Texas Essential Knowledge and Skills (TEKS) Alignment to easyCBM® Mathematics

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Background

- In the summer of 2012, experienced teachers from a school district in Texas were recruited to participate in a formal study of the alignment between the TEKS and easyCBM.

  - 2 teachers per grade participated in the math alignment study, with an average of 18 years teaching experience across all teachers. There were 8 different individual teachers total.

- The results of the alignment study in the content area of reading are presented here, with overall alignment presented first. More detailed alignment results follow, where alignment to both **on-grade** and **prior-grade** standards by grade are presented.

- Average strength of alignment ratings across all TEKS aligned to a given measure are also given. Average strength ratings are calculated based on a scale of 0 to 2 where: 0 = *not aligned*; 1 = *somewhat aligned*; and 2 = *directly aligned*.

easyCBM® Math Alignment to On-Grade TEKS by Grade

Grade	K	1	3	4	5	6	6 CCSS	7	7 CCSS	8	8 CCSS
Prop. Aligned	25/37	19/38	23/43	32/42	20/37	21/39	18/39	20/41	26/41	14/43	19/43
%	68%	50%	53%	76%	54%	54%	46%	49%	63%	33%	44%

Alignment results are presented by grade for the battery of easyCBM® mathematics benchmark measures available for grades K-5, and the fall benchmark for grades 6-8. Results are also presented for a stratified random sampling of 90 Common Core State Standards (CCSS) Math items that are available for each of grades 6-8 in the district version of easyCBM®.

- Prop. Aligned = the proportion of TEKS addressed out of the total number of **on-grade** TEKS at each grade (i.e., Grade K easyCBM® measures are compared to Grade K TEKS, Grade 1 measures to Grade 1 TEKS, and so forth)
- % = the percentage of alignment

easyCBM® Math Alignment to Prior-grade TEKS by Grade

Grade	K	1	3	4	5	6	6 CCSS	7	7 CCSS	8	8 CCSS
Prop. Aligned	16/27	19/37	17/40	32/43	20/42	20/37	15/37	15/39	17/39	13/41	14/41
%	59%	51%	43%	74%	73%	54%	41%	38%	44%	32%	34%

Alignment results are presented by grade for the battery of easyCBM® mathematics benchmark measures available for grades K-5, and the fall benchmark for grades 6-8. Results are also presented for a stratified random sampling of 90 Common Core State Standards (CCSS) Math items that are available for each of grades 6-8 in the district version of easyCBM®.

- Prop. Aligned = the proportion of TEKS addressed out of the total number of **prior-grade** TEKS at each grade (i.e., Grade K easyCBM® measures are compared to Grade PK TEKS, Grade 1 measures to Grade K TEKS, and so forth)
- % = the percentage of alignment

Grade K Math BM - On Grade TEKS

Gr K TEKS	K(PK.3D)	K.1A	K.1B	K.1C	K.2A	K.2B	K.3A	K.4A	K.5A	K.6A	K.6B	K.7B	K.8A	K.8B	K.9A	K.9B	K.9C	K.10A	K.10C	K.10D	K.11A	K.11B	K.13B	K.14A	K.15A
Fall		x	x	x	x		x	x	x	x			x		x	x	x	x		x			x	x	
Winter		x	x	x	x		x		x	x		x	x	x	x	x		x	x	x					
Spring	x	x	x		x	x	x	x	x	x	x	x	x		x	x	x	x	x		x			x	x

Overall, 25 of 37 grade K TEKS were aligned to the grade K math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the GrK **fall** benchmark, 16 of 37 grade K TEKS (43%) were aligned, with an average strength rating of 1.81.
- For the GrK **winter** benchmark, 16 of 37 grade K TEKS (43%) were aligned, with an average strength rating of 1.81.
- For the GrK **spring** benchmark, 20 of 37 grade K TEKS (55%) were aligned, with an average strength rating of 1.63.

Grade K Math BM - Prior Grade TEKS

Gr PK TEKS	PK.1B	PK.1C	PK.1D	PK.1E	PK.1G	PK.1H	PK.1J	PK.1K	PK.2B	PK.3A	PK.3D	PK.4B	PK.4C	PK.4E	PK.5A	PK.5B
Fall		x	x	x	x		x	x		x	x		x		x	
Winter	x	x			x	x			x	x		x	x	x	x	x
Spring	x	x			x	x	x			x	x	x	x		x	

Overall, 16 of 27 grade PK TEKS were aligned to the grade K math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the GrK **fall** benchmark, 10 of 27 grade PK TEKS (37%) were aligned, with an average strength rating of 1.94.
- For the GrK **winter** benchmark, 11 of 27 grade PK TEKS (41%) were aligned, with an average strength rating of 1.82.
- For the GrK **spring** benchmark, 10 of 27 grade PK TEKS (37%) were aligned, with an average strength rating of 1.88.

Grade 1 Math BM - On Grade TEKS

Gr 1 TEKS	1.1A	1.1B	1.1D	1.2A	1.3A	1.3B	1.4A	1.5A	1.5B	1.5C	1.5D	1.5E	1.6A	1.6B	1.6C	1.6D	1.10A	1.11B	1.11C
Fall	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Winter	x	x	x	x	x	x		x	x	x	x	x	x		x	x	x	x	x
Spring	x	x	x	x	x	x	x		x	x	x	x	x		x	x	x	x	x

Overall, 19 of 38 grade 1 TEKS were aligned to the grade 1 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr1 **fall** benchmark, 19 of 38 grade 1 TEKS (50%) were aligned, with an average strength rating of 1.89.
- For the Gr1 **winter** benchmark, 17 of 38 grade 1 TEKS (45%) were aligned, with an average strength rating of 1.99.
- For the Gr1 **spring** benchmark, 17 of 38 grade 1 TEKS (45%) were aligned, with an average strength rating of 1.92.

Grade 1 Math BM - Prior Grade TEKS

Gr K TEKS	K.1A	K.1B	K.1C	K.2A	K.3A	K.3B	K.4A	K.5A	K.6B	K.8B	K.8C	K.9A	K.9B	K.9C	K.9D	K.10A	K.12B	K.13B	K.13C
Fall	x	x	x			x	x	x	x		x	x		x	x		x	x	x
Winter	x	x	x	x	x	x	x	x		x	x		x	x	x		x	x	x
Spring	x	x	x		x	x	x	x		x			x	x	x	x	x	x	x

Overall, 19 of 37 grade K TEKS were aligned to the grade 1 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr1 **fall** benchmark, 14 of 37 grade K TEKS (38%) were aligned, with an average strength rating of 1.91.
- For the Gr1 **winter** benchmark, 16 of 37 grade K TEKS (43%) were aligned, with an average strength rating of 1.94.
- For the Gr1 **spring** benchmark, 14 of 37 grade K TEKS (38%) were aligned, with an average strength rating of 1.85.

Grade 3 Math BM - On Grade TEKS

Gr 3 TEKS	3.2A	3.2B	3.2C	3.2D	3.3A	3.4A	3.4B	3.4C	3.6A	3.6B	3.6C	3.8A	3.9A	3.9B	3.9C	3.10A	3.11A	3.11B	3.11E	3.14A	3.14C	3.14D	3.15B
Fall	x	x	x		x	x	x	x	x	x	x	x	x	x		x	x	x					
Winter	x	x	x			x	x	x		x	x	x	x		x	x		x					
Spring	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x

Overall, 23 of 43 grade 3 TEKS were aligned to the grade 3 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr3 **fall** benchmark, 16 of 43 grade 3 TEKS (37%) were aligned, with an average strength rating of 1.79.
- For the Gr3 **winter** benchmark, 13 of 43 grade 3 TEKS (30%) were aligned, with an average strength rating of 1.82.
- For the Gr3 **spring** benchmark, 20 of 43 grade 3 TEKS (47%) were aligned, with an average strength rating of 1.75.

Grade 3 Math BM - Prior Grade TEKS

Gr 2 TEKS	2.2A	2.2B	2.2C	2.3B	2.4A	2.4B	2.5C	2.6C	2.7A	2.7B	2.7C	2.8A	2.9A	2.9C	2.12C	2.14A	2.14D
Fall	x	x		x	x	x	x	x	x		x		x				
Winter	x	x	x		x	x	x		x	x	x		x				
Spring	x	x	x		x	x	x	x	x		x	x		x	x	x	x

Overall, 17 of 40 grade 2 TEKS were aligned to the grade 3 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr3 **fall** benchmark, 10 of 40 grade 2 TEKS (25%) were aligned, with an average strength rating of 1.69.
- For the Gr3 **winter** benchmark, 10 of 40 grade 2 TEKS (25%) were aligned, with an average strength rating of 1.62.
- For the Gr3 **spring** benchmark, 14 of 40 grade 2 TEKS (35%) were aligned, with an average strength rating of 1.62.

Grade 4 Math BM - On Grade TEKS

Gr 4 TEKS	4.1A	4.1B	4.2A	4.2B	4.2C	4.2D	4.3A	4.3B	4.4A	4.4B	4.4C	4.4D	4.4E	4.5A	4.5B	4.6A
Fall	x	x	x	x		x		x	x		x	x			x	
Winter	x	x		x	x	x					x	x		x	x	
Spring	x	x	x			x	x		x	x	x	x	x		x	x

Gr 4 TEKS	4.6B	4.7A	4.8C	4.9B	4.10A	4.11A	4.11C	4.13A	4.13B	4.14A	4.14B	4.14C	4.15A	4.15B	4.16A	4.16B
Fall				x	x	x	x		x	x	x	x				x
Winter	x	x			x	x			x		x	x	x			
Spring		x	x		x	x	x	x	x	x	x	x	x	x	x	

Overall, 32 of 42 grade 4 TEKS were aligned to the grade 4 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr4 **fall** benchmark, 19 of 42 grade 4 TEKS (69%) were aligned, with an average strength rating of 1.59.
- For the Gr4 **winter** benchmark, 17 of 42 grade 4 TEKS (64%) were aligned, with an average strength rating of 1.96.
- For the Gr4 **spring** benchmark, 25 of 42 grade 4 TEKS (60%) were aligned, with an average strength rating of 1.67.

Grade 4 Math BM - Prior Grade TEKS

Gr 3 TEKS	3.1A	3.1B	3.1C	3.2B	3.2C	3.2D	3.3A	3.3B	3.4A	3.4B	3.5B	3.6A	3.6C	3.7A	3.7B	3.8A	3.9A	3.10A
Fall	x		x		x	x			x	x	x	x				x	x	x
Winter	x	x	x	x	x		x		x	x	x			x	x			x
Spring	x		x		x		x	x	x	x	x		x		x	x		x

Gr 3 TEKS	3.11A	3.11C	3.11D	3.12B	3.13A	3.13B	3.13C	3.14A	3.14B	3.14C	3.15A	3.15B	3.16A	3.16B
Fall		x				x	x	x	x	x				x
Winter		x	x	x	x	x			x	x	x			
Spring	x	x				x			x	x	x	x	x	

Overall, 32 of 43 grade 3 TEKS were aligned to the grade 4 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr4 **fall** benchmark, 18 of 43 grade 3 TEKS (42%) were aligned, with an average strength rating of 1.55.
- For the Gr4 **winter** benchmark, 20 of 43 grade 3 TEKS (47%) were aligned, with an average strength rating of 1.78.
- For the Gr4 **spring** benchmark, 20 of 43 grade 3 TEKS (47%) were aligned, with an average strength rating of 1.76.

Grade 5 Math BM - On Grade TEKS

Gr 5 TEKS	5.1A	5.2A	5.2B	5.2C	5.2D	5.3A	5.3B	5.3C	5.3E	5.4A	5.5A	5.7A	5.10B	5.10C	5.14A	5.14B	5.14C	5.15A	5.16A	5.16B
Fall	x	x				x		x	x	x		x	x	x	x		x			x
Winter	x	x	x		x	x	x	x	x	x	x	x	x	x			x		x	x
Spring	x	x		x		x	x	x	x	x			x	x		x	x	x	x	

Overall, 20 of 37 grade 5 TEKS were aligned to the grade 5 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr5 **fall** benchmark, 12 of 37 grade 5 TEKS (32%) were aligned, with an average strength rating of 1.78.
- For the Gr5 **winter** benchmark, 16 of 37 grade 5 TEKS (43%) were aligned, with an average strength rating of 1.82.
- For the Gr5 **spring** benchmark, 14 of 37 grade 5 TEKS (38%) were aligned, with an average strength rating of 1.93.

Grade 5 Math BM - Prior Grade TEKS

Gr 4 TEKS	4.1A	4.2A	4.2B	4.2C	4.2D	4.3A	4.3B	4.4D	4.4E	4.5A	4.5B	4.7A	4.8C	4.11A	4.11C	4.14A	4.14C	4.15A	4.16A	4.16B
Fall	x	x				x	x		x	x	x		x	x			x			x
Winter	x	x	x		x	x	x	x	x	x	x	x	x	x	x		x		x	x
Spring	x	x		x		x	x	x	x		x			x	x	x	x	x	x	

Overall, 20 of 42 grade 4 TEKS were aligned to the grade 5 math benchmark battery. Results are broken down by individual TEKS and by seasonal benchmark above.

- For the Gr5 **fall** benchmark, 11 of 42 grade 4 TEKS (26%) were aligned, with an average strength rating of 1.66.
- For the Gr5 **winter** benchmark, 17 of 42 grade 4 TEKS (40%) were aligned, with an average strength rating of 1.80.
- For the Gr5 **spring** benchmark, 15 of 42 grade 4 TEKS (36%) were aligned, with an average strength rating of 1.87.

Grade 6 Fall BM, and Grade 6 CCSS Math Stratified Random Sample - On Grade TEKS

Gr5 TEKS	6.1A	6.1B	6.1E	6.1F	6.2B	6.2C	6.2E	6.3A	6.3B	6.3C	6.4A	6.5A	6.7A	6.8B	6.9B	6.10A	6.10B	6.10D	6.11A	6.11B	6.11C
Fall BM	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CCSS Sample	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x			x

- For the Grade 6 **fall** benchmark, 21 of 39 grade 6 TEKS (53%) were aligned, with an average strength rating of 1.49.
- For the stratified random sampling of 90 **Grade 6 CCSS items**, 18 of 39 grade 6 TEKS (46%) were aligned, with an average strength rating of 1.47.

Grade 6 Fall BM, and Grade 6 CCSS Math Stratified Random Sample - Prior Grade TEKS

Gr 5 TEKS	5.1A	5.2A	5.2C	5.2D	5.3A	5.3B	5.3C	5.3D	5.3E	5.5A	5.6A	5.9A	5.10C	5.11A	5.12A	5.12B	5.13B	5.13C	5.14C	5.16A
Fall BM	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CCSS Sample	x	x	x		x	x	x	x			x	x	x	x		x	x	x	x	

- For the Grade 6 **fall** benchmark, 20 of 37 grade 5 TEKS (54%) were aligned, with an average strength rating of 1.62.
- For the stratified random sampling of 90 **Grade 6 CCSS items**, 15 of 37 grade 5 TEKS (41%) were aligned, with an average strength rating of 1.57.

Grade 7 Fall BM, and Grade 7 CCSS Math Stratified Random Sample - On Grade TEKS

Gr7 TEKS	7.1A	7.1B	7.2A	7.2B	7.2C	7.2D	7.2E	7.2F	7.3A	7.3B	7.4A	7.5A	7.5B	7.6A	7.6B	7.6C	7.6D	7.8C	7.9A	7.9B	7.9C	7.10A	7.10B	7.11B	7.12A	7.12B
Fall BM	x	x	x	x	x	x	x	x	x	x	x		x	x			x	x	x	x	x		x	x		
CCSS Sample	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

- For the Grade 7 **<u>fall</u>** benchmark, 20 of 41 grade 7 TEKS (49%) were aligned, with an average strength rating of 1.55.
- For the stratified random sampling of 90 **<u>Grade 7 CCSS items</u>**, 26 of 41 grade 7 TEKS (63%) were aligned, with an average strength rating of 1.64.

Grade 7 Fall BM, and Grade 7 CCSS Math Stratified Random Sample - Prior Grade TEKS

Gr6 TEKS	6.1A	6.1B	6.2A	6.2B	6.2C	6.2D	6.2E	6.3B	6.3C	6.4A	6.4B	6.5A	6.6A	6.6B	6.6C	6.8A	6.8B	6.8D	6.9A	6.9B	6.10B	6.10D
Fall BM	x	x	x	x	x	x	x		x	x			x		x	x		x		x		x
CCSS Sample			x	x	x		x	x	x		x	x	x	x	x	x	x		x	x	x	x

- For the Grade 7 **fall** benchmark, 15 of 39 grade 6 TEKS (38%) were aligned, with an average strength rating of 1.37.
- For the stratified random sampling of 90 **Grade 7 CCSS items**, 17 of 39 grade 6 TEKS (44%) were aligned, with an average strength rating of 1.39.

Gr8 TEKS	8.1A	8.1B	8.1C	8.1D	8.1E	8.2A	8.2C	8.2D	8.3A	8.3B	8.4A	8.5A	8.5B	8.6A	8.6B	8.7B	8.7C	8.7D	8.8B	8.9A	8.12A	8.12B	8.12C	8.13B
Fall BM		x	x			x	x			x	x	x			x		x	x	x		x	x		x
CCSS Sample	x		x	x	x	x		x	x	x	x	x	x		x		x	x	x	x		x	x	x

- For the Grade 8 **<u>fall</u>** benchmark, 14 of 43 grade 8 TEKS (33%) were aligned, with an average strength rating of 1.49.
- For the stratified random sampling of 90 **<u>Grade 8 CCSS items</u>**, 19 of 43 grade 8 TEKS (44%) were aligned, with an average strength rating of 1.60.

Grade 8 Fall BM, and Grade 8 CCSS Math Stratified Random Sample - Prior Grade TEKS

Gr7 TEKS	7.1A	7.1B	7.1C	7.2B	7.2D	7.2F	7.2G	7.3A	7.3B	7.4A	7.4B	7.4C	7.5A	7.6B	7.6D	7.7A	7.7B	7.8C	7.11A	7.11B	7.12A	7.12B
Fall BM				x		x	x		x	x	x			x	x	x	x	x			x	x
CCSS Sample	x	x	x		x	x		x	x	x		x	x	x		x	x			x		

- For the Grade 8 **fall** benchmark, 13 of 41 grade 7 TEKS (32%) were aligned, with an average strength rating of 1.40.
- For the stratified random sampling of 90 **Grade 8 CCSS items**, 14 of 41 grade 7 TEKS (34%) were aligned, with an average strength rating of 1.42.