The Development of the easyCBM CCSS Reading Assessments:

Grade 3

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Abstract

In this technical report, we document the development and piloting of easyCBM reading measures aligned to the Common Core State Standards, designed for use in screening students at risk for reading difficulty and monitoring their progress as they develop reading skills. The measures, which assess students' ability to respond to multiple-choice reading comprehension questions, were designed with the specific needs of students classified as "persistently low-performing". Sub-tests include *Read to Perform a Task, Informational Text,* and *Short Literary Text,* organized together into a comprehensive Common Core Reading Assessment. We begin this report by introducing the student population for which these measures were originally developed. Then, we describe the two main approaches used in the development of the measures, with a focus first on content validity and then on the psychometric properties underlying the creation of comparable alternate forms. We include the results of our Item Response Theory (IRT) modeling used during test development. For ease of reference, we present the results for each grade level's analyses in its own technical report yet repeat the introductory sections across all technical reports in this series, as the development process and the research base on which these assessments were developed does not vary by grade.

The Development of the easyCBM CCSS Reading Assessments: Grade 3

(Technical Report No. 1221)

As data-based decision making and Response to Intervention (RTI) gain popularity, the
need increases for reliable measures of reading proficiency appropriate for use with students who
struggle in that construct. Although fluency-based measures have a long-standing tradition of
successful application in school settings, few would argue that it is enough to be a *fluent* reader;
to be a competent reader, one must also be able to comprehend the material one is reading. Thus,
there is an increasing call for direct measures of comprehension, particularly measures that
assess students' ability to understand and interpret a variety of texts (including non-fiction and
graphics-based text display). The call for states to move toward adopting the Common Core
State Standards (CCSS) in literacy—standards which specify that students demonstrate facility
with a variety of text types—prompted us to develop these measures with two goals in mind.
First, we the assessments must reflect the type of reading called for in the CCSS. Second, the
measures must be appropriate for use with a wide range of students, with a particular emphasis
on students who struggle in the area of reading. Our focus with the measures discussed in this
technical report was on creating measures appropriate for use with students who are significantly
under-performing in the area of reading when compared to their same-grade peers.

Persistent Low-Performers

The *Improving the Academic Achievement of the Disadvantaged; Individuals With
Disabilities Education Act* (IDEA) specifies that approximately 20% of students with disabilities
might most appropriately be assessed based on grade-level content standards but modified
academic achievement standards. This subgroup of students with disabilities, sometimes referred
to as the 2% student population in acknowledgment that they would make up roughly 2% of the

student population as a whole, are most likely students with disability categories that are not listed in the IDEA. Students in the 2% population are generally found to not respond to interventions persistently (McMaster, Fuchs, Fuchs, & Compton, 2005, Torgensen, Alexander, Wagner, Rashotee, Voeller, & Conway, 2001). Providing persistently low-performing students with appropriate assessments is important because assessments that are too challenging may demonstrate a floor effect, simultaneously reducing students' motivation to continue to try on future assessments, whereas assessments that are not sufficiently challenging may not provide information useful to educators when making instructional decisions for these students.

The easyCBM CCSS reading assessments are intended to provide educators with accessible measures to assess students' reading comprehension. As part of the suite of reading assessments available on the online easyCBM learning system (Alonzo, Ulmer, Tindal, & Glasgow, 2006), the easyCBM CCSS reading measures are designed to provide a bridge between the easyCBM Passage Reading Fluency (PRF) measures and the lengthier and more cognitively challenging easyCBM Multiple Choice Reading Comprehension (MCRC) measures. They were developed to include both benchmark / screening and progress monitoring assessments.

Universal Design for Assessments

Assessments that are universally designed encourage testing conditions that are accessible and fair to a wide range of students. Some considerations taken into account when designing assessments that are universally designed include: (a) measuring true constructs while eliminating irrelevant ones, (b) recognizing the diversity of the test-taker population, (c) providing texts that are concise and clear, (d) having clear format and visual information, and (e) the ability to change formatting without compromising the meaning or difficulty of the assessment. Universally Designed assessments aim to provide valid interpretation of all test-

takers' abilities and skills, including those with disabilities (Johnstone, Altman, & Thurlow, 2006).

The measurement development team followed guidelines for using Universal Design elements in assessments as recommended by the NCEO (Johnstone, Altman, & Thurlow, 2006). The team also utilized the Test Accessibility and Modification Inventory (TAMI) (Beddow, Kettler, & Elliott, 2008). These tools were used to enhance accessibility and fairness measuring reading skill of our target test-takers.

Common Core State Standards

These assessments are designed to address the Common Core State Standards for reading in Literature, Informational Text, and Literacy in Science and Technical Subjects (retrieved April 2, 2012 from http://www.corestandards.org/). The *Literary Text* sub-tests assess students' ability to understand key ideas and details and identify elements related to craft and structure that contribute to their ability to discern the meaning of a wide range of text types varying in complexity. The texts include stories, short dramas, and poetry. The *Informational Text* and *Read to Perform a Task* sub-tests present students with a wide range of non-fiction text, varying in complexity, and require students to demonstrate their ability to understand key ideas and details and identify elements of the writing craft and structure that contribute to the meaning of the text. Texts for these sub-tests are drawn from a variety of content areas, and include biographies and autobiographies, history, social studies, science, and the arts; as well as technical texts, including directions, forms, and information displayed in graphs, charts, or maps on a range of topics.

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Methods

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Instrument Development

The easyCBM CCSS Reading assessments were written by a team of educators with

experience teaching students in the grade levels for which the tests were intended to be used and particular expertise working with struggling readers. All item writers received training on Universal Design for Assessment, item development, and the content standards to which the assessments are aligned. After they had received their training, item writers worked independently, writing stories and informational text passages to be used for the *Literary* and *Informational Text* sub-tests and sketching out graphics to be used for the *Read to Perform a Task* sub-tests. A graphic artist was hired to render the graphics in a format that would enable them to be delivered by computer. Item writers also wrote five selected-response questions for each of the passages / graphics they created. Each question was targeted to address a specific content standard related to reading proficiently at the grade level for which the assessment was intended. Each question was followed by three possible answer choices. Item writers were instructed to create one correct answer and two plausible distractors for each item. Item writing took place during 2010 and 2011.

All passages / graphics files and selected-response questions and answer options were loaded to a secure database, where they then underwent a detailed review. Every item was reviewed by a group of 3 – 5 members of the research team with training in measurement and assessment development. During the review, the research team checked each item for potential bias, appropriateness for students in the intended grade level, and adherence to the principles of Universal Design for Assessment. Revisions were made directly to the database when needed, and the complete set of items, numbering 900 per grade, grades 3 – 8, were deemed ready for empirical testing in the fall of 2011.

Item Piloting

Items were piloted in November – December, 2011 in convenience samples of students

whose teachers signed up to participate in the item piloting via the easyCBM online assessment system. No financial incentives were provided for participating. Participants included students from the states of Oregon, Washington, Montana, Florida, Texas, Illinois, California, and Wisconsin. Teachers were asked to include the full range of students in their classes in the piloting, including students with disabilities and English language learners. To ensure anonymity of student and teacher participants, no demographic or other identifying information was collected from participants.

During item piloting, a specialized website was developed to provide easy access to the items for teachers and their students. Teachers were given a secure URL and were instructed to have their students log on to the website and select the grade level in which they were currently enrolled. Upon selecting their grade, students were presented with a series of 25 assessment items, clustered into five sub-tests, each with a prompt (text or graphic), followed by five multiple choice questions. Common items across all test takers at a given grade level enabled us to scale all 900 grade-level items concurrently, although no student completed any more than 25 items during the item piloting. To ensure adequate numbers of students for scaling each item and to reduce the potential for a "class effect" whereby students in a given class might all be presented with particularly easy or difficult item sets, the computer system randomly assigned students to subtests.

Item piloting took place entirely online, with students reading the passages / graphics and selecting the answer they thought was most correct directly on the computer. Data were captured automatically each time a student responded to a question. Students had the option to go back and change an answer on a particular sub-test, but were unable to do so once they had moved on to the next sub-test, with its set of five questions.

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Data Analysis

Data from the item piloting were analyzed using Item Response Theory, where each passage / graphic and its accompanying five questions was treated as a testlet, in recognition of the nested nature of the data. Based on results of this piloting, passages / graphics and their accompanying questions were organized into assessments consisting of two *Literary Text* sub-tests, two *Informational Text* sub-tests and one *Read to Perform a Task* sub-test. In all, ten such tests were created to be used for progress monitoring and three to be used for benchmark / screening (fall, winter, and spring).

Results

Tables 1-10 indicate the specific items included on each progress monitoring form of the assessment, along with the standards addressed by those items and results of the IRT analysis. IRT information provided includes: the IRT *Measure* (a rough indication of the "difficulty" of the items: zero indicates an item with estimated *average* difficulty, a measure less than zero indicates *below average* difficulty, while a measure greater than zero indicates *above average* difficulty); *Count* (number of students whose responses were included in the analysis); *Error* (Standard Error); *Mean Square Outfit*, and *Discrimination*. Tables $11 - 13$ present this same information, but for the Benchmark assessments. Table 14 presents this information for the items not currently placed into any of the test forms.

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Table 1
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_1 = 0.21

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
1	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35081 to 35085	-0.95	64	0.30	1.82	0.36
1	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35671 to 35675	1.80	63	0.26	1.23	0.88
1	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35206 to 35210	-0.30	65	0.24	0.60	1.28
1	4	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35161 to 35165	1.13	66	0.33	0.33	1.46
1	5	Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35066 to 35070	-0.62	67	0.23	1.76	0.16

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Table 2
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_2 = 0.30

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
2	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35756 to 35760	-0.71	61	0.35	1.25	0.95
2	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35851 to 35855	1.68	65	0.35	0.78	0.99
2	3	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35256 to 35260	0.07	65	0.40	0.43	1.50
2	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35706 to 35710	1.18	64	0.26	0.71	1.23
2	5	Read to Perform a Task	Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).	35516 to 35520	-0.74	66	0.24	1.87	0.10

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Table 3
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_3 = 0.28

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
3	1	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35221 to 35225	-0.65	65	0.54	4.09	0.48
3	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35536 to 35540	1.53	65	0.31	2.49	0.71
3	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35341 to 35345	0.09	61	0.34	1.11	0.89
3	4	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35791 to 35795	1.20	67	0.25	0.51	1.38
3	5	Read to Perform a Task	Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).	35246 to 35250	-0.77	3397	0.04	0.65	1.21

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Table 4
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_4 = 0.26

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
4	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35801 to 35805	-0.50	67	0.34	0.91	0.83
4	2	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35441 to 35445	1.26	63	0.41	1.25	0.79
4	3	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35841 to 35845	0.10	58	0.31	1.18	0.88
4	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35391 to 35395	1.26	63	0.41	1.25	0.79
4	5	Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35336 to 35340	-0.84	66	0.29	2.76	0.41

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Table 5
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_5 = 0.32

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
5	1	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message. Recognize cause-and-effect relationships in literary text.	35581 to 35585	-0.36	58	0.37	0.44	1.22
5	2	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35846 to 35850	1.20	67	0.25	0.51	1.38
5	3	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35121 to 35125	0.14	64	0.43	0.60	1.09
5	4	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35521 to 35525	1.53	65	0.31	2.49	0.71
5	5	Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35561 to 35565	-0.89	65	0.24	1.72	0.33

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Table 6
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_6 = 0.54

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
6	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35216 to 35220	-0.30	65	0.24	0.60	1.28
6	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35761 to 35765	1.18	64	0.26	0.71	1.23
6	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35251 to 35255	0.20	64	0.37	0.85	1.04
6	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35796 to 35800	1.68	65	0.35	0.78	0.99
6	5	Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35471 to 35475	-0.05	64	0.23	1.21	0.80

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Table 7
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_7 = 0.66

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
7	1	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35266 to 35270	0.07	65	0.40	0.43	1.50
7	2	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35171 to 35175	1.13	66	0.33	0.33	1.46
7	3	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35436 to 35440	0.20	65	0.28	0.45	1.50
7	4	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35656 to 35660	1.80	63	0.26	1.23	0.88
7	5	Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35696 to 35700	0.12	66	0.26	2.82	0.28

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Table 8
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_8 = 0.70

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
8	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35351 to 35355	0.09	61	0.34	1.11	0.89
8	2	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35666 to 35670	0.77	63	0.29	0.80	1.15
8	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35611 to 35615	0.35	60	0.34	2.07	0.96
8	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35661 to 35665	2.02	68	0.28	1.05	0.78
8	5	Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35831 to 35835	0.27	64	0.26	1.44	0.59

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Table 9
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_9 = 0.81

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
9	1	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35896 to 35900	0.10	58	0.31	1.18	0.88
9	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35446 to 35450	0.53	63	0.41	1.51	0.49
9	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35431 to 35435	0.53	63	0.41	1.51	0.49
9	4	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35296 to 35300	2.48	64	0.43	1.04	0.97
9	5	Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35426 to 35430	0.43	66	0.27	2.95	0.05

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Table 10
Results of IRT Analysis, Mean Measure of Progress Monitoring Measure 3_10 = 0.72

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
10	1	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35131 to 35135	0.14	64	0.43	0.60	1.09
10	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35626 to 35630	0.35	60	0.34	2.07	0.96
10	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35566 to 35570	-0.36	58	0.37	0.44	1.22
10	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35751 to 35755	2.84	65	0.31	0.62	1.32
10	5	Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35156 to 35160	0.63	61	0.27	1.12	0.76

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Table 11
Results of IRT Analysis, Mean Measure of Benchmark Measure 3_Fall = 0.60

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
bm1	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35891 to 35895	-1.19	65	0.30	0.86	0.97
bm1	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35716 to 35720	2.02	68	0.28	1.05	0.78
bm1	3	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35211 to 35215	-0.65	65	0.54	4.09	0.48
bm1	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35166 to 35170	3.05	61	0.33	0.80	1.01
bm1	5	Read to Perform a Task	Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).	35741 to 35745	-0.24	65	0.20	2.51	0.82

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Table 12
Results of IRT Analysis, Mean Measure of Benchmark Measure 3_Winter = 0.88

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
bm2	1	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35311 to 35315	-1.18	64	0.32	0.49	1.23
bm2	2	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35306 to 35310	2.48	64	0.43	1.04	0.97
bm2	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35746 to 35750	-0.50	67	0.34	0.91	0.83
bm2	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35571 to 35575	3.84	64	0.48	2.52	0.31
bm2	5	Read to Perform a Task	Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).	35111 to 35115	-0.23	64	0.24	1.68	0.47

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Table 13
Results of IRT Analysis, Mean Measure of Benchmark Measure 3_Spring = 0.92

Test Form	Item #	Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
bm3	1	Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story	35576 to 35580	-1.16	66	0.33	1.11	0.76
bm3	2	Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35806 to 35810	2.84	65	0.31	0.62	1.32
bm3	3	Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35701 to 35705	-0.71	61	0.35	1.25	0.95
bm3	4	Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35886 to 35890	3.84	65	0.37	0.44	1.50
bm3	5	Read to Perform a Task	Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).	35381 to 35385	-0.21	66	0.23	1.43	0.52

Table 14
Grade 3 Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35396 to 35400	-5.41	59	0.36	0.23	1.52
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35531 to 35535	-4.29	65	0.40	1.88	1.09
Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35491 to 35495	-2.50	62	0.30	0.46	1.40
Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35041 to 35045	-2.46	63	0.40	1.69	0.75

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Table 14 (Continued)
Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35086 to 35090	-2.46	65	0.40	0.76	1.01
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35036 to 35040	-1.96	66	0.44	0.74	1.16
Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35401 to 35405	-1.64	64	0.41	1.07	0.73
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35711 to 35715	-1.30	67	0.29	0.91	1.03
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35126 to 35130	-1.28	62	0.41	1.30	0.71

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Table 14 (Continued)
Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35261 to 35265	0.20	64	0.37	0.85	1.04
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35486 to 35490	0.20	65	0.28	0.45	1.50
Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35176 to 35180	3.05	61	0.33	0.80	1.01
Literary Text: Demonstrate General Understanding	Identify the speaker or narrator in a selection. Distinguish the order of events or a specific event from a sequence of events. Determine significant events from the story.	35621 to 35625	3.84	64	0.48	2.52	0.31
Literary Text: Develop an Interpretation	Determine what characters are like by what they say or do and by how the author or illustrator portrays them. Predict probable future outcomes or actions. Determine and discuss the underlying theme or author's message in literary text. Recognize cause-and-effect relationships in literary text.	35356 to 35360	3.84	65	0.37	0.44	1.50

Table 14 (Continued)
Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35346 to 35350	-5.41	59	0.36	0.23	1.52
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35481 to 35485	-4.29	65	0.40	1.88	1.09
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35476 to 35480	-2.50	62	0.30	0.46	1.40
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35031 to 35035	-2.46	63	0.40	1.69	0.75
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35076 to 35080	-2.46	65	0.40	0.76	1.01
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35026 to 35030	-1.96	66	0.44	0.74	1.16

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Table 14 (Continued)
Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35386 to 35390	-1.64	64	0.41	1.07	0.73
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35881 to 35885	-1.30	67	0.29	0.91	1.03
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35116 to 35120	-1.28	62	0.41	1.30	0.71
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35836 to 35840	-1.19	65	0.30	0.86	0.97
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35301 to 35305	-1.18	64	0.32	0.49	1.23

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Table 14 (Continued)
Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35526 to 35530	-1.16	66	0.33	1.11	0.76
Informational Text: Demonstrate General Understanding	Demonstrate comprehension by identifying answers to questions about the text. Distinguish the main idea and supporting details in informational text. Determine significant information from the text, including problems and solutions.	35071 to 35075	-0.95	64	0.30	1.82	0.36
Informational Text: Develop an Interpretation	Recall major points in the text and make predictions about forthcoming information. Distinguish cause-and-effect and fact and opinion.	35616 to 35620	0.77	63	0.29	0.80	1.15
Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35606 to 35610	-2.50	69	0.27	1.71	0.50
Read to Perform a Task	Interpret information from diagrams, charts, and graphs.	35201 to 35205	-1.62	65	0.18	8.54	0.29
Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35021 to 35025	-1.14	66	0.29	4.47	0.28
Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35786 to 35790	-1.10	66	0.27	2.16	-0.83
Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35651 to 35655	1.03	67	0.19	1.25	0.70

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Table 14 (Continued)
Items Not Used

Reading Type	Standard	Item Name	Measure	Count	Error	Mean Square Outfit	Discrimination
Read to Perform a Task	Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.	35291 to 35295	4.03	65	0.26	7.93	-0.18
Read to Perform a Task	Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).	35876 to 35880	4.45	64	0.22	2.40	0.32

Discussion

Overall, our results indicate that, of the three sub-tests, students find the *Read to Perform a Task* sub-test the least challenging. On the Benchmark test forms, for example, the mean difficulty for the items on the *Read to Perform a Task* sub-test of the Fall, Winter, and Spring measures, respectively, was -.024, -0.23, and -0.21. In contrast, the difficulty of the *Short Literary Text* and *Informational Text* sub-tests seems to vary greatly, depending on the specific passage and set of questions. Whereas the average *measure* for the Grade 3 Benchmark *Short Literary Text* sub-tests ranged from 0.42 – 0.84, the actual test forms ranged from a low of -1.19 to a high of 2.84. Likewise, the average *measure* for the Grade 3 Benchmark *Informational Text* sub-tests ranged from 1.20 – 1.67, while the actual test forms ranged from a low of -0.71 to a high of 3.84.

Similar patterns were found for the progress monitoring test forms as well. On the progress monitoring test forms, the mean difficulty for the items on the *Read to Perform a Task* sub-test ranged from -0.89 to 0.63. The average *measure* for the Grade 3 progress monitoring *Short Literary Text* sub-tests ranged from 0.25 – 0.60, while the actual test forms ranged from a low of -0.95 to a high of 1.80. Likewise, the average *measure* for the Grade 3 progress monitoring *Informational Text* sub-tests ranged from 0.42 – 1.50, while the actual test forms ranged from a low of -0.36 to a high of 2.84.

It is important to note that the sub-tests are not intended to be used to provide scores specific to the type of material with which students were presented (*Short Literary Text, Informational Text,* and *Read to Perform a Task).* With only five items per sub-test, such scores would not be a robust or reliable estimate of students' knowledge or skill in a particular area. Additional studies (see, for example, Alonzo, Park, & Tindal, 2012) present the results of

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construct validity studies that add further evidence that although these sub-tests present students with different types of text with which to work, all three measure a single construct. Thus, although it might be tempting to report that a particular student has mastered (or is struggling with) a particular type of reading material, such claims would not be warranted or supported by the results of the easyCBM CCSS Reading Measures.

References

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