0

EXPOSITORY DISCOURSE

INFORMATION UNITS	MAIN IDEA	DEFINITIONS & EXAMPLES	PASSAGE COHERENCE	CONCLUDING STATEMENT
Check or slash numbers below for each information unit in the sample. Refer to the scoring manual for detailed instructions for scoring information units. Unit = a clause, containing a subject and a verb, that conveys one piece of information, whether or not it is true or accurate. e.g., <i>Tigers are carnivores (1). You want to stay away from them (2). When tigers stroll through the jungle (3), they carefully search for their next meal (4). Besides food, they look for shelter (5).</i>	Does the passage have a complete and clear main idea directly related to the pictures/topic or from model passage? (e.g., <i>Carpenter bees turn into butterflies during metamorphosis.</i>)	Use of at least 1 definition AND Use of at least 1 example (e.g., <i>Flora refers to the plants that live in an area. In desert climates, the flora includes a variety of cacti.</i>)	A main idea is stated and all information units support the main idea	Does the passage have a concluding statement?
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	YES NO YES NO YES NO YES NO	YES NO YES NO YES NO YES NO	YES NO YES NO YES NO YES NO	YES NO YES NO YES NO YES NO
The total number of information units included in the sample is the Expository Discourse Score.				
EXPOSITORY DISCOURSE SCORE:				

Use the non-scored information above to provide feedback to the student about their passage quality and cohesion and the space here to take notes about expository discourse instruction and intervention.

ELM Flowchart
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WRITING CONVENTIONS (OPTIONAL)

Child Name/ID#: _____

Grade: _____ Teacher: _____

School: _____

Examiner/Transcriber/Scorer: _____

YEAR MO DAY

Date Tested				
Date of Birth				
Child's Age				

Sampling Context:

Check all that apply

☐ Oral

☐ Written

☐ Generation

☐ Retell

☐ With pictures

☐ Without pictures

☐ Other: _____

Capitalization Score: _____

Average Word Rating: _____

TOTAL SCORE:
(SC + ED)

PUNCTUATION

Number of words written _____

Number of errors ➔ _____

PUNCTUATION SCORE

Subtract number of errors from total number of words written.

Calculate Errors

Add up punctuation errors (up to 3 for each type) for when punctuation was needed and was used incorrectly (0 = not needed)

Period at end of sentence

① ① ② ③

Question mark

① ① ② ③

Apostrophe

① ① ② ③

Quotation mark

① ① ② ③

Comma in a list

① ① ② ③

CAPITALIZATION

Number of words written _____

Number of errors ➔ _____

CAPITALIZATION SCORE

Subtract number of errors from total number of words written.

Calculate Errors

Add up capitalization errors (up to 3 for each type)

Lowercase for regular word

① ② ③

Uppercase I

① ② ③

Uppercase for first word of sentence

① ② ③

Uppercase for proper names

① ② ③

Uppercase for holidays, days, and months

① ② ③

Uppercase for acronyms

① ② ③

SPELLING

Sum of word ratings _____

Number of words written ➔ _____

AVERAGE WORD RATING

Divide the sum of word ratings by the total number of words written.

Rating Scale

Rate each word in the written sample using the rubric below

① Unconventional symbol. Contains vertical line, dot, circle instead of letter or number.

② Conventional symbol. Contains at least one real letter or number, but is unrecognizable as a word. Examples: "q", "p", "1", "5", "B3n"

③ Phonetic representation. Contains one or more letters that are phonetically related to a recognizable word. Examples: "bd" or "bd" for bird, "r" for are

④ Invented spelling. Contains two or more letters that represent most of the phonemes of a recognizable word. Must have a vowel and be easy to figure out. Examples: "br" for bird, "gol" for girl

⑤ Conventional spelling. Spelled correctly.

SENTENCE COMPLEXITY

RELATIVE PRONOUNS

3 + instances of relative pronouns immediately after nouns

(that, who, which, who's) (e.g., *Monkeys, who are agile creatures, swing in the trees.*)

YES ③

2 instances of relative pronouns immediately after nouns

(that, who, which, who's) (e.g., *Many snakes live in trees that have enough leaves to disguise them.*)

YES ②

1 instance of relative pronoun immediately after a noun

(that, who, which, who's) (e.g., *Early humans began building cities, which allowed them to stay in one place.*)

YES ①

VERB/NOUN MODIFIERS

1 + instances of 2 consecutive descriptive modifiers

(e.g., *a large dirty monkey*) OR 2+ instances of single descriptive modifiers before a verb or a noun

(e.g., *Monkeys are found in the tall trees. We easily swing from limb to limb.*)

YES ③

1 instance of single descriptive modifier before a verb or a noun

(e.g., *The large monkeys*) OR 2+ instances of single descriptive modifiers after a verb

(e.g., *Monkeys can climb quickly.*)

YES ②

1 instance of single descriptive modifier after a verb

(e.g., *Monkeys swing easily in the trees.*)

YES ①

VOCABULARY

3 + less-common domain-specific words related to the topic

(e.g., *their natural habitat; they change their form during metamorphosis.*)

YES ③

2 less-common domain-specific words related to the topic

(e.g., *high body temperature; they grow eggs*)

YES ②

1 less-common domain-specific word related to the topic

(e.g., *trash goes to landfills*)

YES ①

TEMPORAL TIES

3 + instances of temporal words (that are often used in complex sentences)

(when, after, before, while, as, until)

YES ③

2 instances of temporal words (that are often used in complex sentences)

(when, after, before, while, as, until)

YES ②

1 instance of a temporal word (that is often used in complex sentences)

(when, after, before, while, as, until)

YES ①

CAUSAL TIES

3 + instances of causal words (that are often used in complex sentences)

(because, so (that), since, unless, although, even though)

YES ③

2 instances of causal words (that are often used in complex sentences)

(because, so (that), since, unless, although, even though)

YES ②

1 instance of a causal word (that is often used in complex sentences)

(because, so (that), since, unless, although, even though)

YES ①

TRANSITIONS

2 + instances of transition words/phrases

(e.g., *therefore, similarly, as a result; however, for example, likewise, in contrast*)

YES ④

1 instance of a transition word/phrase

(e.g., *therefore, similarly, as a result; however, for example, likewise, in contrast*)

YES ②

SENTENCE COMPLEXITY SCORE: _____

EXPOSITORY DISCOURSE

INFORMATION UNITS

Check or slash numbers below for each information unit in the sample. Refer to the scoring manual for detailed instructions for scoring information units.

Unit = a clause, containing a subject and a verb, that conveys one piece of information, whether or not it is true or accurate.

e.g., Tigers are carnivores (1). You want to stay away from them(2). When tigers stroll through the jungle (3), they carefully search for their next meal(4). Besides food, they look for shelter (5).

- | | | | | |
|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 |
| 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 |

The total number of information units included in the sample is the Expository Discourse Score.

EXPOSITORY
DISCOURSE SCORE:

MAIN IDEA

Does the passage have a complete and clear main ideas directly related to the pictures/topic or from model passage?
(e.g., Caterpillars turn into butterflies during metamorphosis.)

YES ☐ NO ☐

Does the passage have a complete and clear main idea directly related to the pictures/topic or from model passage?
(e.g., Humans have five senses to help them learn about the world.)

YES ☐ NO ☐

Does the passage have an incomplete or unclear main idea?
(e.g., Tigers live in the jungle.)

YES ☐ NO ☐

DEFINITIONS & EXAMPLES

Use of at least 1 definition AND Use of at least 1 example
(e.g., Flora refers to the plants that live in an area. In desert climates, the flora includes a variety of cacti.)

YES ☐ NO ☐

Use of a definition OR Use of an example
(e.g., Flora refers to the plants that live in an area.)
(e.g., Monkeys and gorillas are some of the fauna living in jungles.)

YES ☐ NO ☐

Use of an incomplete or unclear definition or example
(e.g., It means the animals.)

YES ☐ NO ☐

PASSAGE COHERENCE

A main idea is stated and all information units support the main idea

YES ☐ NO ☐

There is no main idea but most or all of the information units are about the same topic OR A main idea is stated and some of the information supports it

YES ☐ NO ☐

There is no main idea and only some of the information units are about the same topic

YES ☐ NO ☐

CONCLUDING STATEMENT

Does the passage have a concluding statement?

YES ☐ NO ☐

EXPOSITION TYPE

What type of exposition best fits this sample?

- ☐ How To
- ☐ Description
- ☐ Sequence
- ☐ Comparison
- ☐ Cause/Effect
- ☐ Problem/Solution
- ☐ _____

Use the non-scored information above to provide feedback to the student about their passage quality and cohesion and the space here to take notes about expository discourse instruction and intervention.

APPENDIX C

ALPS Less-Common Domain-Specific Word List

algae	gills	poison
allergy/ies	habitat	pollute/tion
alpha	harvest/ed/ing	precipitation
Arctic	hatch	predator
amphibious/ian	helium	prehistoric
bacteria	herbivore/s	prey
bioluminescence	hibernate	protein
blubber	hydrate	pupa
camouflage	hygiene	pupil
canopy (within the context of a forest)	inhale	recycle/ing/able
carnivore/s	immune system	reproduce/tion
cartilage	in/vertebrate	reptile/s
chemical/s	Jurassic (any prehistoric time period)	reservoir
chrysalis	landfill/s	roots
cocoon	larva	sapling
compost	life cycle	scavenger
condensation	litter	scientific names of animals
creature/s	mammal(s)	scientist (any type)
currents (ocean)	mammoth	sense (only if “five” is NOT preceding it)
crop/s	mature	shelter
decompose	metamorphosis	skull
degrade	meteor	sodium
digest/ion	migrate/s	soil
dumpster	mineral/s	sound wave
earth	molecule/s	spawn
echolocation	molt	species
ecosystem	nectar	spore/s
embryo	nocturnal	sprout
endangered	nutrient/s	surface
environment	ocean zones (sunlight, twilight & midnight)	survive
evaporate	omnivore	tadpole
exercise	organ/s	tentacles
exhale	organism/s	thorax
expedition	oxygen	toxin/s
experiment	particle/s	translucent
extinct/ion	pasture/s	universe
fatigue	photosynthesis	vegetation
features	plankton	virus
fertilize	pollen	vitamin/s
fungi	pollinator/cross-pollinator	waste
gas/es	pollywog	
germinate		