CUBED

Decoding. Language. Reading.

# multi-dimensional literacy assessment

- Decoding ☑
- Language ☑
- Reading ☑
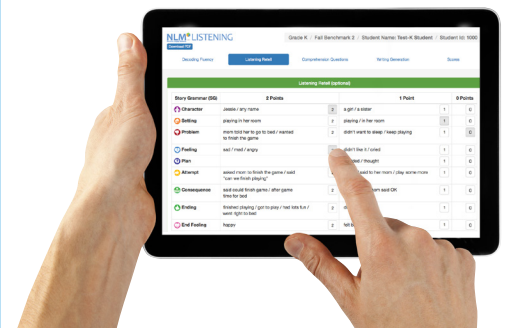- Comprehension ☑
- Vocabulary ☑
- Writing ☑

Are you getting the FULL PICTURE?

Reading ability is the product of decoding and language skills. Many students experience difficulty with language and/or decoding, creating a condition where students are struggle while learning to read. In the DDM subtest, CUBED pinpoints students' phonological awareness and decoding skills so that targeted intervention can begin immediately. CUBED also accurately and reliably assesses comprehension through listening and reading retells from the NLM subtests. Comprehension questions probe students' vocabulary and inferential skills. Scores are compared to benchmark standards for screening and educators can monitor students' progress over time.

Decoding

Language

Reading
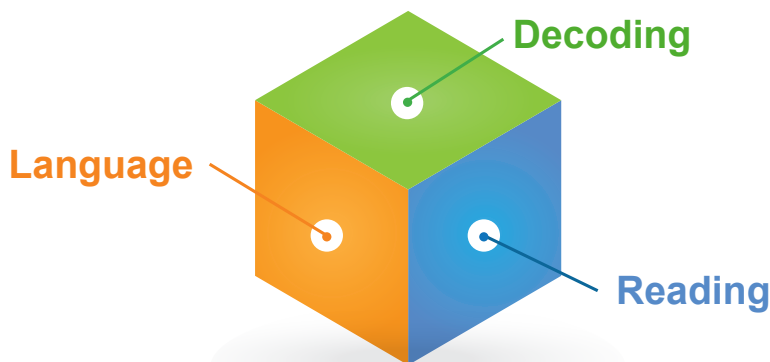
Highlights of the CUBED:

- Serves as a universal screener and progress monitoring assessment

- Identifies students in need of more intensive phonological awareness, decoding, language, or writing intervention

- Quick and easy to administer and score

- Designed for use within multi-tiered systems of supports

- Can be administered digitally through CUBED Insight or downloaded for free

Language Dynamics GROUP

Available at www.LanguageDynamicsGroup.com

NLM Narrative Language Measures

CUBED assesses a variety of literacy skills in the context of narratives, which are highly relevant for school assessment and instruction. The Narrative Language Measures (NLM) include a set of measures to assess listening comprehension and one for measuring reading comprehension. The NLM Listening assesses retelling, comprehension questions, definitional vocabulary, and personal generation while the NLM Reading assesses decoding fluency, retelling, comprehension questions, definitional vocabulary, and narrative writing.

NLM LISTENING

- **Expressive Language**
  Using the optional personal generation section, expressive language can be elicited, transcribed, and analyzed.

- **Listening Comprehension**
  Listening comprehension is measured through story retells as well as questions about the story.

- **Inferential Word Learning**
  Definitional vocabulary questions reflect students' ability to determine the meaning of words through context.

- **Proxy for Reading Comprehension**
  Because listening and reading comprehension are the same construct, the NLM Listening measures reading comprehension before students can decode.

Grades: PreK – 3rd Grade

NLM READING

- **Decoding Fluency**
  Across each grade level, all decoding fluency passages have the exact same lexile score, and are parallel in length, story structure and linguistic features.

- **Reading Comprehension**
  Allows for a comparative analysis of reading comprehension against the listening comprehension (NLM Listening).

- **Pinpoint Intervention Focus**
  The NLM Reading helps educators determine if a students needs decoding or language focused intervention.

- **Writing**
  Using the optional personal writing generation section, students' writing can be elicited and scored.

Grades: 1st – 3rd Grade

DDM Dynamic Decoding Measures

CUBED assesses decoding and foundational code skills using the Dynamic Decoding Measures (DDM), which is comprised of three dynamic assessments with multiple levels (targets). The DDM uses a 'testing the limits' or 'test-teach-retest' dynamic assessment approach to identify a student's current level of performance and learning potential for phonemic awareness, identification of words, letters, and sounds, and nonsense word decoding.

test → teach → test
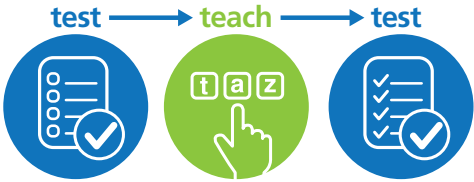
- **Innovative Dynamic Assessment**
  Graduated prompting procedures help identify a student's zone of proximal development.

- **Pinpoint Intervention Targets**
  Educators need to know more than just who needs intervention. The various targets in the DDM also help educators know what to focus on in intervention.

DDM PHONEMIC AWARENESS

Child/ID: _____ Teacher: _____ School: _____ Examiner: _____

PHONEMIC AWARENESS
- **Phoneme Segmentation**
- **First Sounds**
- **Phoneme Blending**

TARGET 1: Phoneme Segmentation

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/."**

Say: **"Let's try a different one: Tell me all the sounds in 'map'."**
- If student clearly separates each sound in 'map', (/m/ /a/ /p/), you say, **"That's right. The sounds in 'map' are /m/ /a/ /p/."**
- If student gives other response, or does not clearly separate sounds, say, **"The sounds in 'map' are /m/ /a/ /p/. Try it again. Tell me all the sounds in 'map'."**

Say: **"OK. Lets do some more."** Begin the test, starting with 'so'.

Corrective Prompt (as needed): **"Say all the sounds in the word, not the letter names."** Mark as incorrect, then go to next word.

Have the student tell you the sounds in each of the following words. Circle the correct sounds (ⓢ/ⓣ) or circle the number of sounds said correctly (ⓞ) for each word.

⊘ **Discontinue Rule:** If the student does not say all the sounds in *three consecutive* words, STOP and administer Target 2.

Next Target: If student's score is not at benchmark, go to Target 2 (see Benchmark table)

Prompt for each word: **"Tell me all th..."**

		0	1	2	3	4
so	/s/					
key	/k/					
pain	/p/ /ai/ /n/					
dog	/d/					
bought	/b/					
gas	/g/ /a/ /s/	0	1	2	3	
last	/l/ /a/ /s/ /t/	0	1	2	3	4
spice	/s/ /p/ /ie/ /s/	0	1	2	3	4
blame	/b/ /l/ /ai/ /m/	0	1	2	3	4
pest	/p/ /e/ /s/ /t/	0	1	2	3	4

TOTAL CORRECT PHONEMES /32

TARGET 2: First Sounds

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

Say: **"Say the first sound in 'mat' with me (/mmm/)."**

Say: **"What is the first sound you hear in the word 'mat'?"** Correct if necessary.

Say: **"That's right, /mmm/ is the first sound in the word 'mat'."**

Say: **"Now I'm going to say some more words. You tell me the first sound you hear in each word."**

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

Have the student tell you the first sound in each of the following words. Circle the correct score to the right of the word (see Scoring Key below).

⊘ **Discontinue Rule:** If student scores 0 on *four consecutive* words, STOP and administer Target 3.

Next Target: If student's score is 17 or lower, go to Target 3.

Prompt for each word: **"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

SCORING KEY

First Sound Correct	2
First & Second Sounds Together	1
Incorrect	0

TOTAL SCORE /20

TARGET 3: Phoneme Blending

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. ssssuuunnn."** Student says, 'sun'. Correct if necessary.

Say: **"Now I'm going to say more words the slow way. You say the words fast."** (No Corrective Prompt)

Have the student say the word fast after you say it slowly. Continuous sounds (e.g., /m/) should be sounded out for approximately 2 seconds. Circle the correct score to the right of the word (see Scoring Key below).

Prompt for each word: **"I say the word slow, you say it fast."**

rain	0	1	2
sin	0	1	2
moose	0	1	2
main	0	1	2
snow	0	1	2

SCORING KEY

Entire Word Fast	2
Part of Word Fast	1
Incorrect	0

TOTAL SCORE /10

Benchmark

Grade	Benchmark Period	Phoneme Segmentation
Preschool	Spring	13
Kindergarten	Fall	27
Kindergarten	Winter	28
Kindergarten	Spring	29
First Grade	Fall, Winter, Spring	29

DDM WORD IDENTIFICATION

Child/ID: _____ Teacher: _____ School: _____ Examiner: _____

WORD ID
- **Irregular Words**
- **Letter Sounds**
- **Letter Names**

TARGET 1: Irregular Words

Display corresponding Irregular Words from stimulus book.

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

⊘ **Discontinue Rule:** If student reads *five consecutive* words incorrectly, STOP and go to Target 2.

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

Put a slash / through words read, for 3 seconds, say the word, ma

the	a	to	his
said	she	do	he
like	what	were	is
how	of	this	find
from	into	who	go
good	all	no	there
out	their	off	day	would	see

CORRECT WORDS = 54

TARGET 2: Letter Sounds

Display corresponding Letter Sounds from stimulus book.

Say: **"Letters make sounds."** (Examiner points to the 'A').

Say: **"The sound this letter makes is 'aaa'. Say 'aaa'."**

Say: **"I want you to tell me the sounds these letters make. If you don't know a sound, that is OK. Just keep going."** Point to the first letter - 'h'.

⏱ **Start the 2-minute timer.**
Corrective Prompt (maximum 2 times): **"Tell me the *sound* the letter makes."**

⊘ **Discontinue Rule:** Stop the test after 2 minutes, *or* when the student is finished, *or* it is clear the student does not know letter sounds.

Next Target: If student's score is not at benchmark, go to Target 3 (see Benchmark table).

Put a slash / through incorrect sounds. Any appropriate letter-sounds are correct (e.g., long / short vowels, ga / ja for 'g'). If student pauses 3 seconds, say the sound, mark it incorrect, and point to next letter. Do not score the letter A used in the demonstration.

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

CORRECT SOUNDS = 62

TARGET 3: Letter Names

Display corresponding Letter Names from stimulus book.

Say: **"Letters have names."** (Examiner points to the O on the top left corner of the stimulus page).

Say: **"The name of this letter is 'oa'. Say 'oa'."**

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

Say: **"If you don't know a name, that is OK. Just keep going."** Point to the first letter – 't'.

⏱ **Start the 2-minute timer.**
Corrective Prompt (maximum 2 times): **"Tell me the *name* of the letter."**

⊘ **Discontinue Rule:** Stop the test after 2 minutes, *or* when the student is finished, *or* it is clear the student does not know letter names.

Put a slash / through incorrect letters. If student pauses 3 seconds, say the letter, mark it incorrect, and point to the next letter. Do not score the letter O used in the demonstration.

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	h	23
n	G	u	V	D	C	U	Q	31
W	i	J	O	c	P	S	J	39
L	v	Y	M	y	X	b	s	47
E	K	d	k	T				

CORRECT LETTERS = 52

Benchmark

Grade	Benchmark Period	Irregular Words	Letter Sounds	Letter Names
Preschool	Spring	2	6	14
Kindergarten	Fall	10	36	15
Kindergarten	Winter	12	38	45
Kindergarten	Spring	30	50	47
First Grade	Fall	37	53	
First Grade	Winter	40	55	
First Grade	Spring	42	56	
Second Grade	Fall	46		
Second Grade	Winter	48		
Second Grade	Spring	49		

DDM DECODING

Child/ID: _____ Teacher: _____ School: _____ Examiner: _____

DECODING
- **CVC**
- **CCVC**
- **Silent 'e'**

PRETEST AND POSTTEST INSTRUCTIONS
Display Pretest Words or Posttest Words from the stimulus book.
Say: **"Please read these words. They are not real words."** (Point to each word)

If student refuses to read or struggles at Pretest or Posttest:
Say: **"I can't help you. Just try your best."** or **"What do you think this word is?"** or **"You can guess."** Encourage twice for each word.

HOW TO SCORE:
- Underline sounds read correctly.
- If all three sounds in a word are read correctly (blended or not), score **3 Correct Sounds** and **1 Correct Word.**
- Circle each word if correctly blended
- For Target 2: Initial consonant blends (e.g., 'sp') = 1 correct sound.

TARGET 3: CVC PRETEST   **START HERE**

Display correct Pretest page from stimulus book. Follow instructions above.

maf	paf	saf	taf

CORRECT SOUNDS = 12   **CORRECT WORDS =** 4
\# Blended Words: ___

Next Target: If student reads **2 or more words** correctly on Pretest, Go to Target 2.
Continue if student reads less than 2 words

TARGET 2: CCVC PRETEST

Display correct Pretest page from stimulus book. Follow instructions above.

spen	plet	brev	stek

CORRECT SOUNDS = 12   **CORRECT WORDS =** 4
\# Blended Words: ___

Next Target: If student reads **2 or more words** correctly on Pretest, Go to Target 1.
Continue if student reads less than 2 words

TARGET 1 (Silent 'e') PRETEST

Display correct Pretest page from stimulus book.

nabe	kupe	hize	loke

CORRECT SOUNDS = 12   **CORRECT WORDS =** 4
\# Blended Words: ___

If student **reads 2 or more words correctly** on Pretest, discontinue the test.
Continue if student reads less than 2 words

TARGET 3: TEACH

m-a-f	p-a-f	s-a-f	t-a-f
maf	paf	saf	taf

Display correct Teach page from stimulus book. Teach Script Round 1 with each word, then teach Script Round 2 with each word.

▶ **Script Round 1: Explicit Instruction**
Follow script word for word. Point to each letter/word and have student imitate.
Say: **"I'm going to show you how to read these words."**
Say: **"This letter says 'm'. Say 'm'."**
"This letter says 'a'. Say 'a'."
"This letter says 'f'. Say 'f'."
"Put them together and you get the word 'm-a-f' 'maf'."
"What is this word?"
(Continue teaching all the words using Script 1)

▶ **Script Round 2: Minimal Instruction**
Point to the letter/word and have student imitate the pattern for **each word.**
Say: **"m"** Student says: **"m"**
Say: **"a"** Student says: **"a"**
Say: **"f"** Student says: **"f"**
Say: **"m-a-f"** Student says: **"m-a-f"**
Say: **"maf"** Student says: **"maf"**
(Continue teaching all the words using Script 2)

Circle the intensity of support needed
High | Moderate | Low

TARGET 2: TEACH

sp-e-n	pl-e-t	br-e-v	st-e-k
spen	plet	brev	stek

Display correct Teach page from stimulus book. Teach Script Round 1 with each word, then teach Script Round 2 with each word.

▶ **Script Round 1: Explicit Instruction**
Follow script word for word. Point to each letter(s)/word and have student imitate.
Say: **"I'm going to show you how to read these words."**
Say: **"These letters say 'sp'. Say 'sp'."**
"This letter says 'e'. Say 'e'."
"This letter says 'n'. Say 'n'."
"Put them together and you get the word 'sp-e-n'."
"What is this word?"
(Continue teaching all the words using Script 1)

▶ **Script Round 2: Minimal Instruction**
Point to the letter(s)/word and have student imitate the pattern for **each word.**
Say: **"sp"** Student says: **"sp"**
Say: **"e"** Student says: **"e"**
Say: **"n"** Student says: **"n"**
Say: **"sp-e-n"** Student says: **"sp-e-n"**
Say: **"spen"** Student says: **"spen"**
(Continue teaching all the words using Script 2)

Circle the intensity of support needed
High | Moderate | Low

TARGET 1: TEACH

n-a-b-e	k-u-p-e	h-i-z-e	l-o-k-e
nabe	kupe	hize	loke

Display correct Teach page from stimulus book. Teach Script Round 1 with each word, then teach Script Round 2 with each word.

▶ **Script Round 1: Explicit Instruction**
Point to each letter/word and have student imitate the pattern for each word.
Say: **"This letter is silent 'e'** (point). **It makes this vowel say its name. 'ai'** (point). **Say 'ai'.**
The 'e' (point) **doesn't make a sound."**
"Put these together and you get the word 'n-ai-b' 'nabe'."
"What is this word?"
(Continue teaching all the words using Script 1)

▶ **Script Round 2: Minimal Instruction**
Point to each letter/word and have student imitate the pattern for **each word.**
Say: **"n"** Student says: **"n"**
Say: **"ai"** Student says: **"ay"**
Say: **"b"** Student says: **"b"**
Say: **"n-ai-b"** Student says: **"n-ai-b"**
Say: **"nabe"** Student says: **"nabe"**
(Continue teaching all the words using Script 2)

Circle the intensity of support needed
High | Moderate | Low

TARGET 3: POSTTEST

Display correct Posttest page from stimulus book. Say: **"Please read these words."**

saf	taf	maf	paf

CORRECT SOUNDS = 12   **CORRECT WORDS =** 4
\# Blended Words: ___
(Discontinue test after Posttest. Do not go to Target 2)

TARGET 2: POSTTEST

Display correct Posttest page from stimulus book. Say: **"Please read these words."**

brev	stek	spen	plet

CORRECT SOUNDS = 12   **CORRECT WORDS =** 4
\# Blended Words: ___
(Discontinue test after Posttest. Do not go to Target 1)

TARGET 1: POSTTEST

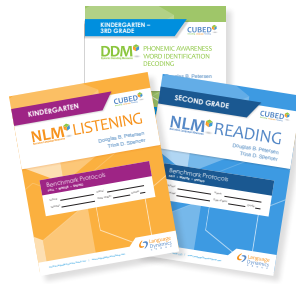Display correct Posttest page from stimulus book. Say: **"Please read these words."**

hize	loke	nabe	kupe

CORRECT SOUNDS = 12   **CORRECT WORDS =** 4
\# Blended Words: ___
(Consider administering the NLM Reading measure)

CUBED
Research Review

CUBED MEASURES	RELIABILITY SCORE
DDM Phonemic Awareness	
Phoneme Segmentation	**96.1%**
First Sounds	**97.4%**
Phoneme Blending	**100%**
DDM Word Identification	
Irregular Words	**95.8%**
Letter Sounds	**97.7%**
Letter Names	**98%**
DDM Decoding	
CVC (pretest sounds)	**99.3%**
CCVC	**94.2%**
Silent 'e'	**96.2%**
NLM Listening	
Real-Time Narrative Retell Scoring	**95%**
Story Questions	**96%**
Vocabulary Questions	**82%**

RELIABILITY

Inter-Rater Reliability. To obtain inter-rater reliability, two independent examiners assign the same scores to the same student responses. This type of reliability is very important especially for the NLM subtests of the CUBED because there is a certain amount of subjectivity involved in scoring a student's language in real-time, despite clear scoring procedures.

SCORE:
≥ 90%
PREFERRED

VALIDITY

Concurrent Validity. Six research studies with 1,146 preschool through 3rd grade students examined evidence of concurrent validity comparing the CUBED NLM Listening Retell highest score to scores from several criterion measures of language. We also compared CUBED 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 the CUBED.

SCORE:
> 70%
VERY STRONG

FALL CUBED SCALED SCORE (Language Composite)		
Criterion Measure	***n***	***r***
Measuring Academic Progress (MAP) Fall		
RIT Score	1,146	**.88 (.78)**
MAP Foundational Skills	566	**.79 (.71)**
MAP Language and Writing	1,143	**.85 (.76)**
MAP Information and Literature	566	**.74 (.66)**
MAP Vocabulary Use and Functions	1,143	**.83 (.74)**

Predictive Validity. To demonstrate the predictive validity of the CUBED, we studied its relationship to the Measures of Academic Progress (MAP) and Wyoming PAWS reading assessments. We report R2 coefficients of determination to indicate the extent to which combinations of CUBED raw scores collected in the fall with 1,512 kindergarten through third grade students were predictive of the MAP assessment in the winter. R2 interpretation is highly dependent upon the testing context.

SCORE:
≥ .10
MEANINGFUL

FALL CUBED SCALED SCORE (Language Composite)		
Criterion Measure	***n***	R^2
NLM:L and NLM:R Predicting MAP RIT	1,512	**.43**
NLM:L/R Vocab and DDM Irregular Words Predicting MAP Vocabulary Use and Functions	1,512	**.55**
All CUBED 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**

Sensitivity and Specificity. We examined the predictive validity of the CUBED for end of year PAWS results. These analyses included data from 71 third grade students attending two different elementary schools in Wyoming. Sensitivity in this case represents the extent to which the CUBED accurately identified students who were at risk on PAWS, and specificity refers to the extent to which the CUBED accurately identified students who were not at risk on PAWS.

SCORE:
≥ 80%
ACCEPTABLE

CUBED 3rd Grade Fall Assessment		
Criterion Measure (End of Year Reading)	*Sensitivity*	*Specificity*
PAWS (end of year) at or Below Basic = At Risk*	**90%**	**73%**
PAWS (end of year) Below Basic = At Risk**	**100%**	**83%**
PAWS (end of year) Below Basic = At Risk***	**75%**	**76%**

For more information or a full list of research articles, visit LanguageDynamicsGroup.com