



AIMSweb
CHARTING THE PATH TO LITERACY

Administration and Scoring of *READING-MAZE (R-MAZE)* for Use in General Outcome Measurement

Power Point Authored by
Jillyan Kennedy

Based on *Administration and Scoring of Reading R-MAZE for Use
with AIMSweb Training Workbook*
By
Michelle M. Shinn, Ph.D.
Mark R. Shinn, Ph.D

AIMSweb
CHARTING THE PATH TO LITERACY

Overview of the CBM R-MAZE Assessment Training Session

The Purpose is to provide background information, data collection procedures, and practice opportunities to administer and score Reading MAZE.

Designed to accompany:

- *Administration and Scoring of Reading R-MAZE for Use in General Outcome Measurement Training Workbook*
- Standard R-MAZE Reading Passages
- AIMSweb Web-based Software
- Embedded QuickTime Examples, DVD or VHS Training Video

AIMSweb
CHARTING THE PATH TO LITERACY

Training Session Goals

1. Brief review of Curriculum Based Measurement (CBM) and General Outcome Measurement (GOM).
 - Its Purpose
 - Its Origin
2. Learn how to administer and score CBM R-MAZE through applied practice.

AIMSweb
CHARTING THE PATH TO LITERACY

General Outcome Measurements from Other Fields

- Medicine measures height, weight, temperature, and/or blood pressure.
- Federal Reserve Board measures the Consumer Price Index.
- Wall Street measures the Dow-Jones Industrial Average.
- Companies report earnings per share.
- McDonald's measures how many hamburgers they sell.

AIMSweb
CHARTING THE PATH TO LITERACY

Common Characteristics of General Outcome Measures (GOMS)

- Simple, accurate, and reasonably inexpensive in terms of time and materials.
- Considered so important to doing business well that they are routine.
- Are collected on an ongoing and frequent basis.
- Shape/inform a variety of important decisions.

AIMSWEB
CHANGING THE WAY TO LITERACY

Origins of CBM as General Outcome Measures

Curriculum-Based Measurement (CBM) was developed more than 20 years ago by Stanley Deno at the University of Minnesota through a federal contract to develop a reliable and valid measurement system for evaluating basic skills growth.

CBM is supported by more than **20 years of school-based research** by the US Department of Education.

Supporting documentation can be found in more than **150 articles, book chapters, and books in the professional literature** describing the use of CBM to make a variety of important educational decisions.

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM is Designed to Provide Educators With...

The same kind of evaluation technology as other professions!

Powerful measures that are:

- Simple
- Accurate
- Efficient indicators of student achievement that guide/inform a variety of decisions

AIMSWEB
CHANGING THE WAY TO LITERACY

R-MAZE is Used for Scientific Reasons Based on Evidence

- It is a reliable and valid indicator of student achievement.
- It is simple, efficient, and of short duration to facilitate frequent administration by teachers.
- It provides assessment information that helps teachers plan better instruction.
- It is sensitive to the improvement of students' achievement over time.
- It is easily understood by teachers and parents.
- Improves achievement when used to monitor progress.

AIMSWEB
CHANGING THE WAY TO LITERACY

Curriculum Based Measurement Reading R-MAZE

CBM R-MAZE is designed to provide educators a more complete picture of students' reading skills, especially when comprehension problems are suspected.

Area	Timing	Test Arrangements	What is Scored?
CBM R-MAZE Reading	3 minutes	Individual, Small Group, or Classroom Group	# of Correct Answers

AIMSWEB
CHANGING THE WAY TO LITERACY

Curriculum Based Measurement Reading R-MAZE (Continued)

- R-MAZE is a multiple-choice cloze task that students complete while reading silently.
- The students are presented with 150-400 word passages.
- The first sentence is left intact.
- After the first sentence, every 7th word is replaced with three word choices inside a parenthesis.
- The three choices consist of:
 - 1) Near Distracter
 - 2) Exact Match
 - 3) Far Distracter

AIMSWEB
CHANGING THE WAY TO LITERACY

Jason sat and waited for his grandfather to arrive. He always enjoyed his grandfather's visits. (Jason, Saturday, said) could see the old car slowly (we, play, make) its way down the street toward (his) house. Grandpa's old car pulled into (an, what, the) driveway.

"Grandpa! Grandpa!" Jason shouted. "You're (same, here, house)?"

"Hello, Jason. How is my favorite (backyard, waiting, grandson)?"

Grandpa chuckled.

"Well, I'm just dandy." (said, for, played) Jason. "Thank you for asking."

Grandpa (or, and, his) Jason walked into the house. Jason (asked, like, helped) his grandfather carry his bags. They (wore, spent, in) a wonderful day together playing in (old, an, the) backyard. Jason sat by his grandfather (them, that, said) night.


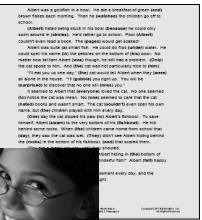
Sample Grade 4 R-MAZE Passage

AIMSWEB
CHANGING THE WAY TO LITERACY

Items Administrators Need Before Testing

What the tester uses for testing:


- Stopwatch
- Appropriate CBM R-MAZE answer key
- Appropriate standardized directions
- List of students to be tested.

AIMSWEB
CHANGING THE WAY TO LITERACY

Additional Assessment Aids

- A List of students to be tested
- Stopwatch (required—digital preferred)



AIMSWEB
CHANGING THE WAY TO LITERACY

Setting up Assessment Environment

Assessment environments are flexible and could include...

- The classroom if assessing the entire class.
- A cluster of desks or small tables in the classroom for small group assessment.
- Individual desks or "stations" for individual assessment.

AIMSWEB
CHANGING THE WAY TO LITERACY

Things You Need to do While Testing

Follow the standardized directions:

- Attach a cover sheet that includes the practice test so that students do not begin the test right away.
- Do a simple practice test with younger students.
- Monitor to ensure students are circling answers instead of writing them.
- Be prepared to "Prorate" for students who may finish early.
- Try to avoid answering student questions.
- Adhere to the end of timing.

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM R-MAZE Standard Directions

- 1) Pass R-MAZE tasks out to students. Have students write their names on the cover sheet, so they do not start early. Make sure they do not turn the page until you tell them to.
- 2) Say this to the student (s):

When I say 'Begin' I want you to silently read a story. You will have 3 minutes to read the story and complete the task. Listen carefully to the directions. Some of the words in the story are replaced with a group of 3 words. Your job is to circle the 1 word that makes the most sense in the story. Only 1 word is correct.
- 3) Decide if a practice test is needed. Say . . .

Let's practice one together. Look at your first page. Read the first sentence silently while I read it out loud: 'The dog, apple, broke, ran after the cat.' The three choices are apple, broke, ran. 'The dog apple after the cat.' That sentence does not make sense. 'The dog broke after the cat.' That sentence does not make sense. 'The dog ran after the cat.' That sentence does make sense, so circle the word ran. (Make sure the students circle the word ran.)

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM R-MAZE Standard Directions (Continued)

Let's go to the next sentence. Read it silently while I read it out loud. 'The cat ran fast, green, for up the hill. The three choices are fast, green, for up the hill. Which word is the correct word for the sentence? (The students answer fast)

Yes, 'The cat ran fast up the hill' is correct, so circle the correct word fast. (Make sure students circle fast)

Silently read the next sentence and raise your hand when you think you know the answer. (Make sure students know the correct word. Read the sentence with the correct answer)

That's right. 'The dog barked at the cat' is correct. Now what do you do when you choose the correct word? (Students answer 'Circle it'. Make sure the students understand the task)

That's correct, you circle it. I think you're ready to work on a story on your own.

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM R-MAZE Standard Directions (Continued)

- 4) Start the testing by saying . . .

When I say 'Begin' turn to the first story and start reading silently. When you come to a group of three words, circle the 1 word that makes the most sense. Work as quickly as you can without making mistakes. If you finish a/ the page/first side, turn the page and keep working until I say 'Stop' or you are all done. Do you have any questions?

- 5) Then say, 'Begin.' Start your stopwatch.
- 6) Monitor students to make sure they understand that they are to circle only 1 word.
- 7) If a student finished before the time limit, collect the student's R-MAZE task and record the time on the student's test booklet.
- 8) At the end of 3 minutes say: **Stop. Put your pencils down. Please close your booklet.**
- 9) Collect the R-MAZE tasks.

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM R-MAZE Familiar Directions

- 1) After the students have put their names on the cover sheet, start the testing by saying . . .

When I say 'Begin' turn to the first story and start reading silently. When you come to a group of three words, circle the 1 word that makes the most sense. Work as quickly as you can without making mistakes. If you finish a/ the page/first side, turn the page and keep working until I say 'Stop' or you are all done. Do you have any questions?

- 2) Then say, 'Begin.' Start your stopwatch.
- 3) Monitor students to make sure they understand that they are to circle only 1 word.
- 4) If a student finished before the time limit, collect the student's R-MAZE task and record the time on the student's test booklet.
- 5) At the end of 3 minutes say: **Stop. Put your pencils down. Please close your booklet.**
- 6) Collect the R-MAZE tasks.

AIMSWEB
CHANGING THE WAY TO LITERACY

Things to Do After Testing

- Score immediately to ensure accurate results!
- Determine the number of words (items) correct.
- Use the answer key and put a slash (/) through incorrect words.

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM R-MAZE Scoring

What is correct?
The students circles the word that matches the correct word on the scoring template.

What is incorrect?
An answer is considered an error if the student:

- 1) Circles an incorrect word
- 2) Omits word selections other than those the student was unable to complete before the 3 minutes expired

AIMSWEB
CHANGING THE WAY TO LITERACY

Making Scoring Efficient

- 1) Count the total number of items up to the last circled word.
- 2) Compare the student answers to the correct answers on the scoring template. Mark a slash (/) through incorrect responses.
- 3) Subtract the number of incorrect answers from the total number of items attempted.
- 4) Record the total number of correct answers on the cover sheet followed by the total number of errors (e.g., 35/2).

AIMSWEB
CHANGING THE WAY TO LITERACY

CBM R-MAZE Prorating

If a student finishes all the items before 3 minutes, the score may be prorated.

- 1) When the student finished, the time must be recorded and the number of correct answers counted. For example, the student may have finished in 2 minutes and correctly answered 40 items.
- 2) Convert the time taken in seconds.
(2 minutes = 120 seconds)
- 3) Divide the number of seconds by the number correct.
(120/40 = 3)
- 4) Calculate the number of seconds in the full 3 minutes.
(3 minutes = 180 seconds)
- 5) Divide the number of full seconds by the calculated value from step 3.
(180/3 = 60)

AIMSWEB
CREATING THE PATH TO LITERACY

Summary

You now have the building blocks to begin **CBM R-MAZE** to ensure literacy growth.

- Practice to automaticity --You'll become more efficient
- Check IRR using the AIRS for accuracy/efficiency with a colleague
- Stay in tune by periodically checking AIRS

AIMSWEB
CREATING THE PATH TO LITERACY

Practice Exercise 1: Let's Score

Practice Maze 1: Rick
Rick, a 3rd grader on a Grade 3 Maze

Once upon a time there was a merchant whose wife died, leaving him with three daughters.

The two older daughters were good-looking (but stand, there) very disagreeable. They cared only for (until, they/for/hers, himself) and for their appearance; they spent (pallace, wicked, (once) of the time admiring their reflections (of, of, turned) a looking glass.

The third and youngest (once, daughter, gate) was quite different from the other (him, two, beast). She was beautiful—so beautiful that (it, loved, she) was known as Beauty. She was (also, age, dream) good and kind. Everyone loved Beauty, (changed, by, except) for her sisters, who were jealous (handsome, of, from) her. They hated her.

One (foot, he, day) the merchant heard that a ship was (expected, and, shivered) in a far away port with a (valuable, high, whisper) cargo for him. He prepared at (she, still, once) to set off on the long (journey, fountain) to the port, for he hoped (struck, for, to) make a great deal of money (by, of, voice) selling the cargo there.

R-CBM Workbook:
Page 17

Answer=11 words correct with 4 errors

AIMSWEB
CREATING THE PATH TO LITERACY

Practice Exercise 2: Let's Score

Practice Maze 1: Dave
Dave, another 3rd grader on the same Grade 3 Maze.

Once upon a time there was a merchant whose wife died, leaving him with three daughters.

The two older daughters were good-looking (but stand, there) very disagreeable. They cared only for (until, they/for/hers, himself) and for their appearance; they spent (pallace, wicked, (once) of the time admiring their reflections (of, of, turned) a looking glass.

The third and youngest (once, daughter, gate) was quite different from the other (him, two, beast). She was beautiful—so beautiful that (it, loved, she) was known as Beauty. She was (also, age, dream) good and kind. Everyone loved Beauty, (changed, by, except) for her sisters, who were jealous (handsome, of, from) her. They hated her.

One (foot, he, day) the merchant heard that a ship was (expected, and, shivered) in a far away port with a (valuable, high, whisper) cargo for him. He prepared at (she, still, once) to set off on the long

Answer=5 words correct with 9 errors

AIMSWEB
CREATING THE PATH TO LITERACY

Appendix A-Checking Out Accuracy in Test Administration

If we use the standardized instructions and score correctly, different examiners should obtain about the same results. To ensure that examiners are consistent in administration and scoring, we recommend "check outs," using the accuracy of implementation rating scale (AIRS) like the one below.

Maze Accuracy of Implementation Rating Scale (AIRS)

Examiner: _____ Date: Observation 1 _____
 Observer: _____ Observation 2 _____
 _____ Observation 3 _____

X = completed accurately O = incorrect

Step	Observation 1	Observation 2	Observation 3
Distributes Maze so students start when appropriate			
Says standardized directions			
Uses necessary practice text			
Says "Begin"			
Starts stopwatch at correct time			
Monitors for "stalling"			
Times accurately			
Records time for presenting			
Says "Stop"			
Stops stopwatch			
Monitors to ensure students stop			
Collects Mazes			

R-CBM Workbook:
Page 19

AIMSWEB
CREATING THE PATH TO LITERACY

THE END.