

Technical Report 2603-AK8RM

Alignment of easyCBM® with Standards in Grades K-8:

Reading and Mathematics

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ALIGNMENT IN READING

This section of the technical report provides information on various easyCBM® reading measures:

- Reading Skills with early reading (phonemes and words)
- Proficient Reading with literal, inferential, and evaluative comprehension.

Note that the Proficient Reading is used in screening students with disabilities and Basic Reading used in progress monitoring. The reason for this distinction is twofold: (a) when CCSS standards were developed, they provided more sensitive progress information on specific types of text, allowing teachers to target instruction; (b) at the same time, the Proficient Measures were more in line with deep reading of extended text (over 1,000 words) and different types of comprehension more in line with the National Panel on Reading. This section presents data from three Technical Reports posted on the web site for Behavioral Research and Teaching (BRT): <https://brtprojects.org> where they can be retrieved by placing the TR# into the search screen and downloaded. Note that more specific detail can be obtained from these reports as the findings reported in this summary are exemplary.

Technical Report 1227 (2012) – Phoneme Segmenting Alignment with the Common Core Foundational Skills Standard Two: Grades K-1.

Technical Report 1303 (2012) – Alignment with the Common Core State Standards (CCSS): easyCBM® K-3 Word Reading.

Technical Report 2101 (2021) – The Alignment between easyCBM® Mathematics and Literacy Assessments and State and National Standards.

Reading Skills

Summary of Technical Report 1227: Phoneme Segmenting Alignment with the Common Core Foundational Skills Standard Two: Grades K–1 (Sáez et al., 2012).

This study examined the alignment of the easyCBM® Phoneme Segmenting assessment with the Common Core State Standards (CCSS) Reading Foundational Skills Standard 2 for kindergarten and first grade. The purpose was to determine the extent to which existing phoneme segmenting items, developed prior to adoption of the CCSS, reflect grade-level expectations for phonological awareness.

Participants were nine educators, including kindergarten teachers, first-grade teachers, and special education teachers from multiple states, with varied teaching experience. Teachers were trained via webinar and then reviewed test items using an online platform. Data collection involved item-level analyses in which reviewers identified the number of syllables and phonemes in each word and decomposed words into their component sound units. A total of 169 unique kindergarten words and 158 unique first-grade words were analyzed, representing nearly all words used across assessment forms.

Rather than relying on traditional alignment ratings, the study used descriptive and agreement-based analyses to evaluate alignment. Proportions of single-syllable words, phoneme counts, and consonant–vowel–consonant (CVC) structures were calculated and compared to CCSS expectations. Reviewer agreement rates were computed for syllable and phoneme identification, both with and without a low-accuracy reviewer.

Results indicated weak or absent alignment between kindergarten phoneme segmenting items and CCSS Standard 2 expectations, as few items met the three-phoneme CVC requirement. In contrast, strong alignment was found for first grade Standard RF.1.2D, with approximately 80% of words being single-syllable and requiring full phoneme segmentation. Alignment with other first-grade components was weak. Approximately 18% of words were identified as problematic due to excessive difficulty, pronunciation ambiguity, or limited instructional relevance.

Table 1. Alignment and Analysis of Phoneme Segmenting as Foundations Skills

Aspect	Kindergarten	First Grade
Alignment to CCSS Standard 2	Weak or none	Strong for RF.1.2D only
Word Structure	Many exceed 3 phonemes	Mostly single syllable
Reviewer Agreement	Moderate (high after adjustment)	Moderate (high after adjustment)
Problematic Items	Present	Present (≈18% overall)

Reference

Sáez, L., Irvin, P. S., Alonzo, J., & Tindal, G. (2012). *Phoneme Segmenting Alignment with the Common Core Foundational Skills Standard Two: Grades K–1 (Technical Report 1227)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Summary of Technical Report 1303: Alignment with the Common Core State Standards: easyCBM® K-3 Word Reading (Sáez et al., 2013).

This study examined the alignment between the easyCBM® kindergarten through grade 3 (K–3) Word Reading assessment and the Common Core State Standards (CCSS) in English Language Arts, specifically Foundational Skills Standard 3 (Phonics and Word Recognition). The purpose was to determine whether the types of words included in the assessment reflected grade-level expectations for word reading skills.

The subjects for the alignment study were 517 unique word items drawn from existing easyCBM® Word Reading forms (57 kindergarten, 117 grade 1, 172, Grade 2, and 171 grade 3 words). Fifteen experienced teachers from multiple U.S. states participated as expert reviewers, representing kindergarten, grades 1–3, and special education backgrounds. Reviewers were trained via webinar and completed online reviews using a secure Distributive Item Review (DIR) system.

Data collection involved having teachers identify specific word characteristics for each item, including syllable structure, vowel patterns, consonant digraphs, inflectional endings, irregular spellings, and word frequency. Rather than using holistic alignment ratings, alignment was quantified by calculating the frequency with which CCSS-aligned subskills appeared across items. Percent correct agreement among reviewers was also computed to evaluate consistency and certainty of judgments.

Results showed strongest alignment at kindergarten, where approximately 60% of items reflected expected vowel patterns and 74% were among the 500 most frequent words in print. Grade 1 items aligned most strongly with decoding regularly spelled one-syllable words (about 60%), while grade 2 items showed the strongest alignment with regularly spelled two-syllable words containing long vowels (about 56%). In contrast, grade 3 items demonstrated relatively weak alignment with CCSS expectations for multisyllabic and morphologically complex word reading. Overall, the findings indicate that easyCBM® Word Reading aligns well with early phonics expectations, with reduced alignment at higher grades.

Table 2. Alignment of easyCBM® Early Reading with Common Core State Standards

Grade	Primary Alignment Focus	Key Findings
Kindergarten	Vowel patterns and high-frequency words	≈60% long/short vowel words; 74% among 500 most frequent words
Grade 1	Regular one-syllable decoding	≈59.8% of items regularly spelled one-syllable words
Grade 2	Regular two-syllable long-vowel decoding	≈55.5% of items aligned with CCSS expectations
Grade 3	Multisyllabic and morphological decoding	Weak alignment with CCSS Standard 3 expectations

Reference

Sáez, L., Irvin, P. S., Alonzo, J., & Tindal, G. (2013). *Alignment of easyCBM® K–3 word reading to the Common Core State Standards (Technical Report 1303)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Summary of Technical Report 2101: The Alignment between easyCBM® Mathematics and **Literacy** Assessments and State and National Standards (Saez et al., 2021).

This section summarizes the alignment coding framework and conclusions for easyCBM® reading measures relative to state English Language Arts standards. easyCBM® measures included Phoneme Segmenting, Letter Names, Letter Sounds, Word and Passage Reading Fluency, Vocabulary, Basic Reading (formerly CCSS Reading), and Proficient Reading (formerly MCR Reading). CCSS domains not assessed by easyCBM® included Writing, Speaking & Listening, and most Language standards and were excluded from analysis. Alignment evidence is drawn from structured coding in the Reading alignment spreadsheet, organized by CCSS Adopted, CCSS Revised, and State Unique groups. Coding reflects text-based comparisons between state standards and the Common Core State Standards (CCSS), followed by determination of whether those standards are represented within easyCBM® reading benchmarks and progress-monitoring measures.

Each state standard was coded using mutually exclusive CCSS relationship categories: CCSS Exact Match, CCSS Partial Match, CCSS Deviation, and Non-CCSS (ADDITIONAL). In parallel, easyCBM® alignment was coded as Yes or No based on minimum item-coverage criteria. These codes allow interpretation of both the degree of conceptual overlap with CCSS and the extent to which easyCBM® reading measures reflect those standards.

Across CCSS **Adopted** states, reading standards overwhelmingly fell into the CCSS Exact Match category, resulting in a high proportion of Yes codes for easyCBM® alignment. This pattern was most consistent for Foundational Skills (phonological awareness, phonics, word recognition, and fluency), as well as basic reading comprehension expectations.

CCSS **Revised** states exhibited a mix of Exact and Partial Matches, with partial matches typically reflecting differences in wording or instructional framing rather than substantive changes in task demands. easyCBM® alignment remained largely positive in these states, though isolated CCSS Deviation and Non-CCSS outcomes appeared in comprehension and language-related standards.

State **Unique** standards showed the greatest variability. While many standards still mapped as Partial Matches or Deviations, Non-CCSS outcomes were more frequent. In these cases, easyCBM® alignment was more variable, reflecting the intentional focus of easyCBM® on broadly shared reading competencies rather than state-specific extensions or alternative emphases.

Table 3. easyCBM® Reading Alignment Summary by State Group

State Group	easyCBM® Alignment (Yes)	easyCBM® Alignment (No)	CCSS Exact Match	CCSS Partial Match	CCSS Deviation	Non-CCSS / ADDITIONAL
CCSS Adopted	Majority	Few	High	Low–Mod	Low	Minimal
CCSS Revised	Majority	Few	High	Low–Mod	Low	Mod–High
State Unique	Majority	Few	High	Low–Mod	Low	Mod–High

easyCBM® ELA Item Coverage: Strand Subtotals and Domain Totals by Grade

Counts were computed from the grade item columns in ELA_FormsItemsOnly.xlsx. For each CCSS Code row, the number of numeric item labels listed in each grade's Items cell was counted (Grades 2–8). Tables below provide (a) totals by grade, (b) CCSS domain totals by grade, and (c) a single wide table of CCSS Domain and Code rows with items by Grade.

Table 4. Strand-Level Item Subtotals by Grade for Proficient Reading

Strand	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Reading Literature	28	54	54	54	49	38	55

Table 5. CCSS Domain Item Totals by Grade

CCSS Domain	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6*	Grade 7	Grade 8
Key Ideas & Details	28	54	54	50	49	31	47
Craft & Structure	0	0	0	4	6	7	8
Integration of Knowledge & Ideas	0	0	0	0	0	0	0
Range of Reading & Level of Text Complexity	0	0	0	0	0	0	0

Table 6. CCSS Domain–Code Item Counts by Grade for Basic and Proficient Reading

Strand	CCSS Domain	Code	Grade 2 (28)
Reading Literature	Key Ideas & Details – Five Ws	RL 2.1	16
Reading Literature	Key Ideas & Details – Character Responses	RL 2.3	12
Strand	CCSS Domain	Code	Grade 3 (54)
Reading Literature	Key Ideas & Details – Text Reference	RL 3.1	28
Reading Literature	Key Ideas & Details – Central Message	RL 3.2	9
Reading Literature	Key Ideas & Details – Character Analysis	RL 3.3	17
Strand	CCSS Domain	Code	Grade 4 (54)
Reading Literature	Key Ideas & Details – Explain Text	RL 4.1	25
Reading Literature	Key Ideas & Details – Determine Theme	RL 4.2	12
Reading Literature	Key Ideas & Details – Story Grammar	RL 4.3	17
Strand	CCSS Domain	Code	Grade 5 (54)
Reading Literature	Key Ideas & Details – Text Explanation	RL 5.1	25
Reading Literature	Key Ideas & Details – Determine Theme	RL 5.2	11
Reading Literature	Key Ideas & Details – Compare/Contrast	RL 5.3	14
Reading Literature	Craft & Structure – Word/Phrase Meaning	RL 5.4	4

Strand	CCSS Domain	Code	Grade 6 (49)
Reading Literature	Key Ideas & Details – Cite Text Evidence	RL 6.1	21
Reading Literature	Key Ideas & Details – Determine a Theme	RL 6.2	19
Reading Literature	Key Ideas & Details – Describe a Plot	RL 6.3	9
Reading Literature	Craft & Structure – Perspective	RL 6.6	6
Strand	CCSS Domain	Code	Grade 7 (38)
Reading Literature	Key Ideas & Details – Cite Text Evidence	RL 7.1	6
Reading Literature	Key Ideas & Details – Determine a Theme	RL 7.2	14
Reading Literature	Key Ideas & Details – Story Interactions	RL 7.3	11
Reading Literature	Craft & Structure – Perspective	RL 7.6	7
Strand	CCSS Domain	Code	Grade 8 (55)
Reading Literature	Key Ideas & Details– Cite Text	RL 8.1	24
Reading Literature	Key Ideas & Details – Determine a Theme	RL 8.2	15
Reading Literature	Key Ideas & Details – Story Interactions	RL 8.3	8
Reading Literature	Craft & Structure – Perspective	RL 8.3	8

The easyCBM® literacy assessments demonstrated substantial alignment with state ELA standards, though alignment strength varied by measure, grade level, and strand. Because most easyCBM® ELA measures were developed between 2006 and 2010—prior to the 2009 release of the CCSS—the researchers anticipated and found some areas of weaker alignment, particularly for reading comprehension measures

easyCBM® measures targeting Foundational Skills—including Phoneme Segmenting, Letter Names, Letter Sounds, and Word and Passage Reading Fluency—demonstrated the strongest alignment with state standards. These skills are consistently represented across both CCSS-aligned and state-unique standards, and the easyCBM® items provided broad coverage of the relevant clusters. Alignment ratings for these measures were predominantly Strong across CCSS Adopted states.

Vocabulary and Basic Reading measures, developed in 2013 after the release of the CCSS, showed relatively stronger alignment compared to earlier ELA measures. These measures were explicitly designed to reflect CCSS expectations and demonstrated Moderate to Strong alignment across the 20 CCSS Adopted states and many of the 24 CCSS Revised states.

Alignment for reading comprehension strands (Reading Literature and Reading Informational Texts) was more variable. Because the Proficient Reading and related measures were developed prior to the CCSS, alignment depended heavily on the degree to which item content incidentally reflected CCSS clusters. Some clusters received Moderate or Limited ratings, while others were rated Insufficient due to inadequate item coverage across benchmark forms.

Reference

Sáez, L., Whitney, M., Swanson, D., & Alonzo, J. (2021). *The alignment between easyCBM® mathematics and literacy assessments and state and national standards (Technical Report 2101)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

ALIGNMENT IN MATH

This section of the technical report provides information on two versions of the easyCBM® mathematics measures:

1. Basic math is aligned to National Council of Teachers of Mathematics in (NCTM).
2. Proficient math is aligned to the Common Core State Standards (CCSS).

Note that the Proficient Math is used in screening students with disabilities and Basic Math used in progress monitoring. The reason for this distinction is that, when CCSS standards were developed, they were designed to increase the rigor over those earlier promulgated with the original NCTM standards. This section presents data from six Technical Reports posted on the web site for Behavioral Research and Teaching (BRT): <https://brtprojects.org> where they can be retrieved by placing the TR# into the search screen and downloaded. Again, more specific information can be obtained from these technical reports with the findings presented in this summary considered exemplary.

Technical Report 1002 (2012) – The Alignment of easyCBM® Math Measures to Curriculum Standards.

Technical Report 2101 (2021) – The Alignment between easyCBM® Mathematics and Literacy Assessments and State and National Standards.

Technical Report 1228 (2012) – Alignment of easyCBM® Grades K–2 Math Measures to the Common Core Standards.

Technical Report 1229 (2012) – The Alignment of the easyCBM® Grades 3-5 Math Measures to the Common Core Standards.

Technical Report 1230 (2012) – The Alignment of the easyCBM® Grades 6-8 – Math Measures to the Common Core Standards.

Technical Report 1208 (2012) – The Alignment of the easyCBM® Middle School Mathematics CCSS Measures to the Common Core State Standards.

Each summary addresses the methods (subjects, settings, data collection, and analytic procedures) and then the results from these technical reports. Where present, actual tables are included; if the tables were too extensive (e.g., item response theory [IRT] presentations of difficulties and misfits), a representative example is presented. Finally, each section ends with an APA reference to the technical report.

Basic Math

Summary of Technical Report 1002: The Alignment of easyCBM® Math Measures to Curriculum Standards (Nese et al., 2010).

This technical report examined the alignment of easyCBM® mathematics benchmark and progress monitoring measures with the National Council of Teachers of Mathematics (NCTM) Curriculum Focal Points for grades **Kindergarten through 8**. Using Webb’s alignment framework, the study focused on evaluating content alignment and depth of knowledge (DOK) through expert judgment.

Methods emphasized structured expert review. Thirteen certified teachers with experience using easyCBM® served as raters. They were trained to evaluate item-to-standard alignment and DOK using a four-point alignment scale and a three-level DOK taxonomy. All benchmark forms for Grades K, 1, and 3–8 were reviewed, along with a substantial subset of progress monitoring forms. Each form contained 16 items, and each item was rated independently by at least two raters. Alignment ratings were later dichotomized to identify items clearly linked to standards. Reliability of ratings was evaluated using intraclass correlations (ICC) derived from cross-classified hierarchical linear models.

Results showed generally strong alignment across grades and focal points. For most grades, between 75% and 100% of benchmark and progress monitoring items were rated as linked to the intended NCTM focal points. Kindergarten and Grade 1 showed particularly strong alignment, with minor weaknesses in Kindergarten measurement. Grades 3 through 7 maintained high alignment across Numbers and Operations, Geometry, Measurement, Algebra, and related focal points. Grade eight exhibited weaker alignment, especially in Geometry/Measurement, though Data Analysis showed more consistent alignment.

Depth of Knowledge analyses indicated that most items reflected lower to moderate cognitive demand, with the majority rated at DOK levels 1 (Recognition and Reproduction) or 2 (Skill and Concept). Few items reached DOK level 3 (Strategic Thinking), and consensus on DOK ratings was lower than for alignment judgments, highlighting the subjective nature of cognitive complexity ratings. Reliability estimates were strong for alignment ratings (ICCs generally above .80) and moderate for DOK ratings.

Across the report, tables are systematically organized by grade, focal point, and assessment type. Early tables summarize alignment frequencies and percentages for benchmark versus progress monitoring forms. Subsequent tables disaggregate results by rater, DOK level, and reliability indices, providing transparency and replication value. Overall, findings support strong content validity for easyCBM[®] math measures relative to NCTM Curriculum Focal Points. The main finding was strong alignment across grades K–7; weaker in Grade 8 Geometry with 75–100% items linked; ICCs .80–1.0

Table 7. Example of Analyses from Technical Report 1002

Table 63

Grade 3 Benchmark Measures: Individual Rater's Ratings on Strength of Link Between Items and

Standards

Focal point	Term	Ratings	Raters		
			E	G	T
Number and operations	Fall	Not Linked (0)	0	0	0
		Vaguely Linked (1)	18.8	0	0
		Somewhat linked (2)	31.2	25.0	6.2
		Direct Linked (3)	50.0	75.0	93.8
	Winter	Not Linked (0)	0	0	0
		Vaguely Linked (1)	18.8	6.1	0
		Somewhat linked (2)	37.5	31.2	0
		Direct Linked (3)	43.8	62.5	100
	Spring	Not Linked (0)	0	0	0
		Vaguely Linked (1)	0	0	6.2
		Somewhat linked (2)	25.0	6.2	0
		Direct Linked (3)	75.0	93.8	93.8
Geometry	Fall	Not Linked (0)	0	0	0
		Vaguely Linked (1)	25.0	12.5	6.3
		Somewhat linked (2)	18.8	6.3	18.8
		Direct Linked (3)	56.3	81.3	75.0
	Winter	Not Linked (0)	0	0	0
		Vaguely Linked (1)	6.3	0	6.3
		Somewhat linked (2)	37.5	31.3	0
		Direct Linked (3)	56.3	68.8	93.8
	Spring	Not Linked (0)	6.3	0	6.3
		Vaguely Linked (1)	12.5	6.3	0
		Somewhat linked (2)	31.3	6.3	0
		Direct Linked (3)	50.0	87.5	93.8

Reference

Nese, J. F. T., Lai, C.-F., Anderson, D., Park, B. J., Tindal, G., & Alonzo, J. (2010). *The alignment of easyCBM[®] math measures to curriculum standards (Technical Report 1002)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Proficient Math

Summary of Technical Report 2101: The Alignment between easyCBM® Mathematics and Literacy Assessments and State and National Standards (Saez et al., 2021).

The mathematics alignment analysis follows the same coding framework as reading but reflects the fact that easyCBM® mathematics measures were developed explicitly with the CCSS in mind. Alignment evidence is drawn from structured coding in the Math alignment spreadsheet, organized by CCSS Adopted, CCSS Revised, and State Unique groups. Coding reflects text-based comparisons between state standards and the Common Core State Standards (CCSS), followed by determination of whether those standards are represented within easyCBM® Math benchmarks and progress-monitoring measures. Each state standard was coded using mutually exclusive CCSS relationship categories: CCSS Exact Match, CCSS Partial Match, CCSS Deviation, and Non-CCSS (ADDITIONAL). In parallel, easyCBM® alignment was coded as Yes or No based on minimum item-coverage criteria. These codes allow interpretation of both the degree of conceptual overlap with CCSS and the extent to which easyCBM® math measures reflect those standards.

For CCSS **Adopted** states, nearly all mathematics standards were coded as CCSS Exact Matches, yielding consistent Yes alignment decisions across domains such as Operations and Algebraic Thinking, Number and Operations, Fractions, Geometry, and Measurement and Data.

CCSS **Revised** states showed a balance of Exact and Partial Matches. Partial matches typically reflected language modifications or reorganization of clusters rather than changes in mathematical intent. easyCBM® continued to align positively with most of these standards.

State **Unique** mathematics standards introduced a higher frequency of CCSS Deviations and Non-CCSS outcomes, including extensions beyond CCSS grade-level boundaries. Alignment with easyCBM® remained present for core concepts but was less comprehensive for unique or extended content.

Table 8. easyCBM® Mathematics Alignment Summary by State Group

State Group	easyCBM® Alignment (Yes)	easyCBM® Alignment (No)	CCSS Exact Match	CCSS Partial Match	CCSS Deviation	Non-CCSS / ADDITIONAL
Adopted	Majority	Few	Very High	Low-Mod	Low	Minimal
Revised	Majority	Few	Very High	Low-Mod	Low	Mod
Unique	Majority	Few	Very High	Low-Mod	Low	Mod

Table 9. easyCBM® Mathematics Alignment Summary by Domain for Benchmark (BM) and Progress Measures (PM)

Domains	BM1	BM2	BM3	PMs
Counting & Cardinality	8	9	10	5
Expressions and Equations	18	17	15	35
Functions	7	6	8	15
Geometry	56	51	50	60
Measurement & Data	32	28	29	30
Number & Operations in Base 10	30	34	33	46
Numbers & Operations - Fractions	24	27	24	3
Operations & Algebraic Thinking	28	29	34	37
Ratios and Proportional Relations	17	9	20	6
Statistics and Probability	14	23	18	21
The Number System	23	24	22	25
Grand Total	257	257	263	283

Table 10. easyCBM® Mathematics Alignment Summary by Cluster for Benchmark (BM) and Progress Measures (PM)

Clusters	BM1	BM2	BM3	PMs
Add and subtract within 20.	2	3	3	0
Operations & Algebraic Thinking	2	3	3	0
Analyze and solve linear equations and pairs of simultaneous linear equations.	2	0	2	4
Expressions and Equations	2	0	2	4
Analyze patterns and relationships.	2	1	3	0
Operations & Algebraic Thinking	2	1	3	0
Analyze proportional relationships and use them to solve real-world and mathematical problems.	14	7	17	6
Ratios and Proportional Relations	14	7	17	6
Analyze, compare, create, and compose shapes.	1	2	2	6
Geometry	1	2	2	6
Apply and extend previous understandings of arithmetic to algebraic expressions.	2	0	1	3
Expressions and Equations	2	0	1	3
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	0	1	2	6
The Number System	0	1	2	6
Apply and extend previous understandings of multiplication and division.	1	1	1	0
Numbers & Operations - Fractions	1	1	1	0
Apply and extend previous understandings of numbers to the system of rational numbers.	3	3	1	0
The Number System	3	3	1	0
Apply and extend previous understandings of operations with fractions.	8	9	12	11
The Number System	8	9	12	11
Build fractions from unit fractions.	2	4	3	0
Numbers & Operations - Fractions	2	4	3	0
Classify objects and count the number of objects in each category.	1	1	2	0
Measurement & Data	1	1	2	0
Classify two-dimensional figures into categories based on their properties.	4	2	3	7
Geometry	4	2	3	7
Compare numbers.	0	1	1	5
Counting & Cardinality	0	1	1	5
Compute fluently with multi-digit numbers and find common factors and multiples.	2	4	0	8
The Number System	2	4	0	8
Count to tell the number of objects.	6	7	7	0
Counting & Cardinality	6	7	7	0
Define, evaluate, and compare functions.	6	3	4	6
Functions	6	3	4	6
Describe and compare measurable attributes.	2	2	3	0
Measurement & Data	2	2	3	0

Develop understanding of fractions as numbers.	10	10	10	0
Numbers & Operations - Fractions	10	10	10	0
Develop understanding of statistical variability.	2	4	4	0
Statistics and Probability	2	4	4	0
Draw and identify lines and angles and classify shapes by properties of their lines and angles.	1	1	1	0
Geometry	1	1	1	0
Draw construct and describe geometrical figures and describe the relationships between them.	10	9	10	5
Geometry	10	9	10	5
Grand Total	81	75	92	67

Reference

Sález, L., Whitney, M., Swanson, D., & Alonzo, J. (2021). *The alignment between easyCBM® mathematics and literacy assessments and state and national standards (Technical Report 2101)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Summary of Technical Report 1228: Alignment of easyCBM® Grades K–2 Math Measures to the Common Core Standards (Irvin et al., 2012b).

Technical Report 1228 examined the alignment of easyCBM® Grades K–2 mathematics benchmark assessments with the Common Core State Standards (CCSS), with an emphasis on supporting valid instructional decisions in formative assessment and response-to-intervention frameworks. The study employed a two-phase expert review design. Participants included experienced general education teachers, special educators, and district-level mathematics specialists from multiple U.S. states, with average mathematics teaching experience ranging from approximately 10 to 12 years. In Phase 1, one expert per grade reviewed all 135 benchmark items (45 items each from fall, winter, and spring) and identified links to on-grade and prior-grade CCSS. Phase 2 expanded the review to four additional experts per grade who completed structured training and conducted independent online reviews.

Data collection was conducted using the Distributed Item Review (DIR) system, which presented items individually and required reviewers to assign CCSS codes and rate strength of alignment (0 = no alignment, 1 = somewhat aligned, 2 = directly aligned). Reviewers could also indicate alignment to prerequisite skills necessary for on-grade mastery. Data preparation involved collapsing sub-standards, correcting rating inconsistencies, and aggregating ratings across reviewers. Analyses focused on identifying primary and secondary standards for each item based on frequency counts and computing average alignment strength ratings.

Results indicated strong overall alignment across grades, with approximately 94% of kindergarten, 99% of Grade 1, and 96% of Grade 2 items aligned to on-grade or prior-grade CCSS. Alignment was consistently stronger at the domain level than at the individual standard level. However, notable gaps were identified, including underrepresentation of certain Geometry, Measurement and Data, and Operations and Algebraic Thinking standards, informing targeted assessment redevelopment.

Table 11. easyCBM® Mathematics Alignments and Key Findings (Grades K–2)

Grade	Overall Alignment	Key Findings
Kindergarten	≈94% aligned	Strong domain coverage: gaps in NBT and select CC standards
Grade 1	≈99% aligned	On-grade alignment strong; Measurement & Data underrepresented
Grade 2	≈96% aligned	Geometry and select OA standards underrepresented

Table 2
CCSS domain and grade level alignment results for the easyCBM® kindergarten fall benchmark in mathematics.

Domain	# ps items	# sec items
K.CC	8	14
K.G	16	12
K.MD	5	13
K.NBT	0	1
K.OA	3	7
Grade K (overall)	32	47

Note. Domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 4
CCSS domain and grade level alignment results for the easyCBM® kindergarten winter benchmark in mathematics.

Domain	# ps items	# sec items
K.CC	8	13
K.G	16	7
K.MD	7	6
K.NBT	0	0
K.OA	4	8
Grade K (overall)	35	34

Note. Domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 6
CCSS domain and grade level alignment results for the easyCBM® kindergarten spring benchmark in mathematics.

Domain	# ps items	# sec items
K.CC	7	12
K.G	15	7
K.MD	7	13
K.NBT	0	0
K.OA	6	11
Grade K (overall)	35	43

Note. Domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 8
CCSS domain and grade level alignment results for the easyCBM® first grade fall benchmark in mathematics.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
K.CC	1	2	1.G	3	8
K.G	11	5	1.MD	1	3
K.MD	0	0	1.NBT	11	9
K.NBT	0	0	1.OA	10	15
K.OA	0	0			
Grade K (overall)	12	7	Grade 1 (overall)	25	35

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 10
CCSS domain and grade level alignment results for the easyCBM® first grade winter benchmark in mathematics.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
K.CC	2	11	1.G	4	9
K.G	6	12	1.MD	1	0
K.MD	0	0	1.NBT	13	6
K.NBT	0	1	1.OA	10	18
K.OA	2	2			
Grade K (overall)	10	26	Grade 1 (overall)	28	33

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 12
CCSS domain and grade level alignment results for the easyCBM® first grade spring benchmark in mathematics.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
K.CC	5	10	1.G	7	10
K.G	6	10	1.MD	2	2
K.MD	0	0	1.NBT	14	5
K.NBT	0	0	1.OA	6	26
K.OA	2	5			
Grade K (overall)	13	25	Grade 1 (overall)	29	43

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 14

CCSS domain and grade level alignment results for the easyCBM® second grade fall benchmark in mathematics.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
1.G	0	0	2.G	0	3
1.MD	4	3	2.MD	13	4
1.NBT	1	6	2.NBT	18	8
1.OA	1	5	2.OA	5	6
Grade 1	6	14	Grade 2	36	21

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 16

CCSS domain and grade level alignment results for the easyCBM® second grade winter benchmark in mathematics.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
1.G	0	0	2.G	0	2
1.MD	2	0	2.MD	11	3
1.NBT	5	5	2.NBT	19	8
1.OA	1	2	2.OA	4	4
Grade 1	8	7	Grade 2	34	17

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 18

CCSS domain and grade level alignment results for the easyCBM® second grade spring benchmark in mathematics.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
1.G	0	0	2.G	0	2
1.MD	4	0	2.MD	15	9
1.NBT	4	3	2.NBT	15	19
1.OA	0	4	2.OA	6	4
Grade 1	8	7	Grade 2	36	34

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Reference

Irvin, P. S., Park, B. J., Alonzo, J., & Tindal, G. (2012). *The alignment of the easyCBM® Grades K–2 math measures to the Common Core State Standards (Technical Report 1228)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Summary of Technical Report 1229: The Alignment of the easyCBM® Grades 3-5 Math Measures to the Common Core Standards (Park et al., 2012).

Technical Report 1229 examined the alignment of easyCBM® Grades 3–5 mathematics benchmark assessments with the Common Core State Standards (CCSS) to support valid instructional decision-making within response-to-intervention frameworks. The study used a structured two-phase expert review design. Participants included experienced general education teachers, special education teachers, and district math specialists from multiple U.S. states, averaging approximately 10–12 years of mathematics teaching experience. All reviewers demonstrated familiarity with CCSS and formative assessment systems.

Data collection involved reviewing all 135 benchmark items per grade (45 items each for fall, winter, and spring). In Phase 1, one reviewer per grade grouped items by mathematical skill and identified alignment to on-grade and prior-grade CCSS. Phase 2 expanded reviews to four additional trained reviewers per grade using a secure Distributed Item Review (DIR) system. Reviewers identified aligned standards and rated alignment strength (0 = none, 1 = somewhat aligned, 2 = directly aligned), including identification of prerequisite skills for on-grade mastery.

Analyses included data cleaning, frequency counts of selected standards, identification of primary and secondary alignments, and calculation of mean alignment strength ratings. Results showed strong overall alignment: approximately 98% of Grade 3 items, 100% of Grade 4 items, and 97% of Grade 5 items aligned to on-grade or prior-grade CCSS. Alignment was strongest in Operations and Algebraic Thinking and Number and Operations–Fractions. Geometry and some Measurement and Data standards were underrepresented, particularly in Grade 5, while several Number and Operations in Base Ten standards were overrepresented. Findings guided targeted item development to improve balance and coverage across CCSS domains.

Table 12. easyCBM® Mathematics Alignments and Key Findings (Grades 3–5)

Grade	Items Aligned	Strongly Represented Domains	Underrepresented Domains
Grade 3	≈98%	OA, NF	NBT, MD
Grade 4	100%	MD, NF	Geometry
Grade 5	≈97%	NBT, NF	Geometry, OA

Table 2
CCSS domain and grade level alignment results for the easyCBM® third grade fall benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
2.G	5	9	3.OA	17	19
2.MD	0	1	3.NBT	1	0
2.NBT	0	0	3.NF	14	3
2.OA	0	3	3.MD	1	1
			3.G	3	16
Grade 2	5	13	Grade 3	36	39

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 4

CCSS domain and grade level alignment results for the easyCBM® third grade winter benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
2.G	5	11	3.OA	14	22
2.MD	0	1	3.NBT	0	0
2.NBT	0	0	3.NF	14	8
2.OA	0	0	3.MD	2	0
			3.G	0	9
Grade 2	5	12	Grade 3	30	39

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 6

CCSS domain and grade level alignment results for the easyCBM® third grade spring benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
2.G	4	8	3.OA	14	19
2.MD	0	0	3.NBT	0	0
2.NBT	0	0	3.NF	8	6
2.OA	0	0	3.MD	1	0
			3.G	1	11
Grade 2	4	8	Grade 3	24	36

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 8

CCSS domain and grade level alignment results for the easyCBM® fourth grade fall benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
3.OA	4	9	4.OA	2	10
3.NBT	1	1	4.NBT	3	3
3.NF	2	3	4.NF	5	8
3.MD	11	9	4.MD	11	12
3.G	0	5	4.G	0	0
Grade 3	18	27	Grade 4	21	33

Note. On- and prior-grade domains are labeled using the unique CCSS identification code. # ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 10
CCSS domain and grade level alignment results for the easyCBM® fourth grade winter benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
3.OA	1	1	4.OA	1	7
3.NBT	0	2	4.NBT	8	3
3.NF	1	3	4.NF	7	5
3.MD	11	16	4.MD	9	6
3.G	0	0	4.G	0	0
Grade 3	13	22	Grade 4	25	21

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 12
CCSS domain and grade level alignment results for the easyCBM® fourth grade spring benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
3.OA	4	2	4.OA	4	7
3.NBT	1	2	4.NBT	3	6
3.NF	1	2	4.NF	6	8
3.MD	11	5	4.MD	8	15
3.G	0	0	4.G	0	1
Grade 3	17	11	Grade 4	21	37

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 14
CCSS domain and grade level alignment results for the easyCBM® fifth grade fall benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
4.OA	0	0	5.OA	0	1
4.NBT	4	10	5.NBT	11	11
4.NF	0	11	5.NF	8	7
4.MD	2	2	5.MD	3	13
4.G	0	0	5.G	0	0
Grade 4	6	23	Grade 5	22	32

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 16
CCSS domain and grade level alignment results for the easyCBM[®] fifth grade winter benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
4.OA	0	0	5.OA	0	1
4.NBT	5	7	5.NBT	7	18
4.NF	6	6	5.NF	5	2
4.MD	1	1	5.MD	10	10
4.G	0	0	5.G	0	0
Grade 4	12	14	Grade 5	22	31

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 18
CCSS domain and grade level alignment results for the easyCBM[®] fifth grade spring benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
4.OA	0	0	5.OA	0	1
4.NBT	4	10	5.NBT	11	11
4.NF	0	11	5.NF	8	7
4.MD	2	2	5.MD	3	13
4.G	0	0	5.G	0	0
Grade 4	6	23	Grade 5	22	32

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Reference

Park, B. J., Irvin, P. S., Alonzo, J., & Tindal, G. (2012). *The alignment of the easyCBM[®] Grades 3–5 math measures to the Common Core State Standards (Technical Report 1229)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Summary of Technical Report 1230: The Alignment of the easyCBM[®] Grades 6-8 Math Measures to the Common Core Standards (Irvin et al., 2012a).

Technical Report 1230 examined the alignment between easyCBM[®] mathematics benchmark assessments for grades 6–8 and the Common Core State Standards (CCSS). The study used a two-phase expert review design. In Phase 1, one experienced educator per grade reviewed 135 benchmark items (45 each for fall, winter, and spring) to identify potential on-grade and prior-grade CCSS alignments. Phase 2 expanded the review to four additional educators per grade, all of whom completed training and conducted item-level alignment ratings using a secure Distributed Item Review (DIR) system. Reviewers identified applicable CCSS standards, rated alignment strength, and indicated whether items measured prerequisite skills for on-grade mastery.

Data analyses involved cleaning reviewer responses, collapsing CCSS sub-standards, and calculating frequencies of standards selected per item. Primary standards were defined as those most frequently selected by reviewers, with secondary standards also recorded. Average alignment strength ratings were calculated using Phase 2 data. Results showed strong overall alignment across grades, with approximately 99% of grade 6 items, 93% of grade 7 items, and 96% of grade 8 items aligned to on- or prior-grade CCSS. Alignment was generally stronger to on-grade standards than prior-grade standards.

Despite strong overall alignment, findings revealed systematic over- and underrepresentation of specific domains and standards. Ratios and Proportional Relationships and Expressions and Equations were often overrepresented, while Statistics and Probability, Geometry, and Number System standards were underrepresented in several grades. These results informed targeted assessment development plans to improve CCSS coverage and strengthen the validity of instructional decision-making based on easyCBM® math assessments.

Table 13. easyCBM® Mathematics Alignments and Key Findings (Grades 6–8)

Grade	Overall Alignment	Key Domain-Level Findings
6	≈99% aligned	Overrepresentation of Ratios & Expressions; underrepresentation of Statistics, Geometry
7	≈93% aligned	Strong on-grade alignment; Geometry and Number System overrepresented
8	≈96% aligned	Functions overrepresented; Number System and Statistics underrepresented

Table 2

CCSS domain and grade level alignment results for the easyCBM® sixth grade fall benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
5.OA	0	0	6.RP	11	11
5.NBT	2	6	6.NS	0	2
5.NF	8	7	6.EE	15	26
5.MD	1	1	6.G	0	3
5.G	0	0	6.SP	0	4
Grade 5	11	14	Grade 6	26	46

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 4

CCSS domain and grade level alignment results for the easyCBM® sixth grade winter benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
5.OA	2	2	6.RP	10	9
5.NBT	3	2	6.NS	5	4
5.NF	4	6	6.EE	11	20
5.MD	0	0	6.G	0	0
5.G	0	0	6.SP	0	6
Grade 5	9	10	Grade 6	26	39

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 6

CCSS domain and grade level alignment results for the easyCBM® sixth grade spring benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
5.OA	1	4	6.RP	12	5
5.NBT	2	6	6.NS	2	3
5.NF	5	8	6.EE	16	25
5.MD	0	0	6.G	1	2
5.G	0	0	6.SP	0	5
Grade 5	8	18	Grade 6	31	40

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 8

CCSS domain and grade level alignment results for the easyCBM® seventh grade fall benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
6.RP	11	3	7.RP	0	2
6.NS	1	9	7.NS	3	4
6.EE	1	2	7.EE	1	1
6.G	1	1	7.G	11	7
6.SP	0	1	7.SP	1	1
Grade 6	14	16	Grade 7	16	15

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 10

CCSS domain and grade level alignment results for the easyCBM® seventh grade winter benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
6.RP	6	4	7.RP	0	6
6.NS	2	1	7.NS	7	8
6.EE	1	6	7.EE	4	4
6.G	0	0	7.G	16	2
6.SP	0	0	7.SP	2	2
Grade 6	9	11	Grade 7	29	22

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Table 12

CCSS domain and grade level alignment results for the easyCBM® seventh grade spring benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
6.RP	6	9	7.RP	3	2
6.NS	1	4	7.NS	8	11
6.EE	0	3	7.EE	4	4
6.G	0	2	7.G	14	2
6.SP	0	0	7.SP	1	2
Grade 6	7	18	Grade 7	30	21

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items

= the number of items identified as aligned as secondary standard to that CCSS domain.

Table 14

CCSS domain and grade level alignment results for the easyCBM® eighth grade fall benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
7.RP	0	2	8.NS	0	0
7.NS	0	0	8.EE	3	6
7.EE	4	3	8.F	7	13
7.G	5	7	8.G	5	9
7.SP	4	15	8.SP	1	0
Grade 7	13	27	Grade 8	16	28

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items

= the number of items identified as aligned as secondary standard to that CCSS domain.

Table 16

CCSS domain and grade level alignment results for the easyCBM® eighth grade winter benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
7.RP	1	2	8.NS	0	0
7.NS	0	1	8.EE	1	6
7.EE	1	3	8.F	11	7
7.G	2	7	8.G	9	11
7.SP	0	14	8.SP	0	1
Grade 7	4	27	Grade 8	21	25

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items

= the number of items identified as aligned as secondary standard to that CCSS domain.

Table 18
CCSS domain and grade level alignment results for the easyCBM® eighth grade spring benchmark in math.

Domain	# ps items	# sec items	Domain	# ps items	# sec items
7.RP	0	0	8.NS	0	1
7.NS	0	0	8.EE	2	6
7.EE	1	1	8.F	10	14
7.G	5	7	8.G	7	10
7.SP	2	17	8.SP	2	3
Grade 7	8	25	Grade 8	21	34

Note. On- and prior-grade domains are labeled using the unique CCSS identification code.

ps items = the number of items identified as aligned as primary standard to a given CCSS domain; # sec items = the number of items identified as aligned as secondary standard to that CCSS domain.

Reference

Irvin, P. S., Park, B. J., Alonzo, J., & Tindal, G. (2012). *The alignment of the easyCBM® grades 6–8 math measures to the Common Core State Standards (Technical Report 1230)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Summary of Technical Report 1208: The Alignment of the easyCBM® Middle School Mathematics CCSS Measures to the Common Core State Standards (Anderson et al., 2012).

Technical Report 1208 documents a formal alignment study examining the extent to which the easyCBM® Middle School Mathematics measures correspond to the Common Core State Standards (CCSS). The study provides critical validity evidence supporting the instructional use of easyCBM® within a formative and Response to Intervention (RTI) framework. The report focuses on alignment quality, rater agreement, and consistency across grades and mathematical domains.

Methods

The alignment study employed a structured, standards-based review process. Approximately 50% of the available easyCBM® middle school mathematics item pool across grades 6–8 was randomly selected for analysis. Items were originally developed by a team of experienced middle school mathematics teachers to reflect CCSS domains including Ratios and Proportional Relationships, The Number System, Expressions and Equations, Geometry, Functions, and Statistics and Probability.

Fifteen practicing middle school mathematics teachers from across the United States served as alignment raters. All raters completed standardized training delivered via webinar, which introduced the CCSS, alignment definitions, rating criteria, and scoring procedures. Raters conducted their reviews using the Distributed Item Review (DIR) online platform, which ensured consistency in item presentation and data collection.

Each item was evaluated against its intended CCSS using a four-point alignment scale ranging from 0 (no alignment) to 3 (direct alignment). For analytic purposes, ratings were collapsed into aligned (direct or requisite) versus not aligned categories. Rasch measurement modeling was applied to examine rater severity, item ‘endorsability’, and overall model fit, allowing for control of rater effects in estimating alignment outcomes.

Results

Results indicated strong overall alignment between easyCBM® middle school mathematics measures and the CCSS. After adjusting for rater severity, 87% of items were classified as directly aligned to their intended standards. When items measuring requisite or prerequisite skills were included, alignment rose to 99.6%, indicating near-complete coverage of CCSS-relevant content.

Rater effects were present but modest. Rasch analyses demonstrated acceptable fit statistics, suggesting that differences in rater severity did not meaningfully distort alignment conclusions. Overall rater agreement was sufficient to support the reliability of the alignment judgments.

Analyses across grades and mathematical domains revealed only minor variation in alignment rates. No grade-level or domain-specific weaknesses were identified that would undermine the use of the measures for formative or progress-monitoring purposes. Alignment consistency across grades 6–8 supports the vertical coherence of the easyCBM® mathematics system.

Appendix Table Structure

The appendices provide detailed transparency into the alignment process. Appendix A documents rater training materials and alignment criteria. Appendix B presents Rasch model outputs, including rater severity estimates and item ‘endorsability’ statistics. Appendix C contains item-level alignment tables organized by grade, domain, CCSS code, and rater ratings, enabling replication and secondary analyses. **Overall**, the study provides strong evidence that easyCBM® middle school mathematics measures are well aligned to the CCSS and suitable for instructional decision-making.

Table 14. easyCBM® Mathematics Alignments and Key Results with Evidence Leading to Interpretations

Finding Area	Key Result	Methodological Evidence	Interpretation
Overall Alignment	87% direct alignment; 99.6% including requisite skills	Rasch-adjusted alignment ratings	Strong correspondence to CCSS
Rater Effects	Minimal rater severity bias	Rasch rater severity estimates	Alignment judgments are reliable
Grade-Level Patterns	Consistent across grades 6–8	Grade-disaggregated Rasch analyses	Vertical coherence supported
Domain Coverage	High alignment across all CCSS domains	Domain-level alignment summaries	Broad CCSS content coverage

Reference

Anderson, D., Irvin, P. S., Alonzo, J., & Tindal, G. (2012). *The alignment of the easyCBM® middle school mathematics CCSS measures to the Common Core State Standards (Technical Report 1208)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.

Appendix A: Technical Report Table Titles

- Table 1. Alignment and Analysis of Phoneme Segmenting as Foundations Skills
- Table 2. Alignment of easyCBM® Early Reading with Common Core State Standards
- Table 3. easyCBM® Reading Alignment Summary by State Group
- Table 4. Strand-Level Item Subtotals by Grade for Proficient Reading
- Table 5. CCSS Domain Item Totals by Grade
- Table 6. CCSS Domain–Code Item Counts by Grade for Basic and Proficient Reading
- Table 7. Example of Analyses from Technical Report 1002
- Table 8. easyCBM® Mathematics Alignment Summary by State Group
- Table 9. easyCBM® Mathematics Alignment Summary by Domain for Benchmark (BM) and Progress Measures (PM)
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- Table 11. easyCBM® Mathematics Alignments and Key Findings (Grades K–2)
- Table 12. easyCBM® Mathematics Alignments and Key Findings (Grades 3–5)
- Table 13. easyCBM® Mathematics Alignments and Key Findings (Grades 6–8)
- Table 14. easyCBM® Mathematics Alignments and Key Results with Evidence Leading to Interpretations

Technical Report References

- Sáez, L., Irvin, P. S., Alonzo, J., & Tindal, G. (2012). *Phoneme segmenting alignment with the Common Core Foundational Skills Standard Two: Grades K-1 (Technical Report # 1227)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.
- Sáez, L., Irvin, P. S., Alonzo, J., & Tindal, G. (2013). *Alignment with the Common Core State Standards: easyCBM K-3 word reading (Technical Report # 1303)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.
- Saez, L., Whitney, M., Swanson, D., & ALonzo, J. (2021). *The alignment between easyCBM® mathematics and literacy assessments and state and national standards (Technical Report # 2101)*. Eugene, OR: Behavioral Research and Teaching, University of Oregon.