CUBED™3
Decoding. Language. Reading.

A family of screening and progress monitoring tools that accurately, reliably, and efficiently measure ALL the strands of Scarborough's Rope

NLM Narrative Language Measures

NLM: READING	NLM: LISTENING
• **NLM Retell** Narrative Discourse Expository Discourse Episode Complexity Sentence Complexity Vocabulary Complexity	• **NLM Retell** Narrative Discourse Expository Discourse Episode Complexity Sentence Complexity Vocabulary Complexity
• **NLM Questions** Factual Inferential Vocabulary Inferential Reasoning	• **NLM Questions** Factual Inferential Vocabulary Inferential Reasoning
• **Reading Fluency** Decoding Fluency Accuracy Prosody Rating	• **Personal Generation**
• **Personal Writing Generation**	

DDM Dynamic Decoding Measures

PHONEMIC AWARENESS	PHONEME MANIPULATION	ORTHOGRAPHIC MAPPING
• Phoneme Segmentation • Phoneme Blending • First Sounds • Continuous Phoneme Blending	• Phoneme Deletion • Phoneme Addition • Phoneme Substitution	• Irregular Words • Letter Sounds • Letter Names

DECODING INVENTORY

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

About CUBED-3:

- **Serves as benchmark assessment and progress monitoring measure**
- **Identifies students in need of more intensive decoding, language, decoding fluency, or writing intervention**
- **Quick and efficient to administer and score**
- **Plays an integral role in a multi-tiered system of support focusing on both decoding and language**
- **Evaluates the effectiveness of interventions**
- **For preschool – eighth grade**
- **Subscribe to Digital CUBED-3 or download the paper/pencil version for FREE**

CUBED™-3 is primarily designed to be a criterion-referenced universal benchmarking and progress monitoring assessment. It validly, reliably, and efficiently measures the constructs of decoding and language comprehension, and their product, reading for students in preschool through eighth grade. The results of CUBED-3 can directly inform instruction and provide information on a student's modifiability and zone of proximal development.
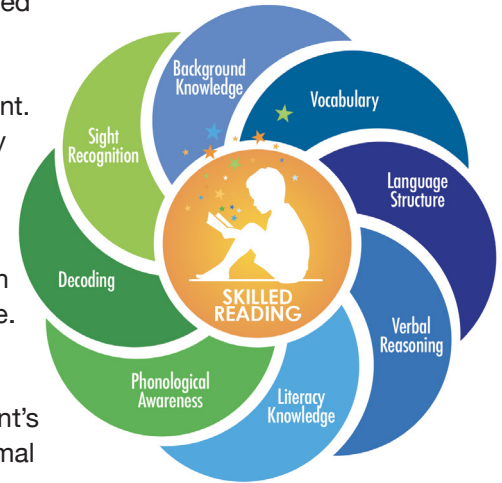
There are two main subtests of CUBED-3 – the Narrative Language Measures (NLM) and the Dynamic Decoding Measures (DDM), which together measure 41 targets so you can capture the FULL picture of your student's literacy!

Narrative Language Measures (NLM)

The NLM subtests of CUBED-3 are designed to measure a student's ability to comprehend and produce complex, academic language. Students are asked to read or listen to a brief narrative, and then retell that narrative. Narrative retells incorporate listening comprehension, cognition, memory, and expressive language skills. Additional sections of the NLM allow for the examination of reading fluency (rate and accuracy), reading comprehension, story grammar comprehension, inferential word learning or word use, inferential reasoning, and writing.

Dynamic Decoding Measures (DDM)

The DDM subtests of CUBED-3 are designed to measure word recognition-related skills. The DDM includes four subtests (*Phonemic Awareness, Phoneme Manipulation, Orthographic Mapping*, and *Decoding Inventory*) which use a 'testing the limits' dynamic assessment approach to identify a student's current level of performance. 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.

Language Dynamics GROUP

CUBED-3 Research Review

RELIABILITY

Inter-Rater Reliability. For inter-rater reliability, two independent examiners should assign similar scores to the same student response. 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.

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%) ★★★

VALIDITY

Concurrent Validity. Evidence of validity can be derived by examining the relationship between CUBED-3 and the results of other assessments administered at approximately the same time. This examination is designed to demonstrate the extent that CUBED-3 results are comparable to results from previously validated instruments that measure similar constructs. Six research studies with 1,146 preschool through 3rd grade students examined evidence of concurrent validity comparing CUBED-3 NLM Listening Retell highest score to scores from several criterion measures of language. We also compared CUBED-3 composite scores to the Measures of Academic Progress (MAP) assessment. The majority of these comparisons, presented in correlation coefficients, offer strong evidence of concurrent, criterion-related validity for CUBED-3.

NLM Listening - Criterion Measure	n	r
MAP RIT Score	1,146	.88 ★★★
MAP Foundational Skills	566	.79 ★★★
MAP Language and Writing	1,143	.85 ★★★
MAP Information and Literature	566	.74 ★★★
MAP Vocabulary Use and Functions	1,143	.83 ★★★
Curriculum-Based Assessment for Writing	86	.69 ★★★
Frog Where Are You? Episode Complexity	50	.69 ★★★
Frog Where Are You? MLU	112	.63 ★★
Frog Where Are You? Subordination Index	166	.44 ★
Information Retell (Expository)	917	.68 ★★

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)

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

Sensitivity and Specificity. We examined the predictive validity of CUBED-3. Sensitivity in this case represents the extent to which CUBED-3 accurately identified students who were at risk, and specificity refers to the extent to which CUBED-3 accurately identified students who were not at risk.
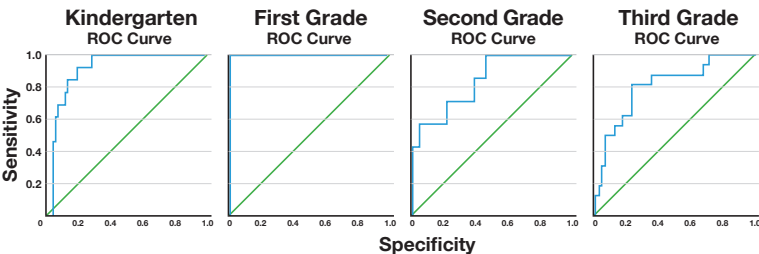
CUBED-3 Third Grade BOY Assessment		
EOY Reading Criterion Measure	**Sensitivity**	**Specificity**
PAWS (end of year) Below Basic = At Risk	**100%** ★★★	**83%** ★★★

BOY CUBED-3 Word Recognition & Language Measures and predicting Fifth Grade WYTOPP State Reading Assessment				
	R²	**AUC**	**Sensitivity**	**Specificity**
Kindergarten	.41	.89	**85%** ★★★	**85%** ★★★
First Grade	1.00	1.00	**100%** ★★★	**100%** ★★★
Second Grade	.43	.86	**86%** ★★★	**71%** ★★
Third Grade	.25	.80	**81%** ★★★	**76%** ★★

Kindergarten ROC Curve · **First Grade** ROC Curve · **Second Grade** ROC Curve · **Third Grade** ROC Curve (Sensitivity vs. Specificity)