Using Data to Screen For Dyslexia

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National Center on INTENSIVE INTERVENTION

at the American Institutes for Research®



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2023 OSEP LEADERSHIP AND PROJECT DIRECTORS' CONFERENCE



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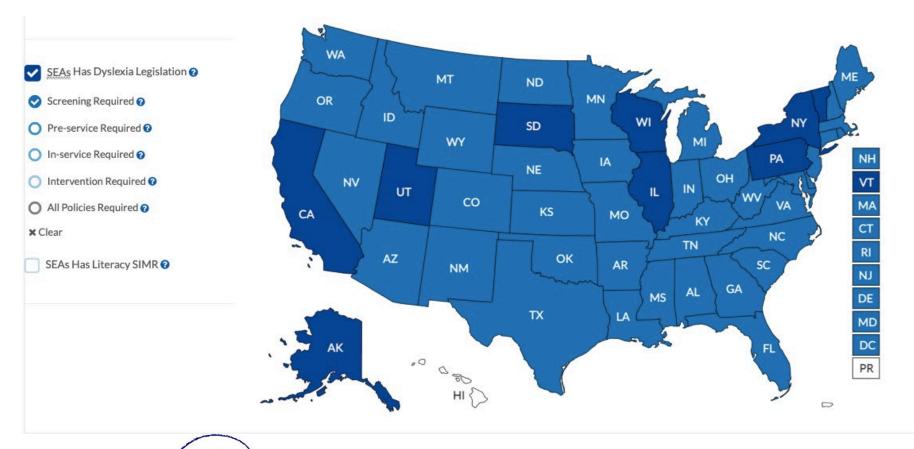
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Agenda

- Dyslexia definition & legislation
- Selection of dyslexia screening tools
- Best practices for screening procedures
- Implementation of an MTSS framework to support dyslexia screening & decision making

• Legislation and Definition



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• Legislation and Definition

"Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge."

• Legislation and Definition

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Wo	rd reading		Written expression	P	honological memory	Or	al language	C	Comprehension	Ra	pid naming	On	set rime		⁻ amily history
2. 3. 4.	Decoding Fluency Phonics Letter-sound (or sound- symbol) correspondence	9. 10. 11.	Encoding Spelling Written expression	12. 13.	Phonological memory Nonsense word repetition	4. 5. 6.	Fluency Oral language Vocabulary	17. 18. 19.	Comprehension Reading comprehension Oral/linguistic comprehension	20. 21.	Alphabet knowledge Rapid naming	22.	Onset rime	23.	Family histor
5.	Phonemic awareness														
6.	Phonological awareness														
3.	Word reading Sight word reading														

Legislation and Definition

What is Dyslexia?



Dyslexia Impairs the Ability to Read

Difficulty with phonological awareness inhibits the ability to effectively decode letters into blendable sounds to form words. A fundamental phonological processing problem may "block" access to other more advanced aspects of reading, such as word reading and comprehension.

Dispelling Myths About Dyslexia

individual cannot read. People with dyslexia can learn to read with evidence-based explicit effort

Dyslexia does not imply the Dyslexia does not otherwise Individuals with dyslexia do impact the brain structure or not necessarily see and write functioning, or the intellectual, letters or words backwards. imaginative, or emotional capabilities of the individual

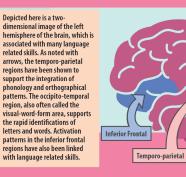
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🞽 NCILiteracy@gmail.com 🌐 ImprovingLiteracy.org 🈏 @NCILiteracy 🚯 @improvingliteracy The research reported here is funded by awards to the National Center on Improving Literacy from the Office of Elementary and Secondary Education, in partnership with the Office of Special Education Programs (Award #: S283D160003). The opinions expressed are those of the authors and do not represent views of OESE, OSEP, or the U.S. Department of Education.

Neurological Considerations for Dyslexia

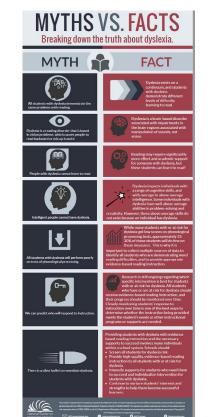
Neuroimaging research suggests that individuals with dyslexia - compared to individuals without – may have fundamental differences in brain regions linked with reading and language. These differences are primarily, although not completely, noted in the left hemisphere of the brain.

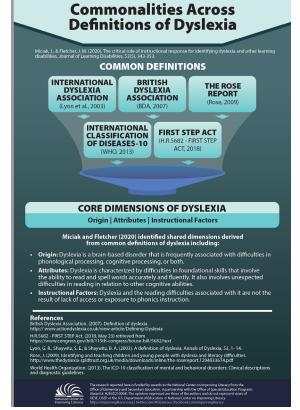


Studies report fundamental differences in brain development and activation patterns between individuals with dyslexia and those without.



Occipito-temporal





Why Screen for Dyslexia?



Reduction for the risk of reading problems in general - and specifically word-level reading issues epitomized by dyslexia



First step for preventative intervention –
paramount importance for states, districts,
& schools take action to improve services
for students with disabilities

Selection of Screening Tools: Skills

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Grade	Skills
Kindergarten	 Phonological and phonemic awareness Rapid automatic naming tasks (letter naming fluency) Letter-sound association Phonological memory
First	 Phoneme awareness & segmentation Letter manipulation Nonword repetition Oral vocabulary Word recognition fluency
Second	 Word ID (real or nonsense) Oral reading fluency Reading comprehension

Selection of Screening Tools: Quality

Essential to select screening tools that:

- Accurately classify risk
 - Key to avoid both false positives and false negatives
- Are reliable and valid
 - Key to avoid unreliable scores or screeners that lack validity due to methods not being sensitive to the risk characteristics associated with dyslexia

Spotlight on the Academic Screening Tools Chart Disaggregated data Partially convincing evidence Data unavailable Legend Convincing Unconvincing available evidence evidence FILTER Subject Grade RESULTS Reading Pre-K Middle School (6-8) Mathematics Elementary (K-5) □ High School (9-12) Show Advanced Filters Apply Filters **Clear Filters**

Comp	are Tools Rese	t Chart		Classification Accuracy	Technical Standards	Usability Features
All ■	Title	Area	Grade	<u>Classification Accuracy</u> <u>Fall</u>	Classification Accuracy Winter	<u>Classification Accuracy</u> <u>Spring</u>
	Acadience Math	Composite	Grade 2	Θ	\bigcirc	\bigcirc
	Acadience Math	Composite	Grade 3	\bigcirc	\bigcirc	\bigcirc
	Acadience Math	Composite	Grade 4	Θ	\bigcirc	\bigcirc

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Definition of Screening

• The National Center on Intensive Intervention defines screening as a process using tools with convincing evidence of classification accuracy, reliability, and validity to identify students who demonstrate risk for poor learning outcomes and may benefit from intervention to meet their academic, social, emotional, and/or behavioral needs.



Tools Chart Structure & Review Criteria

• The tools chart includes three tabs

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- 1. Classification Accuracy
- 2. Technical Standards
- 3. Usability Features

Note: Presence on the chart does not indicate NCII endorsement.



Classification Accuracy

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• Ratings are provided for classification accuracy across 3 points of the year (Fall, Winter, Spring) for up to 2 criteria



Technical Standards

- Reliability
- Validity
- Sample Representativeness
- Bias Analysis Conducted

Remember: Click on the header for more information about each of these areas were rated.

Classificatior	Accuracy	Technical Standards	Jsability Features
<u>Reliability</u>	<u>Validity</u>	Sample Representativeness	<u>Bias Analysis</u> <u>Conducted</u>
_		Regional without Cross-Validation	No

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Usability Features

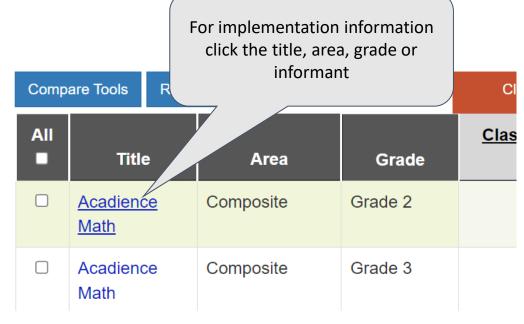
- Administration Format
- Administration & Scoring Time
- Scoring Format
- Types of Decision Rules
- Evidence Available for Multiple Decision Rules
- Usability Study

Classification A	ccuracy	Technical Standards	Usat	ility Features
<u>Admin Format</u>	<u>Admin &</u> <u>Scoring Time</u>	<u>Scoring Format</u>	<u>Types of</u> Decision Rules	<u>Evidence</u> <u>Available for</u> <u>Multiple</u> <u>Decision Rules</u>
Individual Group	3 minutes	Manual	Benchmark Goals	Yes

Implementation Information

Acadience Math Composite





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✤ Descriptive Information	
Acquisition & Cost	
Training & Technical Support	
• Administration	

Descriptive Information

Dropohool / Dro kindorgerten

Please provide a description of your tool:

Acadience Math is a screening and progress monitoring assessment used to measure math skills. The Acadience Math screening measures are efficient indicators of math skills. For each grade and time of year, the Acadience Math component measures that correlate highly with later outcomes are combined to form a Math Composite Score. The component measures used in the Composite Score depend upon grade and time of year. The Composite Score is the best overall predictor of later outcomes and conveys that all of the aspects of math proficiency are critical.

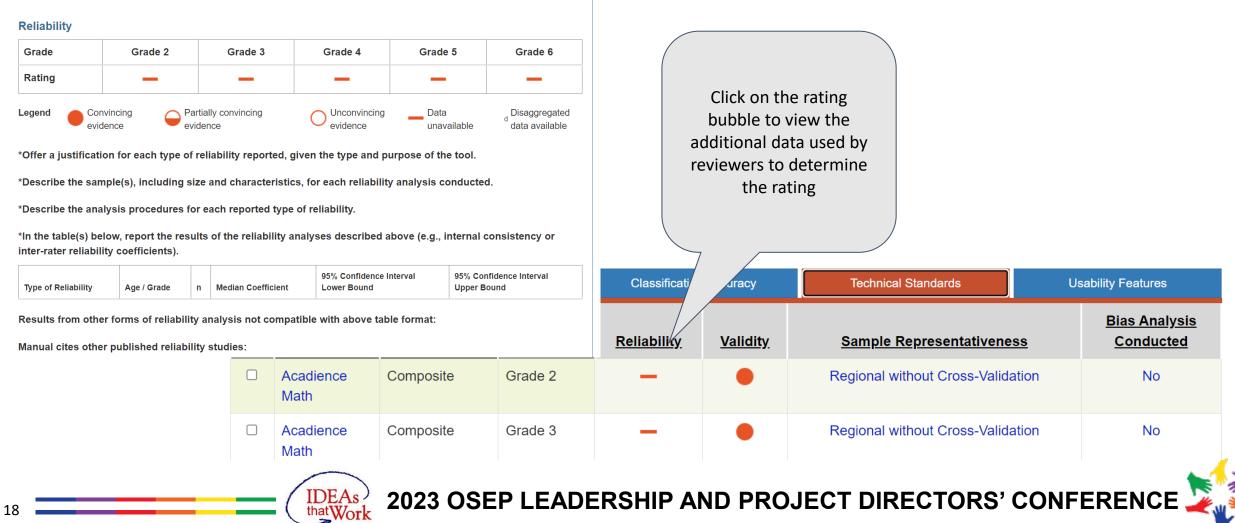
Ninth grade

The tool is intended for use with the following grade(s).

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E Courth grade

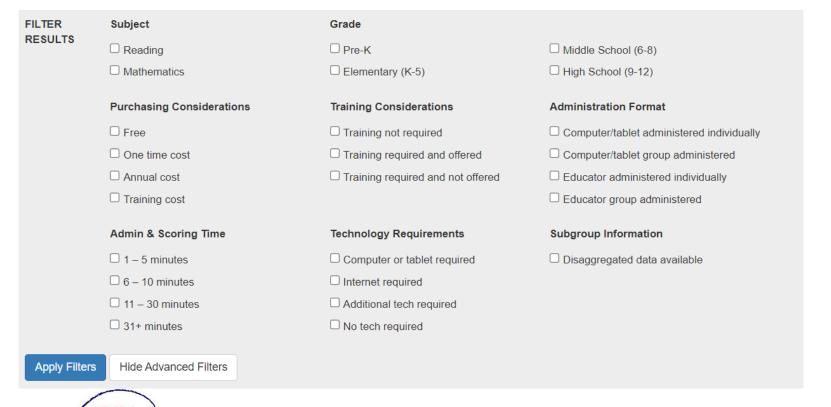
Dig Deeper Into the Data



Advanced Filtering

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 Looking for something specific? Use the advanced filtering to narrow your search



Using Tools Chart to Select Dyslexia Screeners

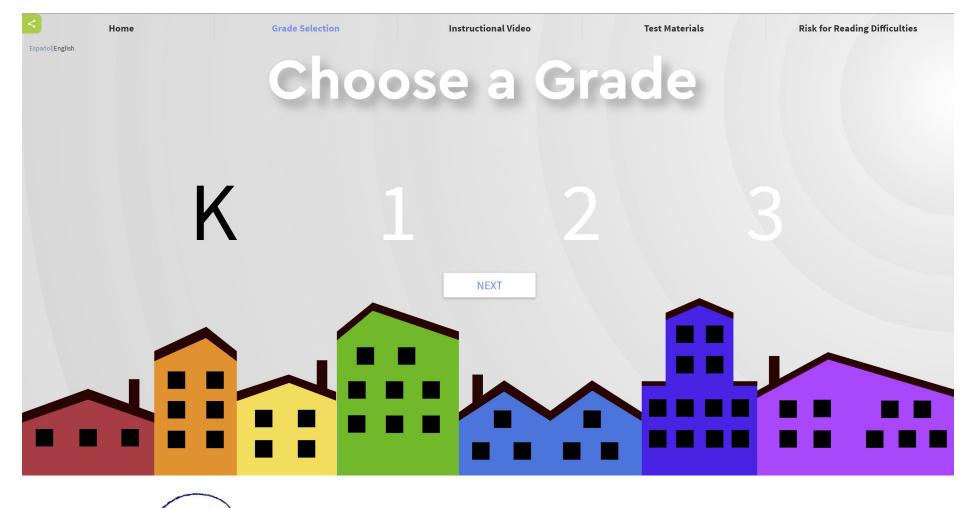
- Tools Charts provide information on:
 - Skills included in screeners ensures screening for the right skills at the right time to accurately assess risk for dyslexia
 - Ability of tool to accurately classify risk ensures both false positives and negatives are avoided
 - Reliability and validity of tool ensures avoidance of unreliable scores or screeners that lack validity

Tools and Tech for Screening Procedures

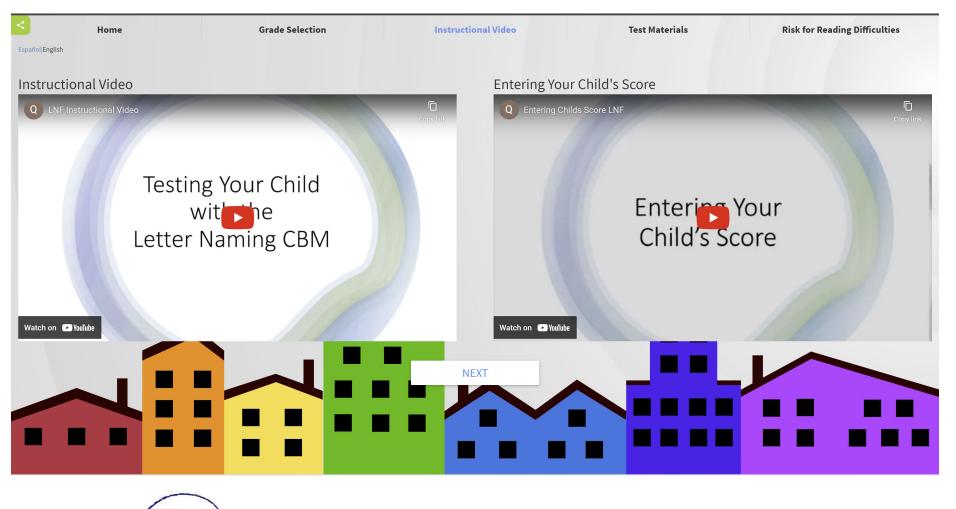




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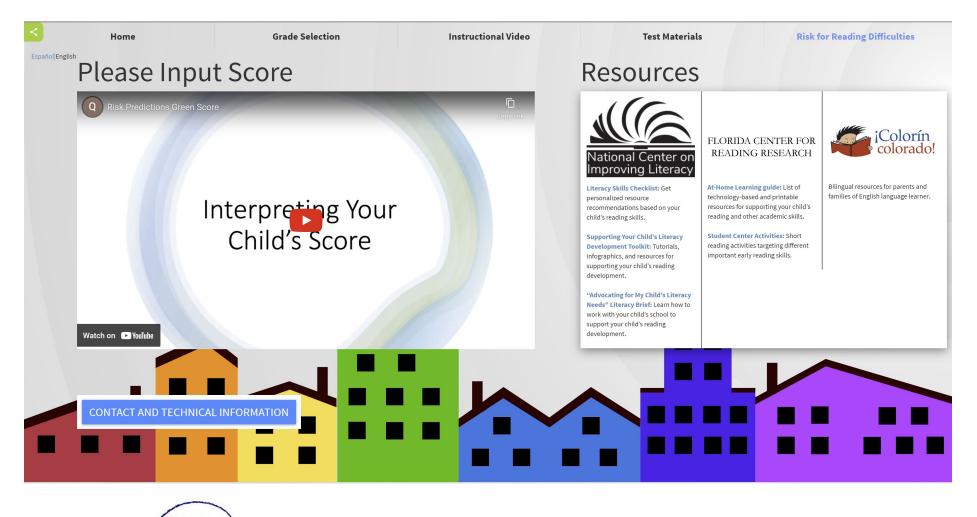


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Follow these steps to test your child and learn about their risk for reading difficulties.				t	F	К	W	R	Q	х	а	с	Х
Before Testing O Gather print or electronic testing materials, a pencil, and a timer. O Make sure child is sitting a comfortable distance from the text. PRINTABLE INSTRUCTIONS AND MATERIALS			Y	i	m	Ν	V	q	М	r	р	V	f
			0	т	J	I	b	e	C	Z	U	D	S
			В	g	у	L	s	E	u	P	W	k	d
			0	А	G	j	z	Н	h	l	М	K	В
During Testing O Read the bolded directions below to your child.			J	i	F	s	Q	Y	u	v	g	D	S
Here are some letters (point to child's page). When I say 'Begin', start here and go across the page. Tell me the name of each letter. If you come to a letter you don't know, I'll tell it to you. Ready? Begin.				,	1	V	W	Н	G	f	C	k	r
O Start your timer after you	say begin.		0	L	ı	У	vv	П	G	1	C	ĸ	I
- ,	conds (1 minute) while they rean correct letters with a slash (/).		E	l	х	е	А	t	R	Ρ	h	Ν	а
			Z	d	q	V	m	q	Z	b	n	Х	Т
If your child	What to do	Start Stop Reset							-		•		
Names a letter incorrectly	Mark (/) through the letter	Time left: 60 s	р	L	U	I	0	Ν	R	С	Q	t	х
Skips letter(s)	Mark (/) through the letter												
Pauses for 3 seconds	Tell child the letter	e letter 0 Letter(s) - 0 Error(s)											
Says a letter sound	= 0 Letters per Minute												
Corrects themselves Count as correct in 3 seconds				Letter	s per Mi	nute							

Q Use your mouse and highlight letters named on the list to the right. Start with the first letter on the list, and highlight until the last letter your child named in 60 seconds. After highlighting the content, press the "Generate Letter Count" button.

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National Center on Mmproving Literacy Tools Chart Tools Chart Definitions	Academic Scr	reenin	g Tools Cha	art Select	or				
Sidebar Grade Selection									
✓ K [1] 2] 3					C			Classificat	tion Accuracy
Sereener Time	Screener Name	Cost 🗘	Additional Scoring Time ‡	Administration Time	Predictive Validity	Concurrent Validity 🏦 Relia	ouity 🤅 –	Estimate 🗧	Time Point
Screener Type	Acadience Reading (aka DIBELS Next)	\$0.00	1 min(s)	5 min(s)	0.48	0.40	0.83	0.79	Fall
🖌 Reading 🖌 Math	DIBELS 8th Edition - Composite	\$0.00	5 min(s)	0 min(s)	0.76	0.85	0.84	0.87	Fall
Table View Criteria	DIBELS 8th Edition - Letter Naming Fluency	\$0.00	1 min(s)	2 min(s)			0.83	0.85	Fall
8 items selected	▪ DIBELS 8th Edition - Nonsense Word Fluency Correct Letter Sounds♂	\$0.00	1 min(s)	2 min(s)			0.90	0.82	Fall
	DIBELS 8th Edition - Phonemic Segmentation Fluency	\$0.00	1 min(s)	2 min(s)			0.85	0.79	Fall
FILTER CRITERIA	DIBELS 8th Edition - Word Reading Fluency	\$0.00	1 min(s)	2 min(s)			0.91	0.87	Winter
	FastBridge - earlyReading Composite	\$7.50		7 min(s)	0.83	0.67	0.83	0.95	Fall
Download Table	Imagine Learning		0 min(s)	45 min(s)	0.53	0.59	0.88	0.75	Fall
File Name: untitled	i-Ready® Diagnostic	\$6.00	0 min(s)	45 min(s)	0.88	0.88	0.81	0.79	Fall
	iSTEEP - Initial Sound Fluency	\$2.00	0 min(s)	1 min(s)	0.72	0.76	0.88	0.82	Fall
b Download	iSTEEP - Letter Sound Fluency	\$2.00	0 min(s)	1 min(s)	0.70	0.68	0.92	0.89	Fall
	iSTEEP - Word Identification Fluency	\$2.00	0 min(s)	1 min(s)	0.71	0.73	0.92	0.92	Spring
	Lexia RAPID Assessment	\$7.20	0 min(s)	40 min(s)	0.71		0.94	0.84	Fall
	MAP® Growth™		0 min(s)	45 min(s)	0.71		0.80	0.77	Fall
	MAP® Reading Fluency™C		0 min(s)	20 min(s)	0.43	0.46	0.83	0.82	Fall

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Sidebar									
Grade Selection		S	Screeners 7	Table: Grade	K Math	& Reading	g		
▼ K 🛄 1 🛄 2 🛄 3			Additional	Administration	Predictive	Concurrent		Classifi Accu	
Screener Type	Screener Name 🗘	Cost ÷	Scoring Time	Time	Validity	¢ Validity	Reliability ‡	Estimate ÷	Time Point
✓ Reading ✓ Math	Acadience Reading (aka DIBELS Next)	\$0.00	1 min(s)	5 min(s)	0.48	0.40	0.83	0.79	Fall
Table View Criteria	DIBELS 8th Edition - Composite	\$0.00	5 min(s)	0 min(s)	0.76	0.85	0.84	0.87	Fall
Select All Deselect All ost dditional Scoring Time	DIBELS 8th Edition - Letter Naming Fluency	\$0.00	1 min(s)	2 min(s)			0.83	0.85	Fall
dministration Time 🖌 redictive Validity ✓ oncurrent Validity ✓	DIBELS 8th Edition - Nonsense Word Fluency Correct Letter Sounds	\$0.00	1 min(s)	2 min(s)			0.90	0.82	Fall
eliability	DIBELS 8th Edition - Phonemic Segmentation Fluency	\$0.00	1 min(s)	2 min(s)			0.85	0.79	Fall
	DIBELS 8th Edition - Word Reading Fluency	\$0.00	1 min(s)	2 min(s)			0.91	0.87	Winter

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Sidebar				
Grade Selection	Screeners Tal	ble: Grade K Reading		
🗸 K 🛄 1 🛄 2 🛄 3	Screener Name	≜ Cost	Reliability	Classification Accuracy
Screener Type	Screener pame	Cost -	Kenability	Estimate Time Point
Screener rype	Acadience Reading (aka DIBELS Next)	\$0.00	0.83	0.79 Fall
Z Reading 🔲 Math	DIBELS 8th Edition - Composite	\$0.00	0.84	0.87 Fall
Table View Criteria	DIBELS 8th Edition - Letter Naming Fluency	\$0.00	0.83	0.85 Fall
4 items selected	DIBELS 8th Edition - Nonsense Word Fluency Correct Letter Sounds ${\ensuremath{\underline{C}}}$	\$0.00	0.90	0.82 Fall
	DIBELS 8th Edition - Phonemic Segmentation Fluency	\$0.00	0.85	0.79 Fall
FILTER CRITERIA	DIBELS 8th Edition - Word Reading Fluency	\$0.00	0.91	0.87 Winter
	FastBridge - earlyReading Composite	\$7.50	0.83	0.95 Fall
Download Table	i-Ready® Diagnostic	\$6.00	0.81	0.79 Fall
File Name: untitled	Imagine Learning		0.88	0.75 Fall
	iSTEEP - Initial Sound Fluency	\$2.00	0.88	0.82 Fall
Download	iSTEEP - Letter Sound Fluency	\$2.00	0.92	0.89 Fall
	iSTEEP - Word Identification Fluency C	\$2.00	0.92	0.92 Spring
	Lexia RAPID Assessment	\$7.20	0.94	0.84 Fall
	MAP® Growth™℃		0.80	0.77 Fall
	MAP® Reading Fluency™C		0.83	0.82 Fall
	mCLASS: Reading 3D	\$20.90	0.81	0.83 Fall
	Phonological Awareness Literacy Screening (PALS) - PALS for Kindergarten	\$5.50	0.95	0.74 Fall
	TPRI Early Reading Assessment		0.88	0.98 Fall
				Previous 1 Next

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Grade Selection

🗸 K 🗌 1 🗌 2 🔲 3

Sidebar

Screener Type

Reading 🗌 Math

Table View	/ Criteria
------------	------------

4 items selected

FILTER CRITERIA

Download Table

File Name: Best Screening Table Ever



A	В	С	D	E	F
Screener Name	Links	Cost	Reliability	Classification Accuracy Estimate	Classification Accuracy Time Point
Acadience Reading (aka DIBELS Next)	https://charts.intensiveintervention.o	0	0.83	0.79	Fall
DIBELS 8th Edition - Composite	https://charts.intensiveintervention.o	0	0.84	0.87	Fall
DIBELS 8th Edition - Letter Naming Fluency	https://charts.intensiveintervention.o	0	0.83	0.85	Fall
DIBELS 8th Edition - Nonsense Word Fluency Correct Letter	https://charts.intensiveintervention.o	0	0.9	0.82	Fall
DIBELS 8th Edition - Phonemic Segmentation Fluency	https://charts.intensiveintervention.o	0	0.85	0.79	Fall
DIBELS 8th Edition - Word Reading Fluency	https://charts.intensiveintervention.o	0	0.91	0.87	Winter
FastBridge - earlyReading Composite	https://charts.intensiveintervention.o	7.5	0.83	0.95	Fall
Imagine Learning	https://charts.intensiveintervention.o	NA	0.88	0.75	Fall
0 i-ReadyÂ [®] Diagnostic	https://charts.intensiveintervention.o	6	0.81	0.79	Fall
1 iSTEEP - Initial Sound Fluency	https://charts.intensiveintervention.o	2	0.88	0.82	Fall
2 iSTEEP - Letter Sound Fluency	https://charts.intensiveintervention.o	2	0.92	0.89	Fall
3 iSTEEP - Word Identification Fluency	https://charts.intensiveintervention.o	2	0.92	0.92	Spring
4 Lexia RAPID Assessment	https://charts.intensiveintervention.o	7.2	0.94	0.84	Fall
5 MAP® Growth™	https://charts.intensiveintervention.o	NA	0.8	0.77	Fall
6 MAP® Reading Fluency™	https://charts.intensiveintervention.o	NA	0.83	0.82	Fall
7 mCLASS: Reading 3D	https://charts.intensiveintervention.o	20.9	0.81	0.83	Fall
8 Phonological Awareness Literacy Screening (PALS) - PALS for	https://charts.intensiveintervention.o	5.5	0.95	0.74	Fall
9 TPRI Early Reading Assessment	https://charts.intensiveintervention.o	NA	0.88	0.98	Fall



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Adolescent Assessment of Literacy

AAL Logo Home Assessment Your Score Resources Downloads

Welcome

Welcome to the Adolecent Assessment of Literacy or AAL. This assessment has been specially developed to assess the literacy of students from the 4th to the 8th grade. When you are ready follow the links below to either take the computer based version of AAL or download a paper and pencil version with instructions on administration. After completing the assessment follow the link labeled 'Test Scores' below or in the navbar at the top of the page. Thank you.

Get Started



Adolescent Assessment of Literacy

1

Take the Assessment

To navigate to the assessment click this link or press the get tarted button above. You can also navigate to the assessment using the navbar at the top of the page.

Interpret Your Score

After completing the assessment and receiving you score, navigate to the your score page. This page will help you understand what your score means.

Discover Resources

After interpreting your score you may discover a need for further intervention. Navigate to the resources page from the navbar at the top of the page for helpful links to get you started.





Lead for Literacy (L4L) Center

 Building capacity of elementary school and district leaders to recognize evidencebased literacy practices and to facilitate their implementation through identifying and supporting instruction and intervention programming and professional development, including coaching.



- Our Focus: "Evidence-based"...
- Literacy skills and concepts
- Leadership skills

Lead for Literacy Framework

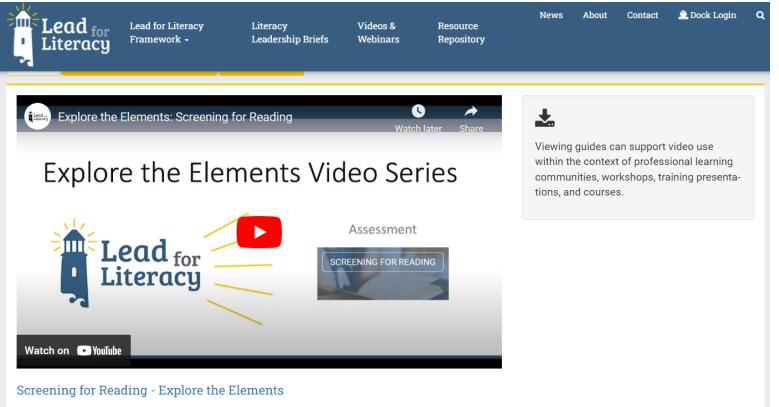


Explore the Elements video series

Assessment videos:

- Screening for Reading
- Monitoring Reading Progress

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In this Explore the Elements video, we describe the purpose and features of effective literacy universal screening processes.

Resource Spotlight

Lead for Literacy (L4L) website

- Presents the L4L Framework with supporting videos, the L4L Framework Navigator, Literacy Leadership Briefs, and other great literacy resources.
- <u>https://leadforliteracy.org</u>

Literacy

LEAD FOR LITERACY FRAMEWORK

NAVIGATOR Lead for Literary (L4L) Framework Navigator is a tool that can be used formatively with sol teams to shell light on areas that area strongly implemented and growth areas that school minish work thread. This tool can be inform action planning with school teams.

> s of the L4L Framework. Determine the level of implementation in you ponent and rate from 0 to 2 (0, not yet evident; 1, developing; and 2, our school team, discuss areas that are strongly implemented and stra ementation. Also discuss any areas for growth in the school. To learn in the strong of the strong stron

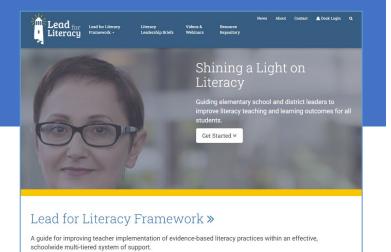
ndards. Priorities. and Goa

Instruction is aligned with college and career readiness standards at every grad level within the core curriculum and interventions.

Standards reflect the reading outcomes you want students in your state, de

tandards should be

Indicators of Success







The Lead for Literacy Framework Navigator is a tool that can be used formatively with school teams to shed light on areas that are strongly implemented and growth areas that school teams might work toward. This tool can help inform action planning with school teams.

https://leadforliteracy.org/framework-navigator

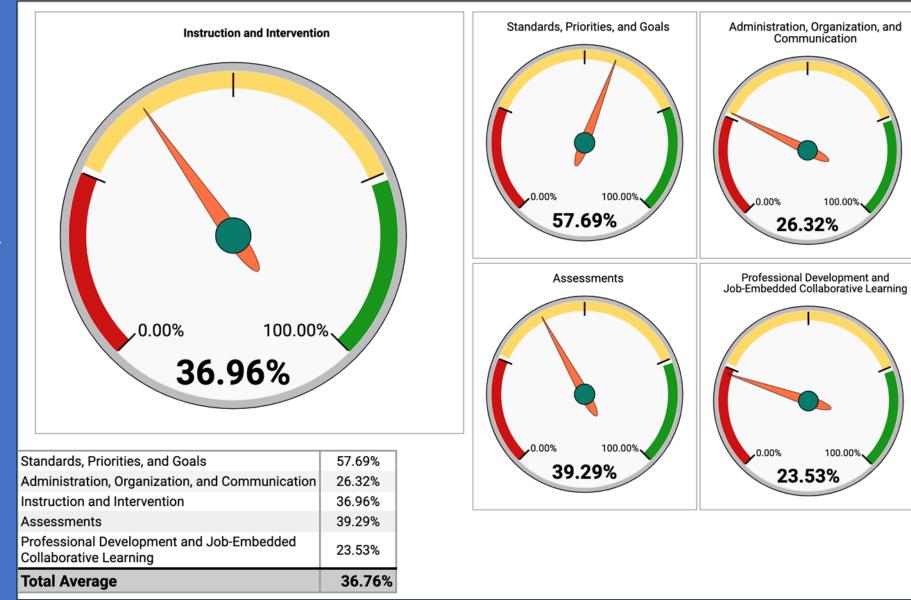
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Framework Navigator: Assessment Please rate each of the following: 0 (not yet evident); 1 (developing); 2 (established)

	RATING		INDICATOR OF SUCCESS
0	1	2	
Types of Assessments			
			Teachers in your school use a balanced combination of formative, summative, and diagnostic assessment tools.
			Assessment tools are valid and reliable.
Screening for Reading			
			Screening assessments are used to identify students at risk for poor reading.
			Reading screening assessments are administered two or three times per year to all students
			Families are involved in the screening process and understand how to interpret the data for their child.
Monitoring Reading Progress			
			Progress monitoring assessments are used to evaluate whether students are responding to instruction and intervention and to set learning goals and intervention accordingly.
			Progress monitoring assessments are administered to students receiving intervention at regular intervals (biweekly for Tier II; weekly for Tier III).

Framework Navigator: Systems Check



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Resource Spotlight

- Individuals with Disabilities Education Act (IDEA) website
 - Brings together IDEA information and resources from the Department and its grantees.
 - https://sites.ed.gov/idea/
- IDEAS That Work
 - For information from research to practice initiatives funded by OSEP that address the provisions of IDEA and ESSA. This website includes resources, links, and other important information relevant to OSEP's research to practice efforts.
 - <u>https://osepideasthatwork.org/</u>

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