Using Curriculum-Based Measurement for Reading Fluency and Writing

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References that support early reading, reading, and math

aimswebPlus (Pearson) annual fee or renewal $6.50 per student

EasyCBM.com Select LITE version (free). Option annual fee $39.99.

Maintained by the University of Oregon.

Hosp, M. K., Hosp, J. L., & Howell, K.W. (2016). *The ABCs of CBM-A practical guide to curriculum-based measurement.*2nd ed. New York: The Guildford Press.

Intervention Central (www.interventioncentral.org) (free)

Curriculum-Based Measurement Procedures for Assessing and Scoring Oral Reading Fluency

One minute timed

Say to the student: *"When I say 'start,' begin reading aloud at the top of this page. Read across the page* [demonstrate by pointing]. *Try to read each word. If you come to a word you don't know, I'll tell it to you. Be sure to do your best reading. Are there any questions?"*
Say, *"Start."*

Follow along on your copy of the story, marking the words that are read incorrectly. If a student stops or struggles with a word for 3 seconds, tell the student the word and mark it as incorrect.
Place a vertical line after the last word read and thank the student.

The following guidelines determine which words are counted as correct:

1. *Words read correctly.* Words read correctly are those words that are pronounced correctly, given the reading context.
   a. The word *read* must be pronounced *reed*, not as *red*, when presented in the context of "He will read the book."
   b. Repetitions are not counted as incorrect.
   c. Self-corrections within 3 seconds are counted as correctly read words.
2. *Words read incorrectly.* The following types of errors are counted: (a) mispronunciations, (b) substitutions, and (c) omissions. Further, words not read within 3 seconds are counted as errors.
   a. *Mispronunciations* are words that are misread: *dog* for *dig*.
   b. *Substitutions* are words that are substituted for the stimulus word; this is often inferred by a one-to-one correspondence between word orders; *dog* for *cat*.
   c. *Omissions* are words skipped or not read; if a student skips an entire line, each word is counted as an error.
3. *Three-second rule.* If a student is struggling to pronounce a word or hesitates for 3 seconds, the student is told the word, and it is counted as an error.

Student Name: _____   Date: _____

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1. Place the Student Copy in front of the student. Point to the names on the Student Copy as you read them:

   "This is a story about <u>Jessie</u>. I want you to read this story to me. You'll have 1 minute to read as much as you can. When I say "begin," start reading aloud at the top of the page. Do your best reading. If you have trouble with a word, I'll tell it to you. Do you have any questions? Begin."

2. Start the timer.
3. While the student is reading, mark errors with a slash (/).
4. At 1 minute, mark the last word read with a bracket (]).
5. When the student gets to a logical stopping place, say "**Stop.**"

<u>Jessie</u> was a rabbit. She was small and very, very quiet. She had	13
soft grey fur and a snow white tail. She lived in a big field with many	29
other animals. There were lizards and snakes. She saw them mostly in	41
the summer when it was hot. There were tiny mice. They liked to run	55
really fast. The mice got nervous if they were out in the open for very	70
long, so Jessie did not see them too often. Many birds lived in the field	85
too. Some were small. Others were big. Jessie was not afraid of these	98
birds. But there was one type of bird that Jessie was afraid of. Her	112
mom told her to be careful when this type of bird was around. So	126
Jessie always looked carefully before she went into the field to play.	138
She wanted to know if there was a hawk around!	148
One day Jessie was hopping around the field. She stopped now and	160
then to eat bits of grass. She also stopped to check to make sure there	175
were no hawks in the sky. Then, she found a patch of extra tasty grass.	190
It was sweet and moist. It tasted better than anything Jessie had ever	203
eaten before. After a little while, Jessie remembered what her mother	214
had said. She checked the sky for danger. She saw a hawk flying far up	229
in the sky. She turned and ran back to the bushes where her home was	244
hidden. She was lucky the hawk had not seen her.	254

Total Words Read:_____ - # of Errors:_____ = CWPM:_____

Student Name: _____   Date: _____

Word Reading

Directions: Place the "Word Reading Student Copy" probe in front of the student and say, **"Please read from this list of words. Read across the page and then on to the next row."** Demonstrate by sweeping your finger from left to right across the first two rows of words. Start timing when the student begins reading. Mark a bracket] after the last word read. If a student self corrects, write S.C. above the word and count as correct. If they say an incorrect word, mark a ~~slash~~ through the word, and count as incorrect. If they hesitate more than 3 seconds, supply the word and count as incorrect. If a student skips a word, circle the word and count it as incorrect. **Note: This is a 60 second timed test.**

I	an	way	my	it	sun	he	miss	8
great	wish	all	hand	work	tell	stop	own	16
left	cover	ball	low	class	bill	eat	under	24
below	important	always	deep	team	inside	music	boom	32
side	corner	dollars	branch	child	fell	seven	life	40
found	case	passed	hunting	didn't	sharp	spend	dusty	48
father	insects	history	power	does	easy	case	grain	56
isn't	matter	ready	wait	eight	trade	stream	born	64
shape	string	early	inflate	waves	rules	warm	paint	72
clear	scale	sense	radio	while	guess	clear	terror	80
base	single	difference	even	page	cattle	serve	ago	88
probably	caught	control	return	strange	sight	fossil	belief	96
branches	action	exciting	suppose	equal	protest	poem	rise	104
chance	blood	business	capital	general	thick	mind	terms	112
settled	understand	tube	entered	value	fair	lifted	spread	120
famous	statement	brought	island	federal	tube	fare	duty	128
company	astronaut	military	property	observe	mulch	wire	legal	136
indicate	confusion	direction	period	though	crisis	urban	senior	144
divided	cultivate	thousands	irrigate	planets	adapt	desert	human	152
received	deception	company	among	predict	settled	course	born	160
electric	experiment	territory	uncle	cloud	sure	pole	moon	168
current	community	weight	probably	journal	size	object	under	176

Correct _____

TABLE 1
Oral reading fluency norms, grades 1-8

Grade	Percentile	Fall WCPM	Winter WCPM	Spring WCPM
1	90		81	111
	75		47	82
	50		23	53
	25		12	28
	10		6	15
	SD		32	39
	Count		16,950	19,434
2	90	106	125	142
	75	79	100	117
	50	51	72	89
	25	25	42	61
	10	11	18	31
	SD	37	41	42
	Count	15,896	18,229	20,128
3	90	128	146	162
	75	99	120	137
	50	71	92	107
	25	44	62	78
	10	21	36	48
	SD	40	43	44
	Count	16,988	17,383	18,372
4	90	145	166	180
	75	119	139	152
	50	94	112	123
	25	68	87	98
	10	45	61	72
	SD	40	41	43
	Count	16,523	14,572	16,269
5	90	166	182	194
	75	139	156	168
	50	110	127	139
	25	85	99	109
	10	61	74	83
	SD	45	44	45
	Count	16,212	13,331	15,292
6	90	177	195	204
	75	153	167	177
	50	127	140	150
	25	98	111	122
	10	68	82	93
	SD	42	45	44
	Count	10,520	9,218	11,290
7	90	180	192	202
	75	156	165	177
	50	128	136	150
	25	102	109	123
	10	79	88	98
	SD	40	43	41
	Count	6,482	4,058	5,998
8	90	185	199	199
	75	161	173	177
	50	133	146	151
	25	106	115	124
	10	77	84	97
	SD	43	45	41
	Count	5,546	3,496	5,335

WCPM: Word correct per minute
SD Standard deviation
Count: Number of student scores

INFORMAL ASSESSMENT-CURRICULUM-BASED ASSESSMENT FOR WRITING

WRITTEN EXPRESSION

Directions for 3-Minute Administration of Written Expression

Materials:

1. Story starter.
2. Lined paper for student responses.
3. Stopwatch or timing tape.

Directions:

1. Select an appropriate story starter.
2. Provide the student with a pencil and a sheet of lined paper.
3. Say these specific directions to the student:

   Say to the student(s): "*Today I want you to write a story. I am going to read a sentence to you first and then I want you to compose a short story about what happens. You will have 1 minute to think about what you will write and 3 minutes to write your story. Remember to do your best work. If you don't know how to spell a word, you should guess. Are there any questions?* (Pause). *Put your pencils down and listen.*

   For the next minute, think about... (insert story starter)."

4. After reading the story starter, begin your stopwatch and allow 1 minute for students to "think." (Monitor students so that they do not begin writing). After 30 seconds say: "*You should be thinking about* (insert story starter)."
5. At the end of 1 minute say: "Now begin writing." Restart your stopwatch.
6. Monitor students' attention to the task. Encourage students to work only if they are looking around or talking.
7. After 90 seconds say: "*You should be writing about* (insert story starter)."
8. At the end of 3 minutes say: "*Stop. Put your pencils down.*"

TOTAL WORDS WRITTEN (TWW)

The total number of words written regardless of spelling or context.

Abbreviations:
> Commonly used abbreviations are counted as words.

Hyphenated Words:
> Each morpheme separated by a hyphen(s) is counted as an individual word if it can stand alone.

Story Titles:
> Words written in the title are counted as words written.

WORDS SPELLED CORRECTLY (WSC)

A word is spelled correctly if it can stand alone as a word in the English language.
Contextual clarity is not an issue.

Hyphenated Words
> Each morpheme separated by a hyphen(s) is counted as an individual word if it can stand alone and is spelled correctly.
> If one or more or the morphemes separated by a hyphen(s) cannot stand alone, the entire sequence is counted as one word if it is spelled correctly.

Abbreviations
> Commonly used abbreviations (Dr., Mrs., Blvd.) are counted as words.

Story Titles
> Words written in the title, if spelled correctly, are included in the correctly spelled word count.

Capitalized Words
> Proper nouns must be capitalized to be considered as correct. Capitalization of the first word in a sentence is not required for the words to be spelled correctly.

Words with Reversed Letters
> Words containing reversed letters are counted as correctly spelled words unless the reversed letter causes a word to be spelled incorrectly. This rule applies most frequently to the letters p, b, q, d, n, and u.

Contractions
> For a contraction to be counted as a correctly spelled word, an apostrophe in the correct place in the word is required if the word cannot stand alone.

SPECIAL SCORING RULES FOR CORRECT WRITING SEQUENCE

Scoring Procedures for Correct Writing Sequence Count

1. Read the entire writing sample.

2. Based on the context of each phrase, score each written sample according to units (word/word or word/punctuation) that are acceptable within the context of what is written. The term "acceptable" means that the writing sequence has to be syntactically and semantically correct.

3. The caret method for scoring correct and incorrect writing sequences will be used. This involves placing a caret (^) between word sequences and between words and punctuation marks. If the sentence is correct, there will be one more caret (^) than words because a caret is placed before the first word if it is correctly capitialized.

Ex.   *He went home early today.*

   ^ *He* ^ *went* ^ *home* ^ *early* ^ *today* ^. 6 correct sequences.

Scoring rules for correct writing sequence count

1. The first word of a sentence must be capitalized. Proper nouns must be capitalized. *Words that should not be capitalized must begin with a lower-case letter.* **(To be discussed in relation to handwriting)**

2. Ending punctuation must be present and correct.

3. Commas are not counted as part of a sequence unless they include a series of nouns. Quotes, colons, and semicolons are not counted.

4. Words must be spelled correctly. With a misspelled word, the sequence on both sides of the word should be marked incorrect. Capital letters must be used when needed in words in order for those words to be considered spelled correctly.

5. Pronouns must be used correctly.

6. Words showing possession or is used as a contraction must have an apostrophe.

7. Sentences that begin with conjunctions are considered syntactically correct.

Ex.   *I want to go to the movies tonight.*

   ^ *I* ^ *want* ^ *to* ^ *go* ^ *to* ^ *the* ^ *movies* ^ *tonight* ^. = 9 correct sequences

   i want ^ *to* ^ *go* ^ *to movies tonite* = 3 correct sequences

CBM 3-minute example

Peter is a 4th grade student. All scores were determined to be at the 3rd grade level.

Story starter—Yesterday I made a beautiful.......

Yestaday I made a beutiful picture of my dog his nam is Puff and he has brow hair. His paws are whit and in my picture he has dirty fete. He plays in mud Puff has a red ball and I like play with him. Puff picture is on my wall I like to look Puff

Correct version of his writing

Yesterday I made a beautiful picture of my dog. His name is Puff and he has brown hair. His paws are white and in my picture he has dirty feet. He plays in mud. Puff has a red ball and I like to play with him. Puff picture is on my wall. I like to look at Puff.

Child's writing Sample Scored for Sequences

yestaday I^ made ^a beutiful picture ^of ^my ^dog his nam is^ Puff ^and ^he ^has brow

hair^. ^His ^ paws ^are whit and^ in ^my ^picture ^ he^ has^ dirty fete. ^He ^plays ^in

^mud Puff ^has ^a red ^ball ^and ^I ^like play ^with ^him ^. Puff picture ^is ^on ^my

^wall I ^like ^to ^look Puff

Total Words Written (TWW) _____58_____

Words Correctly Spelled (WCS) _51_____

Correct Word Sequences (CWS) _39_____

TABLE 6.1. Norms for Writing CBM: Correct Writing Sequences (CWS)

Grade	Percentile	aimsweb (2015)		
		Fall (CWS)	Winter (CWS)	Spring (CWS)
K	90%	12	16	19
	75%	8	12	15
	50%	4	7	9
	25%	1	1	3
	10%	0	0	1
1	90%	7	16	26
	75%	4	10	18
	50%	2	5	11
	25%	1	2	5
	10%	0	1	2
2	90%	23	36	39
	75%	15	25	30
	50%	9	16	21
	25%	4	9	13
	10%	2	5	8
3	90%	38	48	56
	75%	27	35	43
	50%	18	24	30
	25%	11	15	21
	10%	5	9	13
4	90%	50	57	62
	75%	39	45	51
	50%	28	34	38
	25%	18	23	27
	10%	10	14	18
5	90%	56	63	69
	75%	44	52	57
	50%	34	39	46
	25%	24	28	32
	10%	15	19	22
6	90%	65	72	78
	75%	51	59	66
	50%	37	47	53
	25%	25	35	40
	10%	16	24	29
7	90%	71	73	76
	75%	60	62	66
	50%	47	52	53
	25%	35	40	42
	10%	23	29	31
8	90%	73	79	81
	75%	62	69	69
	50%	49	56	56
	25%	37	44	44
	10%	24	31	35

(aimsweb, 2015; Hosp, Hosp, & Howell, 2016)

TABLE 6.2. Norms for Writing CBM: Words Spelled Correct (WSC)

Grade	Percentile	aimsweb (2015)		
		Fall (WSC)	Winter (WSC)	Spring (WSC)
K	90%	17	11	16
	75%	3	5	10
	50%	1	2	6
	25%	0	1	3
	10%	0	0	1
1	90%	14	22	31
	75%	9	15	23
	50%	5	10	16
	25%	2	5	10
	10%	1	2	5
2	90%	23	39	42
	75%	16	29	33
	50%	10	21	24
	25%	6	12	17
	10%	3	6	11
3	90%	38	47	54
	75%	30	38	43
	50%	21	28	33
	25%	13	18	23
	10%	8	11	16
4	90%	51	55	57
	75%	41	45	46
	50%	30	35	35
	25%	21	25	25
	10%	13	17	17
5	90%	57	63	75
	75%	48	51	62
	50%	36	40	49
	25%	26	29	38
	10%	18	20	27
6	90%	68	76	76
	75%	57	63	66
	50%	44	50	56
	25%	32	40	45
	10%	20	30	35
7	90%	82	72	82
	75%	70	63	73
	50%	52	52	63
	25%	39	40	51
	10%	27	30	41
8	90%	77	83	93
	75%	69	72	82
	50%	55	60	71
	25%	43	48	60
	10%	26	36	48

(aimsweb, 2015; Hosp, Hosp, & Howell, 2016)

TABLE 6.3. Norms for Writing CBM: Total Words Written (TWW)

Grade	Percentile	aimsweb (2015)		
		Fall (TWW)	Winter (TWW)	Spring (TWW)
K	90%	10	16	20
	75%	3	10	14
	50%	1	5	10
	25%	1	2	6
	10%	0	1	3
1	90%	17	26	35
	75%	12	19	28
	50%	7	13	20
	25%	4	8	14
	10%	2	5	9
2	90%	30	42	49
	75%	22	34	41
	50%	15	25	32
	25%	10	18	24
	10%	5	11	16
3	90%	44	53	59
	75%	35	44	49
	50%	26	34	39
	25%	19	25	30
	10%	13	17	23
4	90%	55	60	66
	75%	45	51	56
	50%	35	41	45
	25%	26	31	35
	10%	17	22	25
5	90%	60	68	74
	75%	51	59	63
	50%	41	48	51
	25%	30	37	41
	10%	21	27	31
6	90%	71	78	85
	75%	58	66	73
	50%	46	55	59
	25%	35	43	47
	10%	24	33	36
7	90%	79	84	87
	75%	67	72	74
	50%	53	60	61
	25%	42	48	48
	10%	32	37	37
8	90%	90	81	90
	75%	78	70	79
	50%	63	59	69
	25%	50	49	58
	10%	38	38	47

(aimsweb, 2015; Hosp, Hosp, & Howell, 2016)

Intervention

For intervention planning, count the total number of words (correct & incorrect), total number of correctly spelled words, and total number of correct word sequences. The student can chart his/her own data and set goals with the SLP. Data can be used for RtI planning.

SUMMARY CHART OF ALL MEASUREMENTS

Student's score:

Total Words Written _____

Number of words per minute _____ (3 minute sample)

Total number of Correctly Spelled Words _____

Number of correctly written words per minute _____ (3 minute sample)

Total number of Correct Word Sequences _____

Notes:

WRITTEN EXPRESSION INTERVENTION

Structuring skills
-use of all types of sentences (simple, compound, and complex)
-begins, combines, and expands sentences
-combines sentences into paragraphs
-uses topic sentences in paragraphs
-identifies cause and effect; and compare and contrast ideas
-uses the organizational pattern required (e.g., poetry, plays, letters, narratives, etc.)
-uses genre characteristics (e.g., science fiction, biography, autobiography, poetry, narrative, etc.)

Language skills
-uses idioms, similes, and metaphors
-uses alliteration, rhyme, and other poetic structures
-selects synonyms and antonyms as needed
-demonstrates paraphrasing

Four types of sentence work (use reading material from the student's grade)

1. Sentence unscrambling
-The student unscrambles sentences that are taken from class readings. Present them as clauses, phrases, or as individual words.

2. Sentence imitating
-The student creates a sentence that resembles a sentence from a book read in class.

3. Sentence combining
-The teacher/SLP selects a long sentence from a book that the class is reading. Divide the sentence into short sentences and ideas. The child is to structure a new sentence containing all the ideas and compares the meaning to the original sentence.

4. Sentence expanding
-The student is asked to expand on a sentence selected from a class reading. The child then compares the new sentence to the original one and discusses the changes that were made. (Tompkins, 2004)

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