About Oral Reading Fluency (ORF)

Oral Reading Fluency (ORF) involves having students read aloud from an unpracticed passag
incorrectly, omitted, read out of order, or words pronounced for the student by the examiner af
minute (WCPM). This WCPM score has 30 years of validation research conducted over three
the primary grades.

Purposes

ORF is used for two primary purposes: **screening** and **progress monitoring**.

When ORF is used to screen students, the driving questions are, first: **"How does this stude
of reading failure?"**
To answer these questions, decision-makers rely on ORF norms that identify performance ber
individual student's WCPM score can be compared to these benchmarks and determined to be
benchmark, below benchmark, or significantly below benchmark. Those students below or sign
candidates for further diagnostic assessments to help teachers determine their skill strengths
(Hasbrouck, 2010).
When using ORF for progress monitoring, the questions to be answered are: **"Is this student
provided improving this student's skills?"**

When ORF assessments are used to answer these questions, they must be administered freq
and a goal determined. A student's goal can be based on established performance benchmark

Multidimensional Elements of Fluent Reading

Dr. Timothy V. Rasinski writes in his short publication **"Assessing Reading Fluency"** (https://

> [R]eading fluency is **multidimensional** – one dimension stresses the importance of **a
> recognition of words** in connected text, and a third dimension stresses **expressive**
> another – accurate and automatic reading creates the conditions for expressive readi
> must be taught, and all must be monitored

Definitions

Decoding accuracy	the ability of readers to decode words accurately in text
Automaticity	the ability of readers to decode words in text with minimal use of atte

Prosody	the ability of readers to appropriately use phrasing and expression

e for one minute. An examiner notes any errors made (words read or pronounced
ter a 3-second pause) and then calculates the total of words read correctly per
decades, indicating it is a robust indicator of overall reading development throughout

Quoted from Hasbrouck and Tindal, 2017

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nt's performance compare to his/her peers?" and then: **"Is this student at risk**

ıchmarks at the beginning (fall), middle (winter), and end (spring) of the year. An
e either significantly above benchmark, above benchmark, at the expected
ıificantly below benchmark are at possible risk of reading difficulties. They are good
or weaknesses, and plan appropriately targeted instruction and intervention

making expected progress?" and **"Is the instruction or intervention being**

uently (weekly, bimonthly, etc.), the results placed on a graph for ease of analysis,
ks or information on expected rates of progress.

Quoted from Hasbrouck and Tindal, 2017

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files.eric.ed.gov/fulltext/ED483166.pdf):

ıccuracy in word decoding, a second dimension focuses on **quick and automatic
and meaningful interpretation of text**. These dimensions are related to one
ng. All three are important for effective comprehension and overall good reading. All

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Dr. Timothy Rasinski

entional resources Dr. Timothy Rasinski

Dr. Timothy Rasinski

Hasbrouck & Tindal Studies

Jan Hasbrouck and Gerald Tindal first published their oral reading fluency norms in 1 → Hasbrouck, J. & **students in gra** https://journals.

A 2006 report, "Oral Reading Fluency: 90 Years of Measurement," updated the actual numbers used for norming and expanded the data to grades 1 to 8. → Hasbrouck, J. & **assessment to** https://brtprojec

Their 2017 update included "data from three widely-used commercially available ORF assessments (DIBELS 6th Edition©, DIBELS Next©, and easyCBM©)" and represented grades 1 to 6. → Hasbrouck, J. & Report No. 170 Oregon. https://files.eric.

Charts displaying the 2006 and 2017 norms are below, with data points for the 10th, 25th, 50th, 75th, and

"Spring benchmark" refers to the *50th percentile WCPM* for *Spring*. Values that are *identical* or *within 1* c

Printable one-pagers have also been provided by Read Naturally: **2006 norms** and **2017 norms**.

2006 Fluency Norms

Grade	Percentile	Words Correct Per Minute			Grade
		Fall	Winter	Spring	
1	90th percentile	--	81	111	1
	75th percentile	--	47	82	
	50th percentile	--	23	53	
Spring benchmark:	25th percentile	--	12	28	Spring benchmark:
53	10th percentile	--	6	15	60

Grade	Percentile	Words Correct Per Minute			Grade
		Fall	Winter	Spring	
2	90th percentile	106	125	142	2
	75th percentile	79	100	117	
	50th percentile	51	72	89	
Spring benchmark:	25th percentile	25	42	61	Spring benchmark:

89	10th percentile	11	18	31	100

Grade	Percentile	Words Correct Per Minute			Grade
		Fall	Winter	Spring	
3	90th percentile	128	146	162	3
	75th percentile	99	120	137	
	50th percentile	71	92	107	
Spring benchmark:	25th percentile	44	62	78	Spring benchmark:
107	10th percentile	21	36	48	112

Grade	Percentile	Words Correct Per Minute			Grade
		Fall	Winter	Spring	
4	90th percentile	145	166	180	4
	75th percentile	119	139	152	
	50th percentile	94	112	123	
Spring benchmark:	25th percentile	68	87	98	Spring benchmark:
123	10th percentile	45	61	72	133

Grade	Percentile	Words Correct Per Minute			Grade
		Fall	Winter	Spring	
5	90th percentile	166	182	194	5
	75th percentile	139	156	168	
	50th percentile	110	127	139	
Spring benchmark:	25th percentile	85	99	109	Spring benchmark:
139	10th percentile	61	74	83	146

Grade	Percentile	Words Correct Per Minute			Grade

Grade	Percentile	Words Correct Per Minute		
		Fall	Winter	Spring
6 Spring benchmark: 150	90th percentile	177	195	204
	75th percentile	153	167	177
	50th percentile	127	140	150
	25th percentile	98	111	122
	10th percentile	68	82	93

Grade
6 Spring benchmark: 146

Grade	Percentile	Words Correct Per Minute		
		Fall	Winter	Spring
7 Spring benchmark: 150	90th percentile	180	192	202
	75th percentile	156	165	177
	50th percentile	128	136	150
	25th percentile	102	109	123
	10th percentile	79	88	98

Grade	Percentile	Words Correct Per Minute		
		Fall	Winter	Spring
8 Spring benchmark: 151	90th percentile	185	199	199
	75th percentile	161	173	177
	50th percentile	133	146	151
	25th percentile	106	115	124
	10th percentile	77	84	97

Tindal, G. (1992). **Curriculum-based oral reading fluency norms for ades 2 through 5.** Teaching Exceptional Children, 24(3), 41-44. sagepub.com/doi/10.1177/004005999202400310 (partial)

Tindal, G. A. (2006). **Oral reading fluency norms: A valuable ol for reading teachers.** The Reading Teacher. 59(7), 636-644.). ts.org/wp-content/uploads/2022/07/TechRpt33_FluencyNorms.pdf

Tindal, G. (2017). **An update to compiled ORF norms** (Technical 2). Eugene, OR, Behavioral Research and Teaching, University of

ed.gov/fulltext/ED594994.pdf

90th percentiles three times a year.

r 2 digits are highlighted in both tables.

2017 Fluency Norms

Percentile	Words Correct Per Minute		
	Fall	Winter	Spring
90th percentile	--	97	116
75th percentile	--	59	91
50th percentile	--	29	60
25th percentile	--	16	34
10th percentile	--	9	18

Percentile	Words Correct Per Minute		
	Fall	Winter	Spring
90th percentile	111	131	148
75th percentile	84	109	124
50th percentile	50	84	100
25th percentile	36	59	72

10th percentile	23	35	43

Percentile	Words Correct Per Minute		
	Fall	Winter	Spring
90th percentile	134	161	166
75th percentile	104	137	139
50th percentile	83	97	112
25th percentile	59	79	91
10th percentile	40	62	63

Percentile	Words Correct Per Minute		
	Fall	Winter	Spring
90th percentile	153	168	184
75th percentile	125	143	160
50th percentile	94	120	133
25th percentile	75	95	105
10th percentile	60	71	83

Percentile	Words Correct Per Minute		
	Fall	Winter	Spring
90th percentile	179	183	195
75th percentile	153	160	169
50th percentile	121	133	146
25th percentile	87	109	119
10th percentile	64	84	102

Percentile	Words Correct Per Minute

PERCENTILE	FALL	WINTER	SPRING
90th percentile	185	195	204
75th percentile	159	166	173
50th percentile	132	145	146
25th percentile	112	116	122
10th percentile	89	91	91

CKLA Reporting

This page will explain how I made decisions from CKLA fluency specifications, Hasbrouck and Tindal available data, and some data theory.

This may seem like too much explanation or perhaps even overthinking, but if you're looking at one of my CKLA assessment trackers and wondering why I differed from the official directions, I wanted to be clear about my process to make sense of all of this! And I want to help YOU use your fluency data in the most effective way possible.

Percentiles

Percentiles are, by their very definition, the basis of equal groups of numbers of students. What does this mean?

It means that each grouping of **10 percentile points is 10%** of the total number of students *who took the test/nationally:*

1st to 10th percentile*	10th to 20th percentile	20th to 30th percentile	30th to 40th percentile	40th to 50th percentile	50th to 60th percentile	60th to 70th percentile	70th to 80th percentile	80th to 90th percentile	90th to 99th percentile
10% of students**	10% of students	10% of students	10% of students	10% of students	10% of students	10% of students	10% of students	10% of students	10% of students

* Labeled with *10th, 20th*, etc. for readability – is really *10th to 19th*, for example.
** Approximately. There is no "0 percentile" or "100th percentile," so each group is actually more like 9%.

CKLA + Hasbrouck and Tindal

In CKLA (first and second editions alike), end-of-unit assessments include fluency at key points: in **Grade 1 Unit 7** (end-of-year), in **Grade 2 Unit 2**, in **Grade 2 Unit 3** (optional), in **Grade 2 Unit 4**, and in **Grade 2 Unit 6** (end-of-year).

CKLA uses the published statistics from Hasbrouck and Tindal's ***2006*** studies (even in the second edition of CKLA). They also use the 10/25/50/75/90 cutoff scores.

Knowing what we know about percentiles, the 10/25/50/75/90 benchmarks do create uneven groups:

1st to 10th percentile	10th to 25th percentile	25th to 50th percentile	50th to 75th percentile	75th to 90th percentile	90th to 99th percentile
10% of students	15% of students	25% of students	25% of students	15% of students	10% of students

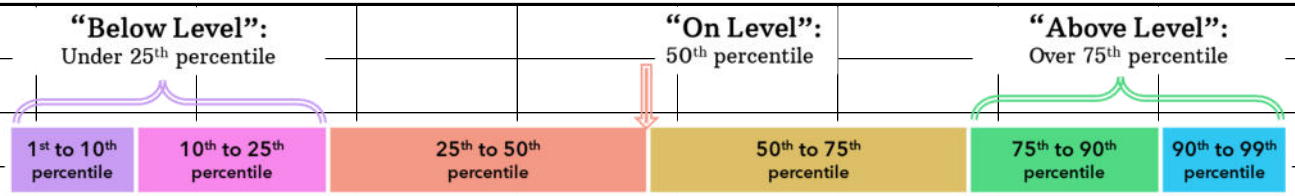
Below is the guidance provided for each of the fluency occurrences in Grades 1 and 2. I wanted to get a clear picture of how CKLA suggests you use a student's WCPM score.

- G1 U7: "Students who score in the 25th or lower percentile are below grade level. Students who score in the 50th percentile are on grade level. Students who score in the 75th–90th or above percentile are above grade level."
- G2 U2: "A score below the 50th percentile may be cause for concern; a score below the 25th percentile is definite cause for concern."
- G2 U3 (optional): "If time permits, you may also want to administer the optional Fluency assessment located in Teacher Resources." No other guidance is provided.
- G2 U4: Students are scored on the Multidimensional Fluency Scale (fluent, mostly fluent, improving, labored) rather than on percentiles, though WCPM is calculated.
- G2 U6: Same as for G1 U7, as both are end-of-year tests.

The EOY tests also ask you to note the "percentile," which I don't understand as it's not like you can calculate every percen

But, more than the uneven directions from test to test, I was not able to square CKLA's guidance with the percentile ranges.

How do you "label" student performance at, say, the 30th percentile or the 60th? And should there be wiggle room for On Level and, if so, how much?

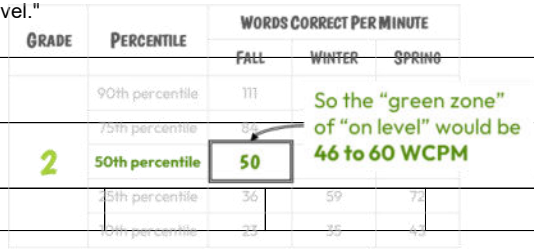


Question 1: What is "On Level"?

As mentioned above, I wasn't comfortable with only 50th percentile being considered "on grade level." Is 49th percentile not close enough?

I did find a comment in one of the fluency studies that you can consider a **"green zone"** to be *4 WCPM less* than the 50th percentile and up to *10 WCPM more*. →

However, calculating this for every grade, fall, winter, and spring felt messy and I wanted something more systematic.



Question 2: What is In Between Three Groups and Six?

I like that in the 10/25/50/75/90 model, you have six categories that show relative performance in a more nuanced way than the simple *below*, *on*, or *above grade level*.

But - I want the categories to have equal percentages of the whole so that you can easily tell how your class' distribution of scores compares to the "ideal."

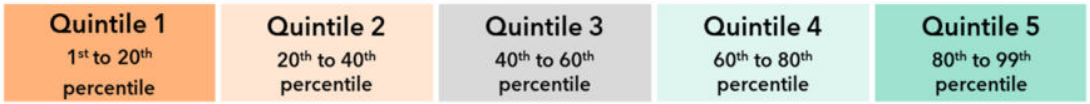
For example, in this model, you have to do some calculations:

1st to 10th percentile	10th to 25th percentile	25th to 50th percentile	50th to 75th percentile	75th to 90th percentile	90th to 99th percentile
10% of students	15% of students	25% of students	25% of students	15% of students	10% of students

If I have 30 students, I can expect 3 students in the lowest group 4.5 students in the next group up, then 7.5 students, 7.5, 4.5, an

Solution: Quintiles

I chose one solution that would answer both of the questions above: representing the data with quintiles. **Quintiles are five equal groups:**



The next page explains more about quintiles and their uses and calculation, but overall, this model has key characteristics:

⇒ **Quintile 3 has a nice padding around the 50th percentile.** I feel comfortable saying that scores ranging from 40th to 60th percentile are "average."

⇒ **These are five equal groups,** meaning that in a class of 30, you can expect 6 in each group. If you have 10 students in Quintile 1, you can easily see that that's (likely) bottom-heavy.

⇒ **Five groups are better than three,** at least for making sense of data. You can have your "on level" group and then "above" and "below" as well as "*well* above" and "*well* below."

⇒ **Quintiles can be compared across tests and years.** Yes, the actual numbers change (50th percentile is different in fall, spring, and winter), but if you can say that a child was in Quintile 1, then Quintile 2, and is now in Quintile 3, that's fairly quantifiable, easily-understood progress.

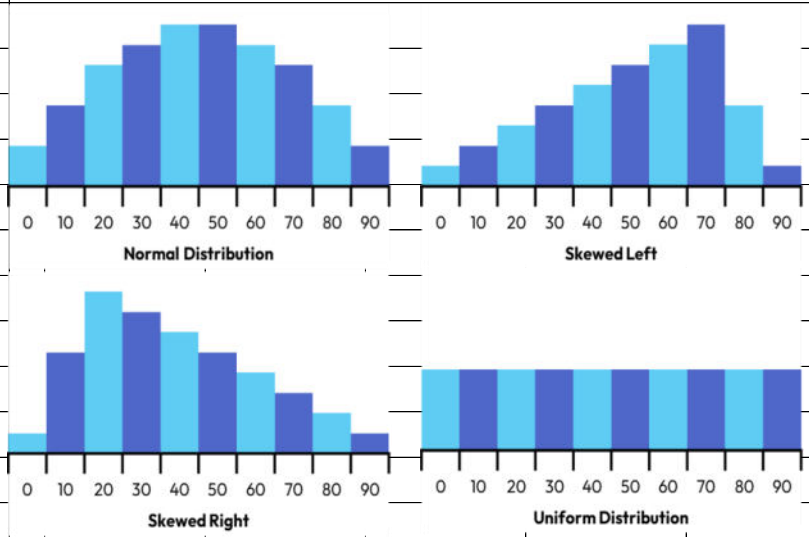
Quintiles

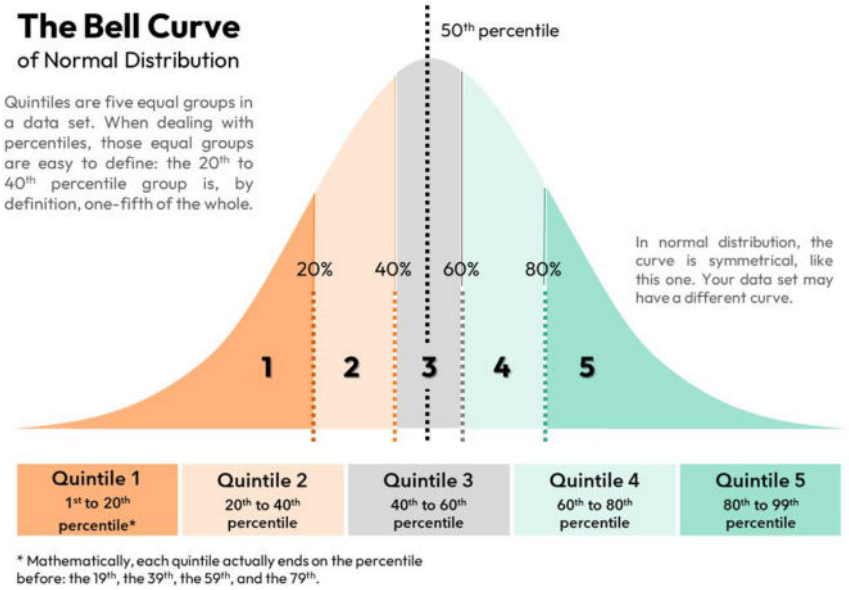
A data set can be represented with a bell curve, which shows how the results are distributed.

Statistically, in any large enough group, you'll have the most values at the 50th percentile (so it's the highest point of the curve), and very few values will be at the far ends of the curve.

In the bell curve pictured here, each of the colored areas is exactly the same (20% of the whol so you see Quintile 3, the tallest piece, is also the skinniest piece. This visual is the ideal, or normal distribution. Bell curves look like this when scores exactly match up on either side of 5(percentile, like one student scored 5% and one student scored 95%, 2 students scored 15% a students scored 85%, etc.

Of course, in the real world, you could have different curves or not even a curve at all:





Getting Quintile Numbers

If you looked at the Hasbrouck and Tindal reports, you'll see that they provided only certain percentile points, not the entire data set:

Recall that I need numbers for **20th, 40th, 60th, and 80th percentiles**, none of which are reported in charts like this from the 2017 stu

90th percentile	111
75th percentile	84
50th percentile	50
25th percentile	36
10th percentile	23

However, the 2006 study DOES provide these data points! This is good, because you can't calculate other percentiles unless you have full set of data or two statistical numbers, the mean and the standard deviation.

Grade 2 Winter

10th Percentile	18
20th Percentile	33
25th Percentile	43

So I use the 2006 numbers in my CKLA trackers, though I would have preferred to use the more recent ones.

25th Percentile	42
30th Percentile	49
40th Percentile	61
50th Percentile	72
60th Percentile	84
70th Percentile	94
75th Percentile	100
80th Percentile	107
90th Percentile	125

Multidimensional Fluency Scale

The original, or at least updated by one of the authors himself, version of this scale looks like th

	1	2
Expression and Volume	Reads in a quiet voice as if to get words out. The reading does not sound natural like talking to a friend.	Reads in a quiet voice. The reading sounds natural in part of the text, but the reader does not always sound like they are talking to a friend.
Phrasing	Reads word-by-word in a monotone voice.	Reads in two or three word phrases, not adhering to punctuation, stress and intonation.
Smoothness	Frequently hesitates while reading, sounds out words, and repeats words or phrases. The reader makes multiple attempts to read the same passage.	Reads with extended pauses or hesitations. The reader has many "rough spots."
Pace	Reads slowly and laboriously.	Reads moderately slowly.

CKLA's version of this scale, used in **Grade 2, Unit 4**, looks like this (rotated/transposed to res

	Labored	Developing
Phrasing	Mostly reads word-by-word	Attempts to make text meaningful but still struggles with decoding words
Prosody	Many long pauses, rereads, and multiple attempts	Attempts phrases, may still have word-by-word reading for some of passage
Pace	Very slow and laborious	Still hesitant and not fluid; very choppy

I have not found any reference to or rationale for these changes in category names, labels, nur

Phrasing and **Pace** have some similar content across the two versions:

	Phrasing (MDFS)	Phrasing (CKLA)	
1	Reads **word-by-word** in a monotone voice.	Mostly reads **word-by-word**	1
2	Reads in two or three word phrases, not adhering to punctuation, stress and	Attempts to make text meaningful but	2

2	adhering to punctuation, stress and intonation.	still struggles with decoding words	2
3	Reads with a mixture of run-ons, mid sentence pauses for breath, and some **choppiness**. There is reasonable stress and intonation.	May **stumble occasionally** over words	3
4	Reads with good phrasing; adhering to punctuation, stress and intonation.	Good expression and engagement with text	4

Prosody, by definition, includes elements of expression, volume, and smoothness ("reading wi
and stresses for the text," definition from [this page]), and it looks like CKLA did perhaps try to c

	Prosody (CKLA)		**Expression & Volume (MDFS**
1	Many long pauses, rereads, and **multiple attempts**	1	Reads in a quiet voice as if to get words out. The reading does not sound natural like talking to a friend.
2	Attempts phrases, may still have word-by-word reading for some of passage	2	Reads in a quiet voice. The reading sounds natural in part of the text, but the reader does not always sound like they are talking to a friend.
3	May read too fast and/or too slow without regard to textual signals	3	Reads with volume and expression. However, sometimes the reader slips into expressionless reading and does not sound like they are talking to a friend.
4	Observation of functional text signals and **meaningful expression**	4	Reads with varied volume and expression. The reader sounds like they are talking to a friend with their voice **matching the interpretation of the passage**.

So it's hard to make a one-on-one comparison between the two rubrics. To be honest, CKLA s

"May read too fast and/or too slow without regard to textual signals" is under Prosody

"Good expression and engagement with text" is under Phrasing, not **Prosody**.

"Attempts phrases, may still have word-by-word reading for some of passage" is und

Creating an Overall Level for the Rubric

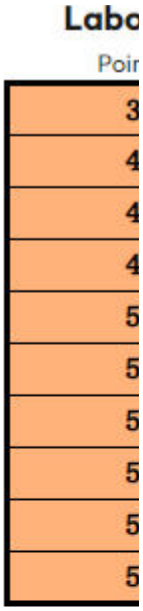
Even on the original MDFS, which uses numeric values 1-4 for the four categories, no overall s
categories can be misleading, but I also think people want to know what the three or four separ

For the purposes of assessment tracking in CKLA, I created a scale that would allow an averag
designation.
If **Labored = 1 point, Developing = 2 points, Mostly Fluent = 3 points,** and **Fluent = 4 poin**
overall.

In the chart to the right, the points represent how many

ways that total can be made. There are 12 ways to get a score of 7, for example: 1 + 2 + 4, or 2 + 2 + 3, or 3 + 1 + 3 ...

I divided the totals in what seemed like the most equitable way. Thinking realistically, there should be fewer students at the Labored and Fluent ends than in the middle.



Let's see if it works:
One student is scored as follows.

	Labored	Developing	Mostly Fluent	Fluent
Phrasing	**1 point**			
Prosody		**2 points**		
Pace		**2 points**		

For a total of **5 points**, of **Labored** overall. Yes, that works.

How about:

	Labored	Developing	Mostly Fluent	Fluent
Phrasing			**3 points**	
Prosody		**2 points**		
Pace				**4 points**

For a total of **9 points**, of **Mostly Fluent** overall. Looks good to me.

If you scored all one category, your total is solidly within my made-up ranges, which is great.

Labored + Labored + Labored = **3 points**, or **Labored** overall

Developing + Developing + Developing = **6 points**, or **Developing** overall

Mostly Fluent + Mostly Fluent + Mostly Fluent = **9 points**, or **Mostly Fluent** overal

Fluent + Fluent + Fluent = **12 points**, or **Fluent** overall

ıis: http://www.timrasinski.com/presentations/multidimensional_fluency_rubric_4_factors.pdf

3	4
Reads with volume and expression. However, sometimes the reader slips into expressionless reading and does not sound like they are talking to a friend.	Reads with varied volume and expression. The reader sounds like they are talking to a friend with their voice matching the interpretation of the passage.
Reads with a mixture of run-ons, mid sentence pauses for breath, and some choppiness. There is reasonable stress and intonation.	Reads with good phrasing; adhering to punctuation, stress and intonation.
Reads with occasional breaks in rhythm. The reader has difficulty with specific words and/or sentence structures.	Reads smoothly with some breaks, but self-corrects with difficult words and/ or sentence structures.
Reads generally at an appropriate rate throughout reading.	Reads at an appropriate conversational pace throughout the reading.

ɜemble the format above):

Mostly Fluent	Fluent
May stumble occasionally over words	Good expression and engagement with text
May read too fast and/or too slow without regard to textual signals	Observation of functional text signals and meaningful expression
Generally appropriate expression and rate	Smooth, appropriate pace for the text

ɲber of categories, or wording.

Pace (MDFS)	Pace (CKLA)
Reads **slowly and laboriously.**	Very **slow and laborious**
Reads moderately slowly.	Still hesitant and not fluid; very choppy

Reads moderately slowly.	Still hesitant and not fluid, very choppy
Reads **generally at an appropriate rate** throughout reading.	**Generally appropriate** expression and **rate**
Reads at an **appropriate conversational pace** throughout the reading.	Smooth, **appropriate pace** for the text

th expression – with the appropriate rhythm, tone, pitch, pauses,
ombine these two categories into one:

Smoothness (MDFS)

Frequently hesitates while reading, sounds out words, and repeats words or phrases. The reader makes **multiple attempts** to read the same passage.
Reads with extended pauses or hesitations. The reader has many “rough spots.”
Reads with occasional breaks in rhythm. The reader has difficulty with specific words and/or sentence structures.
Reads smoothly with some breaks, but self-corrects with difficult words and/ or sentence structures.

eems to throw content from one category into others:

/, not **Rate**.

er Prosody, not **Phrasing**.

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core breakdown is provided. Sometimes summarizing disparate
rate scores mean collectively.

ge of scores in Phrasing, Prosody, and Pace to assign an overall

ts, on a 3-category rubric, your total will be between 3 and 12 points

ored	Improving	Mostly Fluent	Fluent
nts	Points	Points	Points
3	6	8	10
4	6	8	10
4	6	8	10
4	6	8	10
5	6	8	10
5	6	8	10
5	6	8	11
5	6	8	11
5	6	8	11
5	6	8	12
	7	8	
	7	8	
	7	9	
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