

CUBED

Decoding. Language. Reading.



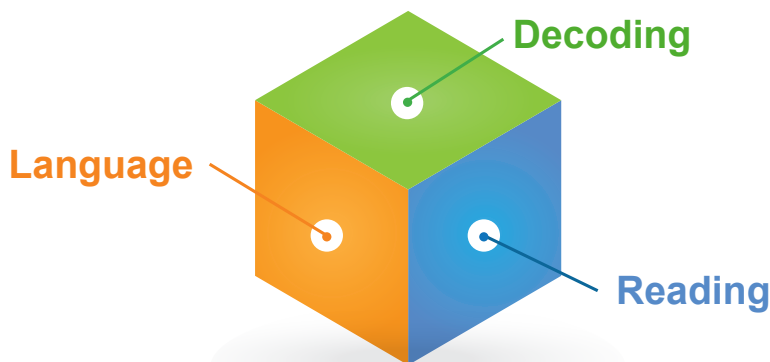
multi-dimensional literacy assessment

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



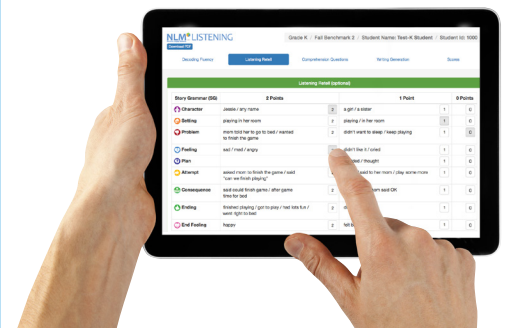
Are you getting the FULL PICTURE?

Reading ability is the product of decoding and language skills. Many students experience difficulty with language and/or decoding, creating a condition where students 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.



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



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 student's 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

NLM LISTENING
Kindergarten Benchmark: STORY 1
FALL

Child/ID _____
Audio File _____
Examiner _____
Date _____

LISTENING RETELL

Examiner says, "I'm going to tell you a story. Please listen carefully. When I'm done, you are going to tell me the same story. Are you ready?" Examiner reads the story word for word at a moderate pace with normal inflection.

One day, **Scott** was **skateboarding** in a **gigantic** park that was near his house. He liked being at the park. But Scott wasn't having fun. He **kept tumbling off** his skateboard. He was **getting hurt**. Scott was **sad** because he wanted to skateboard. He **decided** to **nicely** ask his brother for help. Then Scott **pleaded** with his **nice, big** brother. He **said**, "I don't know what to do. Please help me. I need help because I keep falling down." Then Scott's brother said, "Sure. I'll help. When you start going, **quickly** clasp my hand." After he held his brother's hand, he **learned** how to skateboard. Scott was **happy** because he **didn't** fall anymore.

Examiner says, "Thanks for listening. Now you tell me that story." After student appears to be done, examiner says, "Are you finished?" Prompts (up to 3x), "It's OK. Just do your best." and/or "I can't help, but you can just tell the parts you remember."

STORY GRAMMAR (SG)		2 POINTS		1 POINT		0		LANGUAGE COMPLEXITY (LC)			EPISODE (E)		
Character	Scott / any name	2	a boy / the boy	1	0	because	1	2	3	P+A (from green 2 point SG)			
Setting	skateboarding in a park / skateboarding by house	2	skateboarding / in park / by house	1	0	when	1	2	3	P+A+C			
Problem	tumbling off skateboard / getting hurt	2 [P]	he fell / not good / can't do it	1	0	after	1	2	3	P+A+C+E			
Feeling	sad / mad / angry	2	didn't like it / cried	1	0	LC SUBTOTAL			E SUBTOTAL				
Plan	-	-	planned / decided	1	0	OTHER TARGETS							
Attempt	asked brother for help / said to brother "help me"	2 [A]	talked to brother	1	0	then							
Consequence	said "sure, I'll help," / learned to skateboard	2 [C]	helped him	1	0	Modified							
Ending	he didn't fall anymore	2 [E]	good job / did good	1	0								
End Feeling	happy / excited	2	felt better / liked it	1	0								
SG SUBTOTAL				/12		LISTENING RETELL SCORE (SG+LC+E)			/21				

STORY QUESTIONS (SQ)		1x		VOCABULARY QUESTIONS (VQ)		1x			
Who was this story about?	2	1	0	QA: Scott kept tumbling off his skateboard. He kept getting hurt. What does tumble mean?	3	2	1		
Where was Scott in the beginning of the story?	2	1	0	QB: Does tumble mean to slide or to fall?	1	0	0		
Why was Scott sad?	2	1	0	QA: Scott pleaded with his brother, so his brother helped him. What does plead mean?	3	2	1		
What did they do to fix the problem?	2	1	0	QB: Does plead mean to play or to talk?	1	0	0		
How did the story end?	2	1	0	QA: Scott's brother told him to clasp his hand. Then he didn't fall. What does clasp mean?	3	2	1		
What will Scott do when he needs to learn to ride a bike?	2	1	0	QB: Does clasp mean to hold or to hit?	1	0	0		
STORY QUESTIONS TOTAL (sq)				/12		VOCABULARY TOTAL (vq)		/9	

PERSONAL GENERATION (Turn on audio recorder). Examiner says, "In this story, Scott fell off his skateboard. Tell me a story about a time when you fell down." If the student doesn't tell a story, encourage the student (up to 3x) to produce a thematically related story. Score the story using the NLM Flow Chart (see Examiner's Manual for details).

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NLM READING
Second Grade Benchmark: STORY 1
FALL

Child/ID _____
Audio File _____
Examiner _____
Date _____

DECODING FLUENCY

Decoding Fluency: Examiner places correct Student Reading Passage in front of student. Examiner says, "Please read this out loud. Do your very best reading. If help you if you need it. When you're done I might ask you to tell me the story." Start timer when student reads first word. Follow along on this form. 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 it 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. Allow student to keep reading & continue timing if Reading Retell is to be administered.

Reading Retell (optional): If student reads less than 40 correct words/minute, use professional judgment whether to administer the Reading Retell measure. The NLM Listening measure can be used to assess listening comprehension in addition to or in place of reading comprehension. To administer the Reading Retell, student reads the entire passage. After student reads entire passage, record total Time. Follow directions below.

#Words in 1 Min _____ - Errors in 1 Min _____ = **DECODING FLUENCY** /120 **Accuracy** % **Prosody** % **Total Time** _____ **Read Entire Story**

Yesterday, **Caleb** was in his classroom doing some math problems. Caleb, who had not studied, was **really** confused. He couldn't do the math because there were **hard** problems. Caleb was **angry**. He needed to do the math. He **decided** to quietly walk over to his **best** friend so that he could ask him for help. He **talked** to his friend, but Caleb's friend didn't understand the math either. Caleb still **didn't** know how to do the math. He was **frustrated**. So then Caleb **decided** to ask his teacher for help. Caleb said, "I can't do this!" Caleb's teacher, a **kind** woman, said, "It's not that mystifying." Then she illustrated how to do it. When he **saw** her do an **extensive, hard** problem, Caleb understood. He **learned**. After he understood the **really** hard problems, he felt **happy** because he **could** easily do the math. He **finished** all the math problems.

Reading Retell (optional): After student reads entire passage, examiner says, "Thanks for reading. Now you tell me that story." While the student retells the story, examiner scores the story for Story Grammar, Language Complexity, and Other Targets (if selected). Episode score is calculated when testing is completed. After student appears to be done, examiner says, "Are you finished?" Acceptable prompts (up to 3x): "It's OK. Just do your best." and/or "I can't help, but you can just tell the parts you remember."

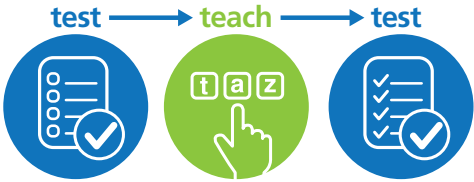
STORY GRAMMAR (SG)		2 POINTS		1 POINT		0		LANGUAGE COMPLEXITY (LC)			EPISODE 1 (E1)		
Character	Caleb / any name	2	a boy / the boy	1	0	because	1	2	3	P+PL (from green 2 point SG)			
Setting	in classroom working on math	2	class / doing math	1	0	when	1	2	3	P+A (from blue 2 point SG)			
Problem	couldn't do math / hard problems	2 [P]	couldn't do it	1	0	so that	1	2	3	P+A+C (from blue 2 point SG)			
Feeling	sad / mad / angry	2	didn't like it / cried	1	0	LC SUBTOTAL			E1 SUBTOTAL				
Plan	decided to ask best friend for help	2 [PL]	decided to get help	1	0	after	1	2	3	EPISODE 2 (E2)			
Attempt	talked to his friend	2 [A]	he didn't	1	0	OTHER TARGETS							
Consequence	friend didn't understand / still couldn't do the math	2 [C]	didn't help / couldn't do it	1	0	Modified							
Emotion-2	sad / mad / frustrated	2	didn't like it / cried	1	0								
Plan-2	decided to ask teacher for help	2 [A2]	talked to teacher	1	0								
Attempt-2	told teacher it was too hard	2 [A2]	talked to teacher	1	0								
Consequence	teacher showed him	2 [C]	she said OK	1	0								
Ending	he understood / he could easily finish	2 [E]	he was OK	1	0								
End Feeling	happy / relieved	2	liked it / smiled	1	0								
SG SUBTOTAL				/22		READING RETELL TOTAL (SG+LC+E1+E2)			/24				

STORY QUESTIONS (SQ)		1x		VOCABULARY QUESTIONS (VQ)		1x			
Who was this story about?	2	1	0	QA: Caleb thought math was mystifying. He didn't understand it. What does mystifying mean?	3	2	1		
Where was Caleb in the beginning of the story?	2	1	0	QB: Does mystifying mean boring or confusing?	1	0	0		
Why was Caleb frustrated?	2	1	0	QA: Teacher illustrated how to do the problem. Caleb watched her. What does illustrate mean?	3	2	1		
How did he first try to fix his problem?	2	1	0	QB: Does illustrate mean to watch or to show?	1	0	0		
Why did he talk to his teacher?	2	1	0	QA: The math problem was extensive. It wasn't easy. What does extensive mean?	3	2	1		
How did the story end?	2	1	0	QB: Does extensive mean big or fun?	1	0	0		
What will Caleb do the next time he needs help with math?	2	1	0						
STORY QUESTIONS TOTAL (sq)				/14		VOCABULARY TOTAL (vq)		/9	

PERSONAL WRITING GENERATION (Give student the NLM Writing Form). Examiner says, "In this story, Caleb couldn't do the math problems. Write a story about a time when you couldn't do something." If the child doesn't have a story to write, or refuses, encourage the child (up to 3x) to write a thematically related story. Score the story using the NLM Flow Chart (see Examiner's Manual for details).

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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.



- 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.

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

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

Say: "Let's try a different one: Tell me all the sounds in 'map'." **Discontinue Rule:** If the student does not say all the sounds in **three consecutive** words, STOP and administer Target 2.

Say: "OK. Let's 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. **○** and circle the number of sounds said correctly **○** for each word.

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

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

Score Key:
First Sound Correct: 2
First & Second Sounds Together: 1
Incorrect: 0

Score Key:
First Sound Correct: 2
First & Second Sounds Together: 1
Incorrect: 0

Word	1	2	3	4
so	/s			
key	/k			
pain	/k			
dog	/c			
bought	/t			
gas	/g	/ar	/st	
last	/l	/a	/s	/t
spice	/s	/t	/ie	/s
blame	/b	/l	/ai	/m
pest	/p	/e	/s	/t
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/." **Discontinue Rule:** If student scores 0 on **four consecutive** words, STOP and administer Target 3.

Say: "Say the first sound in 'mat' with me (/mmm/)." **Discontinue Rule:** If student scores 0 on **four consecutive** words, STOP and administer Target 3.

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).

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

Score Key:
First Sound Correct: 2
First & Second Sounds Together: 1
Incorrect: 0

Score Key:
First Sound Correct: 2
First & Second Sounds Together: 1
Incorrect: 0

Word	0	1	2
boat	/b/		
jet	/j/		
cut	/c/		
rot	/r/		
net	/n/		
pull	/p/		
last	/l/		
dump	/d/		
stop	/s/		
grub	/g/		
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, /ssssuuuuun/ 'sun' [-2 seconds for each sound]. **Discontinue Rule:** If student scores 0 on **four consecutive** words, STOP and administer Target 3.

Say: "Now I'm going to say the word the slow way and you say it the fast way. Ready, /ssssuuuuun/." **Discontinue Rule:** If student scores 0 on **four consecutive** words, STOP and administer Target 3.

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.

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 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).

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

Score Key:
Entire Word Fast: 2
Part of Word Fast: 1
Incorrect: 0

Score Key:
Entire Word Fast: 2
Part of Word Fast: 1
Incorrect: 0

Word	0	1	2
rain			
sin			
moose			
main			
snow			
TOTAL SCORE			/10

Benchmark	Grade	Benchmark Period	Phoneme Segmentation
	Preschool	Spring	18
	Kindergarten	Fall	27
	Kindergarten	Winter	28
	Kindergarten	Spring	29
	First Grade	Fall, Winter, Spring	29

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

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, mark the letter. Do not score the letter A used in the demonstration.

the	a	to	this
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'." **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, /a/ for /g/). If student pauses 3 seconds, say the sound, mark it incorrect, and point to the next letter. Do not score the letter A used in the demonstration.

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

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 'oo'. Say 'oo'." **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
l	o	r	f	A	x	g	p
e	F	R	m	q	N	H	h
n	G	u	V	D	C	U	Q
W	i	J	O	c	P	S	a
L	v	Y	M	v	X	b	s
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	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		

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

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 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

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

maf	paf	saf	taf
-----	-----	-----	-----

CORRECT SOUNDS = 12 CORRECT WORDS = 4

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

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: TEACH

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

nabe	kupe	hize	loke
------	------	------	------

CORRECT SOUNDS = 12 CORRECT WORDS = 4

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

TARGET 3: TEACH

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

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

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'."
"What is this word?"

Script Round 2: Minimal Instruction
Point to each 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"

Circle the intensity of support needed
High Moderate Low

TARGET 2: TEACH

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

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

Script Round 1: Explicit Instruction
Follow script word for word. Point to the 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'."
"These letters say 'e'. Say 'e'."
"These letters say 'n'. Say 'n'."
"Put them together and you get the word 'sp-e-n'."
"What is this word?"

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"

Circle the intensity of support needed
High Moderate Low

TARGET 1: TEACH

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

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

Script Round 1: Explicit Instruction
Point to each letter/word and have student imitate the pattern for each word. Say: "I'm going to show you how to read these words."
Say: "This letter is silent 'e' (point). It makes this vowel say its name, 'ai' (point). Say 'ai'."
"This 'e' (point) doesn't make a sound."
"Put these together and you get the word 'n-a-b-e'."
"What is this word?"

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: "a" Student says: "a"
Say: "b" Student says: "b"
Say: "n-a-b" Student says: "n-a-b"
Say: "nabe" Student says: "nabe"

Circle the intensity of support needed
High Moderate Low

TARGET 3: POSTEST

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

saf	taf	maf	paf
-----	-----	-----	-----

CORRECT SOUNDS = 12 CORRECT WORDS = 4

(Discontinue test after Posttest. Do not go to Target 2.)

TARGET 2: POSTEST

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

brev	stek	spen	plet
------	------	------	------

CORRECT SOUNDS = 12 CORRECT WORDS = 4

(Discontinue test after Posttest. Do not go to Target 1.)

TARGET 1: POSTEST

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

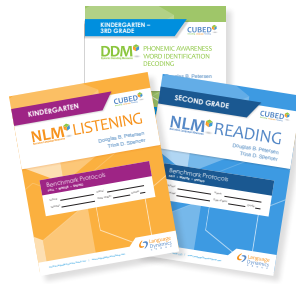
hize	loke	nabe	kupe
------	------	------	------

CORRECT SOUNDS = 12 CORRECT WORDS = 4

(Consider administering the NLM Reading measure.)

CUBED

Research Review



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:
 $\geq 90\%$
 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

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 R^2 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. R^2 interpretation is highly dependent upon the testing context.

SCORE:
 $\geq .10$
 MEANINGFUL

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:
 $\geq 80\%$
 ACCEPTABLE

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%

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)

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

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%