

A Correlation of

Scott Foresman • Addison Wesley

en**Vision**MATH™

to the

**Kentucky
Core Content for
Mathematics Version 4.1
Grades K-6**

PEARSON

T/M-166

Introduction

This correlation is designed to show the close alignment between Scott Foresman-Addison Wesley enVisionMATH and the Kentucky Core Content for Mathematics. Correlation page references are to the Teacher's Edition and Student Edition.

The enVisionMATH™ program is based around scientific research on how children learn mathematics as well as on classroom-based evidence that validates proven reliability.

Personalized Curriculum

enVisionMATH™ provides 20 (16 in Kindergarten) focused topics that are coherent, digestible groups of lessons focusing on one or a few related content areas. A flexible sequence of topics is small enough for a district to rearrange into a personalized curriculum that matches the sequence preferred by the district. The curriculum is designed so that all standards can be taught before the major mathematics testing.

Instructional Design

enVisionMATH™ teaches for deep conceptual understanding using research-based best practices. Essential understandings connected by Big Ideas are explicitly stated in the Teacher's Edition. Daily Spiral Review and the Problem of the Day focus foundational skills and allow for ongoing practice with a variety of problem types. Daily interactive concept development encourages students to interact with teachers and other students to develop conceptual understanding.

Visual Learning allows students to benefit from seeing math ideas portrayed pictorially as well as being able to see connections between ideas. enVisionMATH™ created a Visual Learning Bridge which is a step-by-step bridge between the interactive learning activity and the lesson exercises to help students focus on one idea at a time and see the connections within the sequence of ideas. The strong sequential visual/verbal connections deepen conceptual understanding for students of all learning modalities and are particularly effective with English language learners and struggling readers. Guiding questions in blue type help the teacher guide students through the examples, ask probing questions to stimulate higher order thinking, and allow for checking of understanding.

Differentiated Instruction

enVisionMATH™ engages and interests all students with leveled activities for ongoing differentiated instruction. A Teacher-Directed Intervention activity at the end of every lesson provides immediate opportunities to get students on track. In addition, ready made leveled learning centers for each lesson allow different students to do the same activity at different levels at the same time giving the teacher uninterrupted time to focus on reteaching students who require intervention. All centers can be used repeatedly due to the inclusion of a "Try Again" at the end. They can also be used for ongoing review and they can be used year after year. Topic-specific considerations for EL, Special Education, At-Risk, and Advanced students enable the teacher to accommodate the diverse learners in the classroom.

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**Scott Foresman – Addison Wesley enVisionMATH
to the
Kentucky Core Content for Mathematics
Kindergarten**

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Number Properties and Operations Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.</p>	
End of Primary	
Number Sense	
MA-EP-1.1.1 Students will:	
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 9,999): 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 51–52, 59–60, 63–64, 67–68, 75–76, 79–80, 83–84, 87–88, 89–90, 93–94, 101–102, 105–106, 177–178, 179–180, 183–184, 185–186, 189–190, 195–196, 197–198, 201–202, 205–206, 207–208, 215–216, 217–218, 221–222, 225–226, 237–238, 241–242, 245–246, 289–290</p>
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe fractions (halves, thirds, fourths); 	SE/TE: 137–138, 139–140, 141–142
<ul style="list-style-type: none"> • apply these numbers to represent real-world problems and 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 95–96, 109–110, 138, 141–142, 143–144, 147–148, 177–178, 180, 181–182, 183–184, 185–</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
	186, 187–188, 195–196, 197–198, 199–200, 201–202, 203–204, 205–206, 207–208, 213–214, 215–216, 217–218, 219–220, 221–222, 229–230, 237–238, 239–240, 241–242, 247–248, 273–274
<ul style="list-style-type: none"> explain how the base 10 number system relates to place value. <p style="text-align: right;">DOK 2</p>	SE/TE: 225–226 213–214, 215–216, 217–218, 219–220, 223–224, 227–228
<i>MA-EP-1.1.2</i> <i>Students will read, write and rename whole numbers (0 to 9,999) and apply to real-world and mathematical problems.</i>	SE/TE: 53–54, 57–58, 59–60, 69–70, 79–80, 83–84, 85–86, 89–90, 91–92, 93–94, 95–96, 107–108, 109–110, 147–148, 213–214, 215–216, 217–218, 219–220, 221–222, 223–224, 225–226, 245–246, 259–260 120, 166, 231–232, 257–258, 277–278, 279–280, 143–144
MA-EP-1.1.3 Students will compare (<, >, =) and order whole numbers to whole numbers, decimals to decimals (as money only) and fractions to fractions (limited to pictorial representations). <p style="text-align: right;">DOK2</p>	SE/TE: 63–64, 65–66, 67–68, 93–94, 101–102, 103–104, 105–106, 107–108, 289–290
Estimation	
MA-EP-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results (limited to addition and subtraction). <p style="text-align: right;">DOK 2</p>	<i>Correlations listed provide readiness for the standard:</i> SE/TE: 161–162, 171–172 TE: 162C, 166C, 172C
Number Operations	
MA-EP-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:	
<ul style="list-style-type: none"> add and subtract whole numbers with three digits or less; 	SE/TE: 177–178, 179–180, 181–182, 183–184, 185–186, 187–188, 189–190, 195–196, 197–198, 199–200, 201–202, 203–204, 205–206, 207–208

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<ul style="list-style-type: none"> multiply whole numbers of 10 or less; 	Introduced in Grade 2.
<ul style="list-style-type: none"> add and subtract fractions with like denominators less than or equal to four and 	Introduced in Grade 3.
<ul style="list-style-type: none"> add and subtract decimals related to money. <p style="text-align: right;">DOK 2</p>	Introduced in Grade 2.
<p><i>MA-EP-1.3.2</i> Students will skip-count forward and backward by 2s, 5s, 10s and 100s.</p>	SE/TE: 225–226, 227–228, 229–230
<p><i>MA-EP-1.3.3</i> Students will divide two digit numbers by single digit divisors (with or without remainders) in real-world and mathematical problems.</p>	Introduced in Grade 2.
Ratios and Proportional Reasoning (not assessed at the elementary level)	
Properties of Numbers and Operations	
<p>MA-EP-1.5.1 Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 221–222 223–224, 225–226, 227–228, 229–230 TE: 222A, 222C 221A, 226A, 226C, 228A, 228C, 230A, 230C</p>
<p><i>MA-EP-1.5.2</i> Students will use the commutative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</p>	Introduced in Grade 1.

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Measurement Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.	
End of Primary	
Measuring Physical Attributes	
MA-EP-2.1.1 Students will apply standard units to measure length (to the nearest half-inch or the nearest centimeter) and to determine:	
<ul style="list-style-type: none"> • weight (nearest pound); 	<i>Correlations listed provide readiness for the standard:</i> SE/TE: 159–160, 161–162, 169–170, 171–172
<ul style="list-style-type: none"> • time (nearest quarter hour); and 	<i>Correlations listed provide readiness for the standard:</i> SE/TE: 159–160, 161–162, 261–262, 263–264
<ul style="list-style-type: none"> • money (identify coins and bills by value) and 	<i>Correlations listed provide readiness for the standard:</i> SE/TE: 237–238, 239–240, 241–242, 243–244, 245–246, 247–248 159–160, 161–162
<ul style="list-style-type: none"> • temperature (Fahrenheit). <p style="text-align: right;">DOK 1</p>	<i>Correlations listed provide readiness for the standard:</i> SE/TE: 159–160, 161–162, 281–282, 283–284
<i>MA-EP-2.1.2</i> <i>Students will use standard units to measure temperature in Fahrenheit and Celsius to the nearest degree.</i>	Introduced in Grade 1.
<i>MA-EP-2.1.3</i> <i>Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, ruler) for specific measurement tasks.</i>	SE/TE: 167–168, 169–170, 171–172, 259–260, 261–262, 281–282, 283–284
<i>MA-EP-2.1.4</i> <i>Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length – in, cm; weight – oz, lb) and</i>	SE/TE: 153–154, 155–156, 157–158, 159–160, 161–162, 165–166, 167–168, 169–170, 171–172

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<i>make an estimate using appropriate units of measurement.</i>	
<p><i>MA-EP-2.1.5</i> <i>Students will use units of measurement to describe and compare attributes of objects to include length (in, cm), width, height, money (cost), temperature (F) and weight (oz, lb), and sort objects and compare attributes by shape, size and color.</i></p>	<p>SE/TE: 3–4, 5–6, 7–8, 9–10, 11–12, 153–154, 155–156, 157–158, 159–160, 167–168, 281–282, 283–284 163–164</p>

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<p><i>MA-EP-2.1.6</i> Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.</p>	<p>SE/TE: 161–162, 171–172 253–254</p>
<p>Systems of Measurement</p>	
<p><i>MA-EP-2.2.1</i> Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement to include length (in., cm.), time, money, temperature (Fahrenheit) and weight (oz., lb).</p>	<p>SE/TE: 161–162, 171–172, 237–238, 239–240, 241–242, 243–244, 245–246, 247–248, 253–254, 255–256, 261–262, 263–264, 265–266, 281–282, 283–284</p>
<p><i>MA-EP-2.2.2</i> Students will determine elapsed time by half hours.</p>	<p>Correlations listed provide readiness for the standard: SE/TE: 261–262, 263–264 TE: 262A, 262C, 264A, 264C</p>
<p><i>MA-EP-2.2.3</i> Students will convert units within the same measurement system including money (dollars, cents), time (minutes, hours, days, weeks, months), weight (ounce, pound) and length (inch, foot).</p>	<p>Correlations listed provide readiness for the standard: SE/TE: 243–244, 271–272, 273–274, 277–278, 279–280 TE: 244C, 274A, 280A</p>
<p>Geometry Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.</p>	
<p>End of Primary</p>	
<p>Shapes and Relationships</p>	
<p>MA-EP-3.1.1 Students will describe and provide examples of basic geometric elements and terms (sides, edges, faces, bases, vertices, angles) and will apply these elements to solve real-world and mathematical problems. DOK 2</p>	<p>SE/TE: 115–116, 117–118, 121–122, 125–126, 127–128, 129–130, 131–132</p>

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<p>MA-EP-3.1.2 Students will describe and provide examples of basic two-dimensional shapes (circles, triangles, squares, rectangles, trapezoids, rhombuses, hexagons) and will apply these shapes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 3–4, 5–6, 7–8, 9–10, 11–12, 37–38, 39–40, 45–46, 115–116, 117–118, 119–120, 121–122, 123–124, 129–130, 131–132, 137–138, 139–140, 141–142 TE: 17A, 18C, 19A, 21A, 23A, 27A, 271A, 275A</p>
<p>MA-EP-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes) and will apply the attributes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 4, 6, 8, 10, 18, 25–26, 43–44, 63–64, 65–66, 67–68, 125–126, 127–128, 129–130, 131–132, 139–140 60, 108, 154, 155–156, 157–158, 159–160, 165–166, 167–168, 169–170, 171–172, 181–182, 289–290 TE: 22C, 271A, 275A</p>
<p><i>MA-EP-3.1.5</i> <i>Students will identify and describe congruent figures in real-world and mathematical problems.</i></p>	<p>SE/TE: 3–4, 5–6, 7–8, 9–10, 11–12, 115–116, 117–118, 121–122, 125–126, 127–128, 129–130, 131–132</p>
Transformations of Shapes	
<p>MA-EP-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one line of symmetry to construct a simple geometric design.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 123–124 137–138, 139–140, 141–142 TE: 123A, 124A, 124C</p>
<p><i>MA-EP-3.3.1</i> <i>Students will locate points on a grid representing positive coordinate system.</i></p>	<p>Introduced in Grade 1.</p>
<p>Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	
End of Primary	
Data Representations	

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<p>MA-EP-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs with two or three sectors, line plots, two-circle Venn diagrams).</p> <p style="text-align: right;">DOK 3</p>	<p>SE/TE: 95–96, 289–290, 291–292, 293–294, 295–296, 297–298, 301–302</p>
<p><i>MA-EP-4.1.2</i> Students will collect data.</p>	<p>SE/TE: 95–96, 291–292, 293–294, 295–296</p>
<p><i>MA-EP-4.1.3</i> Students will organize and display data.</p>	<p>SE/TE: 95–96, 291–292, 293–294, 295–296, 297–298, 301–302</p>
<p>Characteristics of Data Sets</p>	
<p><i>MA-EP-4.2.1</i> Students will determine the mode (of a set of data with no more than one mode) and the range of a set of data.</p>	<p>Introduced in Grade 2.</p>
<p>Experiments and Samples</p>	
<p><i>MA-EP-4.3.1</i> Students will pose questions that can be answered by collecting data.</p>	<p>SE/TE: 291–292, 293–294, 295–296</p>
<p>Probability</p>	
<p><i>MA-EP-4.4.3</i> Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).</p>	<p>SE/TE: 299–300 TE: 299A, 300A, 300C</p>
<p>Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.</p>	
<p>End of Primary</p>	
<p>Patterns, Relations and Functions</p>	

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<p>MA-EP-5.1.1 Students will extend simple patterns (e.g., 2,4,6,8, ...; $\diamond\triangle\diamond\diamond\diamond \dots$). DOK 2</p>	<p>SE/TE: 33–34, 35–36, 37–38, 39–40, 41–42, 43–44, 46, 225–226, 227–228, 229–230, 231–232, 273–274 TE: 275A</p>
<p>MA-EP-5.1.2 Students will describe functions (input-output) through pictures and words. DOK 2</p>	<p>Introduced in Grade 1.</p>
<p><i>MA-EP-5.1.3</i> <i>Students will determine the value of an output given a function rule and an input value</i></p>	<p>Introduced in Grade 1.</p>
<p>Variables, Expressions and Operations</p>	
<p>Equations and Inequalities</p>	
<p>MA-EP-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a missing value (e.g., $2 + ? = 7$, $___ < 6$) and apply simple number sentences to solve mathematical and real-world problems. DOK 2</p>	<p>SE/TE: 187–188, 189–190, 205–206, 207–208</p>

**Scott Foresman – Addison Wesley enVisionMATH
to the
Kentucky Core Content for Mathematics**

Grade One

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Number Properties and Operations Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.</p>	
End of Primary	
Number Sense	
<p>MA-EP-1.1.1 Students will:</p> <ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 9,999): 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 7–10, 19–22, 35–38, 51–54, 63–66, 75–78, 83–86, 95–98, 107–110, 119–122, 131–134, 147–150, 159–162, 179–182, 263–266, 283–286, 303–306, 311–314, 323–326, 339–342, 351–354, 485–488, 501–504, 517–520, 533–536, 541–544, 561–564, 609–612, 625–628, 637–640</p>
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe fractions (halves, thirds, fourths); 	<p>SE/TE: 585–588, 589–592 593–596, 597–600, 601–604 TE: 583A–583B, 583C–583D, 583E–583F, 583G–583H, 583–584, 585A, 588B, 589A, 592B, 593A, 596B, 597A, 600B, 604B</p>
<ul style="list-style-type: none"> • apply these numbers to represent real-world problems and 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 6, 14, 23–25, 34, 42, 67–70, 75–78, 86, 99–102, 110, 124–126, 135–138, 146, 163–166, 174, 187–190, 266, 286, 295–298, 306, 323–326, 342, 350, 469–472, 493–496, 533–536, 593–596, 612, 628, 637–640</p>

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<ul style="list-style-type: none"> explain how the base 10 number system relates to place value. <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 263–266, 271–274, 303–306, 307–310, 311–314, 315–318, 319–322, 323–326, 331–334, 335–338, 339–342, 629–632 497–500, 501–504, 609–612, 617–620</p>
<p><i>MA-EP-1.1.2</i> Students will read, write and rename whole numbers (0 to 9,999) and apply to real-world and mathematical problems.</p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 3–6, 11–14, 19–22, 31–34, 39–42, 43–46, 55–58, 59–62, 67–70, 71–74, 83–86, 91–94, 99–102, 103–106, 107–110, 111–114, 123–126, 127–130, 155–158, 179–182, 183–186, 263–266, 287–290, 303–306, 311–314, 315–318, 323–326, 609–612, 617–620, 629–632</p>
<p>MA-EP-1.1.3 Students will compare (<, >, =) and order whole numbers to whole numbers, decimals to decimals (as money only) and fractions to fractions (limited to pictorial representations).</p> <p style="text-align: right;">DOK2</p>	<p>SE/TE: 31–34, 35–38, 39–42, 43–46, 339–342, 343–346, 347–350, 351–354, 355–358, 359–362</p>
Estimation	
<p>MA-EP-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results (limited to addition and subtraction).</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 387–389, 399–402, 403–406, 407–410 347–350, 419–422, 423–426, 427–430, 435–438, 439–442</p>
Number Operations	
<p>MA-EP-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</p>	

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<ul style="list-style-type: none"> add and subtract whole numbers with three digits or less; 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 55–58, 63–66, 71–74, 83–86, 91–94, 99–102, 107–110, 123–126, 131–134, 143–146, 151–154, 159–162, 171–174, 179–182, 187–189, 267–270, 319–322, 388–389, 481–484, 489–492, 497–500, 505–508, 521–524, 529–532, 609–612, 617–620, 621–624, 625–628, 633–636, 637–640</p>
<ul style="list-style-type: none"> multiply whole numbers of 10 or less; 	<p><i>Correlations listed provide readiness for the standard:</i> SE/TE: 147–150, 271–274, 275–278, 279–282</p>
<ul style="list-style-type: none"> add and subtract fractions with like denominators less than or equal to four and 	<p>Introduced in Grade 3.</p>
<ul style="list-style-type: none"> add and subtract decimals related to money. <p style="text-align: right;">DOK 2</p>	<p>Introduced in Grade 2.</p>
<p><i>MA-EP-1.3.2</i> <i>Students will skip-count forward and backward by 2s, 5s, 10s and 100s.</i></p>	<p>SE/TE: 271–274, 275–278, 279–282, 291–294, 295–298, 309</p>
<p><i>MA-EP-1.3.3</i> <i>Students will divide two digit numbers by single digit divisors (with or without remainders) in real-world and mathematical problems.</i></p>	<p>Introduced in Grade 2.</p>
<p>Ratios and Proportional Reasoning (not assessed at the elementary level)</p>	
<p>Properties of Numbers and Operations</p>	
<p>MA-EP-1.5.1 Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 283–286, 291–294, 295–298</p>

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<p><i>MA-EP-1.5.2</i> <i>Students will use the commutative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i></p>	<p>SE/TE: 71–74, 145, 505–508</p>
<p>Measurement Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.</p>	
<p>End of Primary</p>	
<p>Measuring Physical Attributes</p>	
<p>MA-EP-2.1.1 Students will apply standard units to measure length (to the nearest half-inch or the nearest centimeter) and to determine:</p>	
<ul style="list-style-type: none"> • weight (nearest pound); 	<p>SE/TE: 399–402, 403–406, 407–410, 411–414, 415–418</p>
<ul style="list-style-type: none"> • time (nearest quarter hour); and 	<p>SE/TE: 407–410, 411–414, 453–456, 457–460, 461–464, 474 399–402, 403–406, 415–418</p>
<ul style="list-style-type: none"> • money (identify coins and bills by value) and 	<p>SE/TE: 367–370, 371–374, 375–378, 379–382, 383–386, 387–390</p>
<ul style="list-style-type: none"> • temperature (Fahrenheit). <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 407–410, 411–414 399–402, 403–406, 415–418, 443–446</p>
<p><i>MA-EP-2.1.2</i> <i>Students will use standard units to measure temperature in Fahrenheit and Celsius to the nearest degree.</i></p>	<p>Introduced in Grade 2.</p>
<p><i>MA-EP-2.1.3</i> <i>Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, ruler) for specific measurement tasks.</i></p>	<p>SE/TE: 407–410, 411–414, 431–434, 435–438, 439–442, 453–456, 457–460, 461–464 415–418 TE: 469A</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p><i>MA-EP-2.1.4</i> <i>Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length – in, cm; weight – oz, lb) and make an estimate using appropriate units of measurement.</i></p>	<p>SE/TE: 395–398, 399–402, 403–406, 407–410, 411–414, 419–422, 423–426, 427–430, 435–438, 439–442 TE: 469A</p>
<p><i>MA-EP-2.1.5</i> <i>Students will use units of measurement to describe and compare attributes of objects to include length (in, cm), width, height, money (cost), temperature (F) and weight (oz, lb), and sort objects and compare attributes by shape, size and color.</i></p>	<p>SE/TE: 367–370, 371–374, 431 395–398, 443–446 TE: 260B, 450B</p>
<p><i>MA-EP-2.1.6</i> <i>Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.</i></p>	<p>SE/TE: 407–410, 411–414, 435–438, 439–442, 465–468 399–402, 403–406 TE: 450A</p>
Systems of Measurement	
<p><i>MA-EP-2.2.1</i> <i>Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement to include length (in., cm.), time, money, temperature (Fahrenheit) and weight (oz., lb).</i></p>	<p>SE/TE: 367–370, 371–374, 375–378, 379–382, 386, 387–390, 398, 399–402, 403–406, 418, 422, 423–426, 427–430, 431–434, 435–438, 439–442, 443, 456, 460, 464, 465–468, 473–476 465</p>
<p><i>MA-EP-2.2.2</i> <i>Students will determine elapsed time by half hours.</i></p>	<p>SE/TE: 461–464 473–476 TE: 451D, 464B</p>
<p><i>MA-EP-2.2.3</i> <i>Students will convert units within the same measurement system including money (dollars, cents), time (minutes, hours, days, weeks, months), weight (ounce, pound) and length (inch, foot).</i></p>	<p>SE/TE: 369, 373, 375–378, 379–382</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Geometry Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.</p>	
<p>End of Primary</p>	
<p>Shapes and Relationships</p>	
<p>MA-EP-3.1.1 Students will describe and provide examples of basic geometric elements and terms (sides, edges, faces, bases, vertices, angles) and will apply these elements to solve real-world and mathematical problems. DOK 2</p>	<p>SE/TE: 195–198, 199–202, 227–230, 231–234, 235–238</p>
<p>MA-EP-3.1.2 Students will describe and provide examples of basic two-dimensional shapes (circles, triangles, squares, rectangles, trapezoids, rhombuses, hexagons) and will apply these shapes to solve real-world and mathematical problems. DOK 2</p>	<p>SE/TE: 195–198, 199–202, 203–206, 207–210, 211–214, 215–218, 219–222, 223–226, 248–249, 251–254, 256–258</p>
<p>MA-EP-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes) and will apply the attributes to solve real-world and mathematical problems. DOK 1</p>	<p>SE/TE: 227–230, 231–234, 235–238, 554–556 196–197</p>
<p><i>MA-EP-3.1.5</i> <i>Students will identify and describe congruent figures in real-world and mathematical problems.</i></p>	<p>SE/TE: 215–218 TE: 218B, 219A 193B, 215A</p>
<p>Transformations of Shapes</p>	
<p>MA-EP-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one line of symmetry to construct a simple geometric design. DOK 2</p>	<p>SE/TE: 219–222 TE: 222B</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p><i>MA-EP-3.3.1</i> Students will locate points on a grid representing positive coordinate system.</p>	<p>SE/TE: 553–556 TE: 556B</p>
<p>Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	
<p>End of Primary</p>	
<p>Data Representations</p>	
<p>MA-EP-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs with two or three sectors, line plots, two-circle Venn diagrams). DOK 3</p>	<p>SE/TE: 135–138, 224, 292–293, 473–476, 541–544, 545–548, 549–552, 557–560, 569–572, 577–580 509–512, 561–564, 565–568</p>
<p><i>MA-EP-4.1.2</i> Students will collect data.</p>	<p>SE/TE: 223–226, 541, 557–560, 561–564, 565–568, 577–578 545–548, 549–552, 569–572</p>
<p><i>MA-EP-4.1.3</i> Students will organize and display data.</p>	<p>SE/TE: 223–226, 509–512, 541, 557–560, 561–564, 565–568, 569–572, 577–578 360–361, 545–548, 549–552</p>
<p>Characteristics of Data Sets</p>	
<p><i>MA-EP-4.2.1</i> Students will determine the mode (of a set of data with no more than one mode) and the range of a set of data.</p>	<p>Introduced in Grade 2.</p>
<p>Experiments and Samples</p>	
<p><i>MA-EP-4.3.1</i> Students will pose questions that can be answered by collecting data.</p>	<p>SE/TE: 544, 548 549–552, 557–560, 561–564, 565–568, 569–572</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
Probability	
<p><i>MA-EP-4.4.3</i> <i>Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).</i></p>	<p>SE/TE: 573–576, 577–580</p>
<p>Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.</p>	
End of Primary	
Patterns, Relations and Functions	
<p>MA-EP-5.1.1 Students will extend simple patterns (e.g., 2,4,6,8, ...; $\diamond\triangle\diamond\triangle$...). <p style="text-align: right;">DOK 2</p> </p>	<p>SE/TE: 15–18, 19–22, 213, 229, 233, 243–246, 247–250, 251–254, 255–258, 271–274, 275–278, 279–282, 283–286, 289, 291–294, 295–298, 343–346, 357, 463, 507 7–9, 11–13, 23–25</p>
<p>MA-EP-5.1.2 Students will describe functions (input-output) through pictures and words. <p style="text-align: right;">DOK 2</p> </p>	<p>SE/TE: 291–294, 295–298</p>
<p><i>MA-EP-5.1.3</i> <i>Students will determine the value of an output given a function rule and an input value</i></p>	<p>SE/TE: 291–294, 295–298 TE: 294B, 298B</p>
Variables, Expressions and Operations	
Equations and Inequalities	
<p>MA-EP-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a missing value (e.g., $2 + ? = 7$, $___ < 6$) and apply simple number sentences to solve mathematical and real-world problems. <p style="text-align: right;">DOK 2</p> </p>	<p>SE/TE: 53, 57, 61, 63–66, 85, 89, 93, 97, 101, 105, 109, 149, 153, 155–158, 161, 163–166, 177, 269, 281, 309, 313, 321, 341, 353, 491, 533–536, 615, 619 31–33, 187–190</p>

**Scott Foresman – Addison Wesley enVisionMATH
to the
Kentucky Core Content for Mathematics**

Grade Two

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Number Properties and Operations Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.</p>	
End of Primary	
Number Sense	
<p>MA-EP-1.1.1 Students will:</p> <ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 9,999): 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 3–6, 19–22, 35–38, 43–46, 55–58, 59–62, 76–78, 80–82, 99–102, 111–114, 131–134, 175–178, 195–198, 207–210, 219–222, 227–230, 231–234, 251–254, 263–266, 303–306, 483–486, 511–514, 519–522, 531–534, 551–554, 575–578, 591–594, 603–606, 619–622, 627–630</p>
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe fractions (halves, thirds, fourths); 	<p>SE/TE: 351–354, 355–358, 359–362, 367–370, 371–374 363–366</p>
<ul style="list-style-type: none"> • apply these numbers to represent real-world problems and 	<p>SE/TE: 102, 106, 110, 114, 122, 126, 134, 135–138, 354, 358, 362, 366, 367–370, 371–374, 406, 407–410, 418, 422, 423–426, 430, 458, 539–542, 543–546, 619–622, 635–638</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<ul style="list-style-type: none"> explain how the base 10 number system relates to place value. <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 99–102, 103–106, 111–114, 115–118, 136–137, 179–182, 183–186, 203–206, 207–210, 219–222, 223–226, 227–230, 231–234, 235–238, 239–242, 243–246, 251–254, 255–258, 259–262, 263–266, 267–270, 511–514, 515–518, 519–522, 531–534, 559–562, 563–566, 575–578, 579–582</p>
<p><i>MA-EP-1.1.2</i> Students will read, write and rename whole numbers (0 to 9,999) and apply to real-world and mathematical problems.</p>	<p>SE/TE: 3–6, 7–10, 11–14, 15–18, 19–22, 23–26, 27–30, 99–102, 103–106, 107–110, 271–274, 275–278, 519–522, 551–554, 567–570</p>
<p>MA-EP-1.1.3 Students will compare (<, >, =) and order whole numbers to whole numbers, decimals to decimals (as money only) and fractions to fractions (limited to pictorial representations).</p> <p style="text-align: right;">DOK2</p>	<p>SE/TE: 19–22, 71–74, 111–114, 115–118, 119–122, 123–126, 136–137, 299–302, 495–498, 531–534, 535–538, 539–542 TE: 168B</p>
Estimation	
<p>MA-EP-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results (limited to addition and subtraction).</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 287–290, 299–302, 555–558, 571–574</p>
Number Operations	
<p>MA-EP-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</p>	
<ul style="list-style-type: none"> add and subtract whole numbers with three digits or less; 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 7–10, 19–22, 23–26, 27–30, 38, 46, 58, 64–66, 78, 87–90, 178, 187–190, 210, 211–214, 223–226, 231–234, 239–242, 259–262, 271–274, 283–286, 291–294, 303–306, 471–474, 551–554, 559–562, 567–570, 579–582, 583–586, 591–594, 623–626</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<ul style="list-style-type: none"> multiply whole numbers of 10 or less; 	SE/TE: 591–594, 595–598, 599–602, 603–606, 607–610, 611–614, 631–634
<ul style="list-style-type: none"> add and subtract fractions with like denominators less than or equal to four and 	Introduced in Grade 2.
<ul style="list-style-type: none"> add and subtract decimals related to money. <p style="text-align: right;">DOK 2</p>	SE/TE: 159–162 166
<i>MA-EP-1.3.2</i> <i>Students will skip-count forward and backward by 2s, 5s, 10s and 100s.</i>	SE/TE: 127–130, 171–174, 195–198, 199–202, 511–514, 515–518, 523–526, 527–530, 567–570 143–146, 537
<i>MA-EP-1.3.3</i> <i>Students will divide two digit numbers by single digit divisors (with or without remainders) in real-world and mathematical problems.</i>	SE/TE: 619–622, 627–630, 631–634
Ratios and Proportional Reasoning (not assessed at the elementary level)	
Properties of Numbers and Operations	
MA-EP-1.5.1 Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems. <p style="text-align: right;">DOK 2</p>	SE/TE: 131–134 127–130, 514, 530 TE: 616B
<i>MA-EP-1.5.2</i> <i>Students will use the commutative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i>	SE/TE: 47–50, 239–242, 607–610

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Measurement Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.</p>	
<p>End of Primary</p>	
<p>Measuring Physical Attributes</p>	
<p>MA-EP-2.1.1 Students will apply standard units to measure length (to the nearest half-inch or the nearest centimeter) and to determine:</p>	<p>SE/TE: 391–394 TE: 394B</p>
<ul style="list-style-type: none"> • weight (nearest pound); 	<p>SE/TE: 431–434 391–394, 395–398, 435–438 TE: 412B</p>
<ul style="list-style-type: none"> • time (nearest quarter hour); and 	<p>SE/TE: 451–454, 455–458 459–462 TE: 412B</p>
<ul style="list-style-type: none"> • money (identify coins and bills by value) and 	<p>SE/TE: 143–146, 147–150, 151–154, 155–158, 159–162, 163–166 TE: 412B</p>
<ul style="list-style-type: none"> • temperature (Fahrenheit). <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 467–470 TE: 412B, 449B, 449E</p>
<p><i>MA-EP-2.1.2</i> <i>Students will use standard units to measure temperature in Fahrenheit and Celsius to the nearest degree.</i></p>	<p>SE/TE: 467–470 TE: 449B, 449E</p>
<p><i>MA-EP-2.1.3</i> <i>Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, ruler) for specific measurement tasks.</i></p>	<p>SE/TE: 379–382, 383–386, 391–394, 395–398, 431–434, 435–438, 439–442, 443–446, 451–454, 455–458, 467–470</p>
<p><i>MA-EP-2.1.4</i> <i>Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length – in, cm; weight – oz, lb) and make an estimate using appropriate units of measurement.</i></p>	<p>SE/TE: 379–382, 383–386, 387–390, 391–394, 395–398, 399–402, 403–406, 407–410, 415–418, 419–422, 423–426, 427–430, 435–438, 439–442</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p><i>MA-EP-2.1.5</i> Students will use units of measurement to describe and compare attributes of objects to include length (in, cm), width, height, money (cost), temperature (F) and weight (oz, lb), and sort objects and compare attributes by shape, size and color.</p>	<p>SE/TE: 150, 154, 379–382, 383–386, 391–394, 395–398, 399–402, 415–418, 419–422, 423–426, 427–430, 431–434, 435–438, 439–442, 443–446, 459–462 TE: 348C</p>
<p><i>MA-EP-2.1.6</i> Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.</p>	<p>SE/TE: 363–366, 383–386, 391–394, 395–398, 399–402, 403–406, 407–410, 435–438, 439–442, 443–446, 459–462 TE: 412C</p>
<p>Systems of Measurement</p>	
<p><i>MA-EP-2.2.1</i> Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement to include length (in., cm.), time, money, temperature (Fahrenheit) and weight (oz., lb).</p>	<p>SE/TE: 159–162, 163–166, 283–286, 287–290, 291–294, 295–298, 299–302, 303–306, 307–310, 443–446, 463–466, 471–474 155, 382, 383, 387, 391, 430, 431–434, 435, 442, 459–462, 467</p>
<p><i>MA-EP-2.2.2</i> Students will determine elapsed time by half hours.</p>	<p>SE/TE: 455–458 459–462</p>
<p><i>MA-EP-2.2.3</i> Students will convert units within the same measurement system including money (dollars, cents), time (minutes, hours, days, weeks, months), weight (ounce, pound) and length (inch, foot).</p>	<p>SE/TE: 154, 155–158, 163–166, 463–466 146, 147–150</p>
<p>Geometry Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.</p>	
<p>End of Primary</p>	
<p>Shapes and Relationships</p>	
<p>MA-EP-3.1.1 Students will describe and provide examples of basic geometric elements and terms (sides, edges, faces, bases, vertices, angles) and will apply these elements to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 315–318, 323–326 319–322, 327–330, 493</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>MA-EP-3.1.2 Students will describe and provide examples of basic two-dimensional shapes (circles, triangles, squares, rectangles, trapezoids, rhombuses, hexagons) and will apply these shapes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 319–322, 323–326, 327–330, 331–334, 335–338, 339–342, 343–346 351–354, 355–358, 359–362, 363–366</p>
<p>MA-EP-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes) and will apply the attributes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 315–318, 319–322, 343–346</p>
<p><i>MA-EP-3.1.5</i> <i>Students will identify and describe congruent figures in real-world and mathematical problems.</i></p>	<p>SE/TE: 331–334, 335–338, 343–346</p>
Transformations of Shapes	
<p>MA-EP-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one line of symmetry to construct a simple geometric design.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 339–342 TE: 343A</p>
<p><i>MA-EP-3.3.1</i> <i>Students will locate points on a grid representing positive coordinate system.</i></p>	<p><i>Correlations listed provide readiness for the standard:</i> SE/TE: 491–494</p>
<p>Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	
End of Primary	
Data Representations	

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>MA-EP-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs with two or three sectors, line plots, two-circle Venn diagrams).</p> <p style="text-align: right;">DOK 3</p>	
<p><i>MA-EP-4.1.2</i> <i>Students will collect data.</i></p>	<p>SE/TE: 479–482, 483–486, 487–490, 503–506, 583–586</p>
<p><i>MA-EP-4.1.3</i> <i>Students will organize and display data.</i></p>	<p>SE/TE: 163–166, 479–482, 483–486, 487–490, 499–502, 503–506, 583–586, 635–638</p>
<p>Characteristics of Data Sets</p>	
<p><i>MA-EP-4.2.1</i> <i>Students will determine the mode (of a set of data with no more than one mode) and the range of a set of data.</i></p>	<p>SE/TE: 483–486, 487–490 481, 504, 505</p>
<p>Experiments and Samples</p>	
<p><i>MA-EP-4.3.1</i> <i>Students will pose questions that can be answered by collecting data.</i></p>	<p>SE/TE: 479–482, 483–486, 487–490</p>
<p>Probability</p>	
<p><i>MA-EP-4.4.3</i> <i>Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).</i></p>	<p>SE/TE: 495–498, 499–502</p>
<p>Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.</p>	
<p>End of Primary</p>	
<p>Patterns, Relations and Functions</p>	

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
MA-EP-5.1.1 Students will extend simple patterns (e.g., 2,4,6,8, ...; ◊△◊△ ...). <p style="text-align: right;">DOK 2</p>	SE/TE: 119–122, 127–130, 131–134, 187–190, 511–514, 527–530, 543–546 173, 225, 353, 357, 361, 365, 369
MA-EP-5.1.2 Students will describe functions (input-output) through pictures and words. <p style="text-align: right;">DOK 2</p>	SE/TE: 187–190, 543–546, 635–638 525, 529
<i>MA-EP-5.1.3</i> <i>Students will determine the value of an output given a function rule and an input value</i>	SE/TE: 187–190, 635–638
Variables, Expressions and Operations	
Equations and Inequalities	
MA-EP-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a missing value (e.g., $2 + ? = 7$, $\underline{\quad} < 6$) and apply simple number sentences to solve mathematical and real-world problems. <p style="text-align: right;">DOK 2</p>	<i>This objective is taught throughout the program.</i> <i>For examples, see the following pages:</i> SE/TE: 3–6, 11–14, 19–22, 27–30, 39–42, 47–50, 55–58, 63–66, 75–78, 83–86, 91–94, 115–118, 171–174, 179–182, 195–198, 203–206, 211–214, 243–246, 255–258, 263–266, 271–274, 283–286, 291–294, 299–302, 371–374, 531–534, 551–554, 577, 607–610, 627–630

**Scott Foresman – Addison Wesley enVisionMATH
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Grade Three

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Number Properties and Operations Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.</p>	
The End of Primary	
Number Sense	
<p>MA-EP-1.1.1 Students will: apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 9,999):</p>	
<ul style="list-style-type: none"> apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe fractions (halves, thirds, fourths); 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 4–5, 8–9, 10–11, 12–14, 16–17, 39, 50–53, 90–91, 108–109, 110–113, 140–141, 144–146, 148–149, 154–157, 164–165, 170–171, 174–177, 184–185, 208–209, 218–221, 412–413, 416–417, 420–421, 429, 440–443, 460–463, 464–465, 466–467, 472–475, 482–483</p>
<ul style="list-style-type: none"> apply these numbers to represent real-world problems and 	<p>SE/TE: 276–277, 278–279, 280–281, 282–283, 284–287, 288–289, 290–293, 294–295, 296–297, 298–299, 306–307 251, 336</p>

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<ul style="list-style-type: none"> explain how the base 10 number system relates to place value. <p style="text-align: right;">DOK 2</p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 16–17, 24–25, 32–33, 36–39, 44–47, 50–53, 54–55, 66–67, 68–71, 74–77, 86–87, 90–91, 96–97, 98–101, 132–133, 140–141, 144–147, 150–151, 164–165, 174–176, 195, 196–199, 216–217, 224–227, 298–299, 320–321, 374–375, 412–413, 422–425, 438–439</p>
<p><i>MA-EP-1.1.2</i> <i>Students will read, write and rename whole numbers (0 to 9,999) and apply to real-world and mathematical problems.</i></p>	<p>SE/TE: 4–5, 6–7, 8–9, 10–11, 40–43, 216–217, 440–443 245</p>
<p>MA-EP-1.1.3 Students will compare (<, >, =) and order whole numbers to whole numbers, decimals to decimals (as money only) and fractions to fractions (limited to pictorial representations).</p> <p style="text-align: right;">DOK2</p>	<p>SE/TE: 12–14, 16–17, 18–21, 35, 43, 46, 124, 177, 188–189, 193, 195, 222–223, 282–283, 288–289, 290–291, 312–315, 319, 374–375, 414–415 9, 11, 57, 129, 131, 245, 286, 377, 424 TE: 29A</p>
<p>Estimation</p>	
<p>MA-EP-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results (limited to addition and subtraction).</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 34–35, 44–46, 48, 54, 56, 58–59, 72–73, 74–76, 78–79, 88–89, 90–91, 98–99, 177, 267, 394, 414–415 52, 92–94, 146, 153, 191, 207, 283, 307, 379, 419, 421, 428</p>
<p>Number Operations</p>	
<p>MA-EP-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</p>	
<ul style="list-style-type: none"> add and subtract whole numbers with three digits or less; 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 32–33, 36–39, 44–47, 48–49, 50–52, 54–55, 58–59, 66–67, 68–71, 72–73, 78–79, 86–87, 90–91, 92–94, 96–97, 98–101, 117, 132–133, 154–157, 170–171, 208–209, 210–211, 222–223, 224–227, 320–321, 368–369, 370–371, 378–379, 384–385, 395</p>

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<ul style="list-style-type: none"> multiply whole numbers of 10 or less; 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 108–109, 110–113, 116–117, 118–121, 122–124, 126–127, 128–129, 130–131, 132–133, 140–141, 142–143, 144–146, 148–149, 150–151, 152–153, 154–157, 184–185, 188–189, 190–191, 196–199, 210–211, 361, 376–377, 380–383, 398–399, 412–413, 416–417, 418–419, 420–421, 426–429</p>
<ul style="list-style-type: none"> add and subtract fractions with like denominators less than or equal to four and 	SE/TE: 294–295, 296–297 401
<ul style="list-style-type: none"> add and subtract decimals related to money. <p style="text-align: right;">DOK 2</p>	SE/TE: 308–311, 312–314, 316–317
<i>MA-EP-1.3.2</i> <i>Students will skip-count forward and backward by 2s, 5s, 10s and 100s.</i>	SE/TE: 15, 121, 122–123 18
<i>MA-EP-1.3.3</i> <i>Students will divide two digit numbers by single digit divisors (with or without remainders) in real-world and mathematical problems.</i>	SE/TE: 164–165, 166–168, 170–171, 172–173, 174–177, 184–185, 186–189, 190–191, 192–193, 194–195, 196–199, 319, 436–437, 438–439, 440–443, 444–445, 446–447, 448–451 297
Ratios and Proportional Reasoning (not assessed at the elementary level)	
Properties of Numbers and Operations	
MA-EP-1.5.1 Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems. <p style="text-align: right;">DOK 2</p>	SE/TE: 114–115, 121, 122–123, 122–123, 126–127, 128–129, 140–141, 142–143, 144–146, 148–149, 150–151 11, 108–109, 110–113, 253 TE: 137A
<i>MA-EP-1.5.2</i> <i>Students will use the commutative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i>	SE/TE: 33, 95, 110, 112, 126–127, 130–131, 152–153, 425 66–67, 195

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Measurement Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.	
End of Primary	
Measuring Physical Attributes	
MA-EP-2.1.1 Students will apply standard units to measure length (to the nearest half-inch or the nearest centimeter) and to determine:	
<ul style="list-style-type: none"> weight (nearest pound); 	SE/TE: 332–333, 340, 350–351, 358–359 TE: 347A
<ul style="list-style-type: none"> time (nearest quarter hour); and 	SE/TE: 392–394, 396–397, 398–399, 400–401
<ul style="list-style-type: none"> money (identify coins and bills by value) and 	SE/TE: 18–21, 22–23, 114–115, 374–375 24–25, 49, 293
<ul style="list-style-type: none"> temperature (Fahrenheit). <p style="text-align: right;">DOK 1</p>	SE/TE: 328–331, 332–333, 402–403 470, 471
<i>MA-EP-2.1.2</i> <i>Students will use standard units to measure temperature in Fahrenheit and Celsius to the nearest degree.</i>	SE/TE: 402–403 470, 471
<i>MA-EP-2.1.3</i> <i>Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, ruler) for specific measurement tasks.</i>	SE/TE: 328–331, 332–333, 334–337, 338–339, 340–341, 358–359
<i>MA-EP-2.1.4</i> <i>Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length – in, cm; weight – oz, lb) and make an estimate using appropriate units of measurement.</i>	SE/TE: 328–331, 337, 338–339, 340–341, 350–351, 352–355, 356–357, 380–383, 384–385

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<p><i>MA-EP-2.1.5</i> Students will use units of measurement to describe and compare attributes of objects to include length (in, cm), width, height, money (cost), temperature (F) and weight (oz, lb), and sort objects and compare attributes by shape, size and color.</p>	<p>SE/TE: 14, 16–17, 20–21, 308, 312, 316–317, 328–331, 340–341, 350–351, 380–383, 402–403 TE: 257A, 389E</p>
<p><i>MA-EP-2.1.6</i> Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.</p>	<p>SE/TE: 282–283, 328–331, 340–341, 358–359, 368–369, 370–371, 372–373, 376–377, 378–379, 384–385 TE: 257A, 389E, 409A</p>
<p>Systems of Measurement</p>	
<p><i>MA-EP-2.2.1</i> Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement to include length (in., cm.), time, money, temperature (Fahrenheit) and weight (oz., lb).</p>	<p>SE/TE: 20–21, 22–23, 38, 215, 308–311, 332–333, 334–335, 340–341, 350–351, 356–357, 392–395, 396–397, 402–403, 404–405 87, 124, 127, 240, 245, 265</p>
<p><i>MA-EP-2.2.2</i> Students will determine elapsed time by half hours.</p>	<p>SE/TE: 396–397, 400–401, 404–405</p>
<p><i>MA-EP-2.2.3</i> Students will convert units within the same measurement system including money (dollars, cents), time (minutes, hours, days, weeks, months), weight (ounce, pound) and length (inch, foot).</p>	<p>SE/TE: 188, 335–336, 340, 352–355, 398–399, 400–401 151, 397</p>
<p>Geometry Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.</p>	
<p>End of Primary</p>	
<p>Shapes and Relationships</p>	
<p>MA-EP-3.1.1 Students will describe and provide examples of basic geometric elements and terms (sides, edges, faces, bases, vertices, angles) and will apply these elements to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 234–237, 238–240, 242–243, 244–245, 246–247, 248–249, 250–251, 252–253</p>

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<p>MA-EP-3.1.2 Students will describe and provide examples of basic two-dimensional shapes (circles, triangles, squares, rectangles, trapezoids, rhombuses, hexagons) and will apply these shapes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 242–243, 244–245, 246–247, 248–249, 250–251, 252–253, 266–267, 268–269, 368–369, 370–371, 372–373, 376–377 239–240, 262, 264–265, 342–343, 470, 480</p>
<p>MA-EP-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes) and will apply the attributes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 234–237, 238–240, 342–343, 380–383</p>
<p><i>MA-EP-3.1.5</i> <i>Students will identify and describe congruent figures in real-world and mathematical problems.</i></p>	<p>SE/TE: 260–262, 276–277</p>
Transformations of Shapes	
<p>MA-EP-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one line of symmetry to construct a simple geometric design.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 260–263, 264–265, 266–267, 268–269</p>
<p><i>MA-EP-3.3.1</i> <i>Students will locate points on a grid representing positive coordinate system.</i></p>	<p>SE/TE: 468–471</p>
<p>Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	
End of Primary	
Data Representations	
<p>MA-EP-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs with two or three sectors, line plots, two-circle Venn diagrams).</p> <p style="text-align: right;">DOK 3</p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 24–25, 59, 70, 87, 94, 100, 113, 126–127, 132–133, 143, 151, 168–169, 191, 207, 215, 224–227, 279, 307, 316–318, 320–321, 337, 415, 420–421, 428, 437, 444–445, 458–459, 464–465, 468–471, 482–483</p>

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<p><i>MA-EP-4.1.2</i> Students will collect data.</p>	<p>SE/TE: 458–459, 476–477 467</p>
<p><i>MA-EP-4.1.3</i> Students will organize and display data.</p>	<p>SE/TE: 24–25, 287, 458–459, 464–465, 466–467, 468–471, 472, 480, 482–483 59</p>
<p>Characteristics of Data Sets</p>	
<p><i>MA-EP-4.2.1</i> Students will determine the mode (of a set of data with no more than one mode) and the range of a set of data.</p>	<p>SE/TE: 462–463, 470–471, 479 467 TE: 487G</p>
<p>Experiments and Samples</p>	
<p><i>MA-EP-4.3.1</i> Students will pose questions that can be answered by collecting data.</p>	<p>SE/TE: 458–459 467</p>
<p>Probability</p>	
<p><i>MA-EP-4.4.3</i> Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).</p>	<p>SE/TE: 472–475, 476–477, 478–481 TE: 487F</p>
<p>Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.</p>	
<p>End of Primary</p>	
<p>Patterns, Relations and Functions</p>	
<p>MA-EP-5.1.1 Students will extend simple patterns (e.g., 2,4,6,8, ...; $\diamond\triangle\diamond$...). DOK 2</p>	<p>SE/TE: 15, 118–120, 126–127, 128–129, 150–151, 206–207, 208–209, 218–221, 298–299, 360–361, 436, 476–477 35, 247, 293, 295, 314, 354, 385, 415</p>
<p>MA-EP-5.1.2 Students will describe functions (input-output) through pictures and words. DOK 2</p>	<p>SE/TE: 208–209, 210–211, 215, 218–221, 227, 298–299, 360–361</p>

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<p><i>MA-EP-5.1.3</i> <i>Students will determine the value of an output given a function rule and an input value</i></p>	<p>SE/TE: 210–211, 212–214, 216–217, 218–221, 298–299, 360–361</p>
<p>Variables, Expressions and Operations</p>	
<p>Equations and Inequalities</p>	
<p>MA-EP-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a missing value (e.g., $2 + ? = 7$, $___ < 6$) and apply simple number sentences to solve mathematical and real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 9, 32–33, 36–39, 43, 56–57, 66–67, 70–71, 73, 95, 108–109, 111–113, 147, 152–153, 172–173, 184–185, 188–189, 222–223, 425, 440–443, 444 89, 120, 131, 165, 196–199, 309–310, 330–331, 351, 439, 450</p>

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to the
Kentucky Core Content for Mathematics**

Grade Four

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<p>Number Properties and Operations Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.</p>	
Number Sense	
MA-04-1.1.1 Students will:	
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999): 	<p>SE/TE: 4–7, 8–9, 54–57, 62–63, 106–108, 134–135, 146–149, 150–151, 168–169, 170–171, 180–181, 182–183, 184–185, 402–403, 420–422 47, 85, 104, 132–133, 167, 412–413, 415</p>
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe commonly used fractions through tenths and decimals through hundredths; 	<p>SE/TE: 216–218, 220–221, 222–223, 224–226, 230–232, 234–235, 238–241, 250–253, 254–255, 256–257, 258–261, 268–269, 274–275, 276–278, 296–298, 418–419, 472–475</p>
<ul style="list-style-type: none"> • apply these numbers to represent real-world problems and 	<p>SE/TE: 4, 10–13, 14–15, 16–17, 18–19, 20–21, 30–31, 32–33, 34–35, 37–39, 44–45, 68–69, 86–87, 134–135, 168–169, 178–179, 224–227, 258–259, 282–283, 292–293, 308–309, 476–477</p>
<ul style="list-style-type: none"> • explain how the base 10 number system relates to place value. <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 4–6, 8–9, 10–13, 14–15, 16–17, 18–19, 20–21, 36–39, 42–43, 110–111, 150–151, 154–155, 170–171, 174–177, 268–269, 290–292 40–41, 197, 272, 300–301, 393, 413</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p><i>MA-04-1.1.2</i> <i>Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.</i></p>	<p>SE/TE: 4–6, 8–9, 14–15, 20–21, 54–57, 62–63, 64–65, 66–67, 152–153, 182–183, 224–226, 228–229, 230–232, 236–237, 241, 250–253, 254–255, 256–257, 258–261, 268–269, 274–275, 276–278, 280–281, 290–293, 294–295, 325 199, 322, 338, 349</p>
<p>MA-04-1.1.3 Students will compare (<, >, =) and order whole numbers, commonly used fractions and decimals, and explain the relationships (equivalence, order) between and among them. DOK 2</p>	<p>SE/TE: 10–13, 82–83, 113, 219, 233, 234–235, 236–237, 239, 270–272, 276–278, 280–281, 373, 420–422, 438–439 15, 16, 43, 167, 269, 298, 302, 305, 323, 338, 349, 382, 416–417</p>
<p>Estimation</p>	
<p>MA-04-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results. DOK 2</p>	<p>SE/TE: 32–33, 100–101, 102–104, 110–113, 114–115, 144–145, 166–167, 222–223, 294–295, 298–299, 305, 316–317, 373 12, 38–39, 99, 176, 197, 333, 404–405, 411, 435 TE: 25A</p>
<p>Number Operations</p>	
<p>MA-04-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</p>	
<ul style="list-style-type: none"> • add and subtract whole numbers with four digits or less; 	<p>SE/TE: 30–31, 32–33, 34–35, 36–39, 40–41, 42–43, 44–47, 117–119, 129, 156–157, 295, 390–391, 392–393, 412–413, 414–415, 432–433, 434–435, 440–441 67, 145, 405, 420–422, 451, 455, 469</p>
<ul style="list-style-type: none"> • multiply whole numbers with two digits or less; 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 56, 66–67, 68–69, 96–97, 98–99, 100–101, 102–105, 106–109, 110–113, 129, 134–135, 142–143, 147–149, 150–151, 152–153, 156–157, 182–183, 186–187, 201, 318–319, 320–323, 326–327, 332–333, 354–355, 407, 436–437, 440–441, 458–459, 461, 471</p>

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<ul style="list-style-type: none"> divide whole numbers with three digits or less by single-digit divisors (with or without remainders); 	SE/TE: 76–79, 80–81, 82–83, 84–85, 86–89, 165, 167, 169, 170–173, 174–177, 178–179, 180–181, 220–221, 306–307, 412–413, 436–437, 453, 461 203, 227, 327, 330, 409
<ul style="list-style-type: none"> add and subtract fractions with like denominators less than or equal to 10 and 	SE/TE: 251–253, 254–255, 256–257, 258–261, 415 281, 419
<ul style="list-style-type: none"> add and subtract decimals through hundredths. <p style="text-align: right;">DOK 2</p>	SE/TE: 294–295, 300–303, 308–309
<i>MA-04-1.3.2</i> <i>Students will skip-count forward and backward by 2s, 3s, 4s, 5s, 10s, 20s, 25s, 50s, 100s, 1,000, and 10,000s.</i>	SE/TE: 58–59, 273, 356–357 185
Ratios and Proportional Reasoning (not assessed at the elementary level)	
Properties of Numbers and Operations	
MA-04-1.5.1 Students will identify and determine odd numbers, even numbers, multiples of a number and factors of a number, and will apply these numbers to solve real-world problems. <p style="text-align: right;">DOK 2</p>	SE/TE: 58–59, 182–183, 184–185, 208–209, 218, 227 307 TE: 73A
<i>MA-04-1.5.2</i> <i>Students will use the commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i>	SE/TE: 28–31, 60–61, 79, 164–165 205, 433
Measurement Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.	
Measuring Physical Attributes	

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MA-04-2.1.1 Students will apply standard units to measure length (to the nearest quarter-inch or the nearest centimeter) and to determine:	
<ul style="list-style-type: none"> weight (ounce, pound; gram, kilogram); 	SE/TE: 368–369, 374–375, 378–379
<ul style="list-style-type: none"> perimeter; 	SE/TE: 318, 328–330 88, 332–333, 334–335
<ul style="list-style-type: none"> area (figures that can be divided into rectangular shapes); 	SE/TE: 318–319, 320–322, 324–325, 326–327, 372
<ul style="list-style-type: none"> time (nearest five minutes) and 	SE/TE: 364–365, 374–375, 386–389, 392
<ul style="list-style-type: none"> temperature (Fahrenheit and Celsius). <p style="text-align: right;">DOK 2</p>	SE/TE: 364–365, 374–375, 390–391 392–393
<i>MA-04-2.1.2</i> <i>Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, meter stick, yardstick, ruler) for specific measurement tasks.</i>	SE/TE: 200–201, 364–365, 374–375, 389
<i>MA-04-2.1.3</i> <i>Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length and width) using appropriate units of measurement.</i>	SE/TE: 328–330, 364–365, 366–367, 368–369, 376–377, 378–379 325
<i>MA-04-2.1.4</i> <i>Students will use measurements to describe and compare attributes of objects to include length (in, ft, yd, mile; cm, m, km), width, height, money (cost), temperature and weight (oz, lb, ton; g, kg); sort objects and compare attributes of objects.</i>	SE/TE: 115, 296–297, 328–331, 354–355, 364–365, 366–367, 368–369, 370–372, 374–375, 379, 380–383, 390–391 350–351, 352–353
<i>MA-04-2.1.5</i> <i>Students will use nonstandard and standard units to measure angles (as compared to 90°).</i>	SE/TE: 200–201, 418–419 198–199, 204–205
<i>MA-04-2.1.6</i> <i>Students will estimate weight, length, perimeter, area, angle measures and time using appropriate</i>	SE/TE: 146–149, 222–223, 229, 282–283, 316–317, 318–319, 320–322, 328–331, 332–333, 334–335, 336–337, 339, 364–365, 366–367, 368–369,

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<i>units of measurement.</i>	374–375, 376–377, 378–379, 384–385, 458 108, 117, 153, 260, 275, 353, 355, 409, 439 TE: 213A, 399F
Systems of Measurement	
<p><i>MA-04-2.2.1</i> Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement (e.g., weight - oz., lbs., tons, g, kg; length – in., ft., yd., mile, cm, m, km; area in square units) and money.</p>	SE/TE: 18–19, 143, 270–272, 292–293, 295, 364–365, 366–367, 368–369, 374–375, 376–377, 378–379, 390–391, 440–441 44, 176, 187
<p><i>MA-04-2.2.2</i> Students will determine elapsed time to the nearest quarter hour.</p>	SE/TE: 386–389 7, 97, 437, 440, 469
<p>MA-04-2.2.3 Students will convert units within the same measurement system, including money, time (seconds, minutes, hours, days, weeks, months, years), weight (ounces, pounds) and length (inches, feet, yards).</p> <p style="text-align: right;">DOK 1</p>	SE/TE: 16–17, 18–19, 370–372, 376–377, 380–382, 384–385, 386–388 20, 34, 101, 143, 435, 455
<p>Geometry Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.</p>	
Shapes and Relationships	
<p>MA-04-3.1.1 Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices] and will apply these elements to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	SE/TE: 196–197, 198–199, 203, 204, 206–207, 298, 346–348, 350, 353

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<p>MA-04-3.1.2 Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 196–197, 202–203, 204–205, 206–207, 208–209, 319, 324–325, 449, 456–457, 475, 476 240, 302, 351, 455</p>
<p>MA-04-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply the attributes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 197, 346–349, 350–351, 352–353, 354–355</p>
<p><i>MA-04-3.1.4</i> <i>Students will explore two-dimensional representations of three-dimensional objects (nets).</i></p>	<p>SE/TE: 346–348, 350–351, 353 417</p>
<p><i>MA-04-3.1.5</i> <i>Students will identify and describe congruent and similar figures in real-world and mathematical problems.</i></p>	<p>SE/TE: 454–455, 460–461 324, 335, 450–451</p>
Transformations of Shapes	
<p>MA-04-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one or two lines of symmetry to construct a simple geometric design.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 456–457, 458–459, 460–461</p>
<p><i>MA-04-3.2.2</i> <i>Students will identify basic two-dimensional shapes in different orientations using 90° rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane.</i></p>	<p>SE/TE: 448–449, 450–451, 452–453, 454–455, 458–459, 461</p>
<p>MA-04-3.3.1 Students will identify and graph ordered pairs on a positive coordinate system scaled by ones or locate points on a grid.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 408–409, 410–411</p>

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<p>Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	
<p>Data Representations</p>	
<p>MA-04-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams). <p style="text-align: right;">DOK 3</p></p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 13, 15, 45–46, 57, 63, 65, 78–79, 80, 85, 87–88, 97, 103–104, 117–119, 176–177, 179, 181, 223, 229, 232–233, 293, 309, 402–403, 404–405, 406–407, 410–411, 413, 415, 416–417, 420–421, 433</p>
<p><i>MA-04-4.1.2</i> <i>Students will collect data.</i></p>	<p>SE/TE: 402–403, 420</p>
<p>MA-04-4.1.3 Students will construct data displays (pictographs, bar graphs, line plots, Venn diagrams, tables). <p style="text-align: right;">DOK 2</p></p>	<p>SE/TE: 402, 406–407, 416–417, 420–423 TE: 429B</p>
<p>Characteristics of Data Sets</p>	
<p><i>MA-04-4.2.1</i> <i>Students will determine the median, mode (for a data set with no more than one mode) and range of a set of data.</i></p>	<p>SE/TE: 414–415, 416–417 391, 404–405</p>
<p>Experiments and Samples</p>	
<p><i>MA-04-4.3.1</i> <i>Students will pose questions that can be answered by collecting data</i></p>	<p>SE/TE: 402–403, 420</p>
<p>Probability</p>	
<p>MA-04-4.4.1 Students will determine all possible outcomes of an activity/event with up to six possible outcomes. <p style="text-align: right;">DOK 2</p></p>	<p>SE/TE: 21, 468–469, 470–471 283, 337</p>

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<p>MA-04-4.4.2 Students will determine the likelihood of an event and the probability of an event (expressed as a fraction).</p> <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 472–474 TE: 235B, 466B–466D</p>
<p><i>MA-04-4.4.3</i> <i>Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).</i></p>	<p>SE/TE: 472–474, 477</p>
<p>Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.</p>	
<p>Patterns, Relations and Functions</p>	
<p>MA-04-5.1.1 Students will extend patterns (e.g., 108, 208, 308, 408, ...; □○○△□○○△ ...) from real-world and mathematical problems; compare simple patterns (numbers, pictures, words; e.g., △□△□△□ ; △○○△○○); and describe rules for simple number patterns (e.g., 1, 3, 5, 7, ...; 5, 10, 15, 20, ...; 30, 27, 24, 21, ...).</p> <p style="text-align: right;">DOK 3</p>	<p>SE/TE: 58–59, 130–131, 132–133, 142–143, 164–165, 185, 273, 275, 356–357, 475, 477 207, 209, 237, 317, 336–338, 435, 437, 449, 453</p>
<p>MA-04-5.1.2 Students will describe functions (input-output) through pictures, tables, and words; and will analyze functions from a table based on real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 130–131, 132–133, 203 240, 273</p>
<p>MA-04-5.1.3 Students will determine the value of an output given a function rule and an input value.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 128–129 130–131, 132–133, 459</p>

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Equations and Inequalities	
<p>MA-04-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or a missing value (e.g., $4 = 7 - \underline{\quad}$, $N + 5 > 14$, $\frac{1}{2} + N = 1$) and apply simple number sentences to solve mathematical and real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 30–31, 44–45, 54–57, 60, 64–65, 68–69, 79, 80, 83, 84, 86–89, 107–109, 113, 116–117, 128–129, 130–131, 132–133, 234–235, 240–241, 258–259, 303, 382–383, 432–433, 434–435, 436–437, 438–439 16, 96, 155, 164–165</p>

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Grade Five

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Number Properties and Operations Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.</p>	
Number Sense	
MA-05-1.1.1 Students will:	
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999,999); 	<p>SE/TE: 4–5, 28–29, 64–66, 72–73, 90–92, 94, 96, 158–159, 162–163, 270–271, 314–315, 340–341, 366–367, 376–377, 378–379, 380–381, 386–388, 397, 398–399, 400, 478–479, 494–495 412–413, 418–419</p>
<ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe commonly-used fractions, mixed numbers and decimals through thousandths; 	<p>SE/TE: 10–11, 49, 178–179, 188–189, 220–222, 224–225, 226–227, 238–239, 242–243, 244–245, 246–247, 256–257, 263, 265, 266–267, 268–269, 286–287, 288–289 28–29, 279, 281</p>
<ul style="list-style-type: none"> • apply these numbers to represent real-world problems and 	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 26–27, 64–66, 84–85, 100, 110–112, 134–135, 154, 162–163, 188–191, 213, 226–227, 242–243, 266–267, 278–279, 304–305, 314–315, 340–341, 354–355, 376–377, 386–388, 396–397, 412–413, 422–423, 440–443, 446–448, 452–453, 466, 474–476, 487, 494–495</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<ul style="list-style-type: none"> explain how the base-10 number system relates to place value. <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 4–5, 10–11 6–9, 12, 178–179</p>
<p><i>MA-05-1.1.2</i> Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.</p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 4–5, 10–11, 26–27, 38–41, 42–43, 64–65, 74–76, 84–85, 110–112, 122–123, 132, 134–135, 138–139, 188–191, 224–225, 234–235, 238–241, 242–243, 262–263, 268–269, 280–283, 284–285, 286–287, 288–289, 314–315, 340–341, 386–388, 396–397, 398–399, 400–401</p>
<p>MA-05-1.1.3 Students will compare (<, >, =) and order whole numbers), fractions and decimals, and explain the relationships (equivalence, order) between and among them.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 6–9, 12–13, 230–231, 244–245, 398–399, 400–401 93, 260–261, 440–442, 452–453</p>
Estimation	
<p>MA-05-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results in real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 30–32, 62–63, 86–87, 124–125, 174–175, 184–185, 246–247, 339</p>
Number Operations	
<p>MA-05-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</p>	
<ul style="list-style-type: none"> add, subtract, multiply, and divide whole numbers (less than 100,000,000), using technology where appropriate; <p style="text-align: right;">DOK 2</p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 26–27, 38–41, 61, 70–71, 84–85, 90–92, 122–123, 130–132, 147, 158–161, 175, 184–185, 213, 260–261, 270–271, 300–303, 314–315, 329, 334, 340–341, 355, 364–365, 376–377, 386–388, 402–403, 404–405, 422–423, 450–451, 486–487, 494–495</p>

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<ul style="list-style-type: none"> add and subtract fractions with like denominators through 16, with sums less than or equal to one and 	SE/TE: 256–258, 262–263, 264–265, 266–267, 268–269, 285
<ul style="list-style-type: none"> add and subtract decimals through hundredths. <p style="text-align: right;">DOK 2</p>	SE/TE: 42–43, 44–45, 46–48
<p><i>MA-05-1.3.2</i> Students will skip-count forward and backward.</p>	SE/TE: 14–16, 33 105, 148–149, 231, 382–384 TE: 167A
<p><i>MA-05-1.3.3</i> Students will multiply decimals through tenths.</p>	SE/TE: 170–171, 172–173, 174–175, 176–177
Ratios and Proportional Reasoning (not assessed at the elementary level)	
Properties of Numbers and Operations	
<p>MA-05-1.5.1 Students will identify and determine composite numbers, prime numbers, multiples of a number, factors of a number and least common multiples (LCM), and will apply these numbers to solve real-world problems.</p> <p style="text-align: right;">DOK 2</p>	SE/TE: 102–104, 106–107, 234–235, 260–261, 262–263, 264–265, 266–267, 268–269 232–233
<p><i>MA-05-1.5.2</i> Students will use the commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</p>	SE/TE: 24–25, 58–59, 60–61, 223
<p>Measurement Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.</p>	
Measuring Physical Attributes	
<p>MA-05-2.1.1 Students will apply standard units to measure length (to the nearest eighth-inch or the nearest centimeter) and to determine:</p>	

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<ul style="list-style-type: none"> weight (ounce, pound; gram, kilogram); 	SE/TE: 296–297, 298–299, 352–353
<ul style="list-style-type: none"> perimeter; 	SE/TE: 296–297, 298–299, 300–302, 305
<ul style="list-style-type: none"> area (figures that can be divided into rectangular shapes); 	SE/TE: 157, 296–297, 298–299, 304–305, 328–329, 337 176–177, 306–307
<ul style="list-style-type: none"> time (nearest minute); 	SE/TE: 298–299, 358–361, 362–363
<ul style="list-style-type: none"> temperature (Fahrenheit and Celsius) and 	SE/TE: 364–365 413, 422
<ul style="list-style-type: none"> angle measures (nearest degree). DOK 2 	SE/TE: 204–205, 207, 208–209, 210–211, 311–313, 470–471, 474–476, 494
<p><i>MA-05-2.1.2</i> Students will choose and use appropriate tools (e.g., protractor, meter stick, ruler) for specific tasks and apply skills to solve real-world and mathematical problems.</p>	SE/TE: 204–205, 296–297, 298–299, 352–353 348–349, 350–351
<p><i>MA-05-2.1.3</i> Students will use measurements to identify, describe, sort and compare attributes of objects and apply these to solve real-world and mathematical problems.</p>	SE/TE: 204–205, 208–209, 210–211, 352
<p><i>MA-05-2.1.4</i> Students will measure volume of rectangular prisms, liquid capacity, and money using standard units and apply these skills to solve real-world and mathematical problems.</p>	SE/TE: 46–47, 171, 187, 271, 332–334, 336–338, 348–349, 350–351 72, 327, 331
<p>MA-05-2.1.6 Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement. DOK 2</p>	SE/TE: 204–205, 296–297, 299, 339, 353 TE: 373A

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Systems of Measurement	
MA-05-2.2.1 Students will determine elapsed time. <p style="text-align: right;">DOK 3</p>	SE/TE: 358–360, 362–363, 366–367 161, 420–421, 436–439
<i>MA-05-2.2.2</i> <i>Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement.</i>	SE/TE: 296–297, 298–299, 300–303, 304–305, 306–307, 308–309, 310–312, 314–315, 332–334, 348–349, 350–351, 352–353, 354–355, 356–357, 358–361, 362–363, 364–365
MA-05-2.2.3 Students will convert units within the same measurement system [U.S. customary (inches, feet, yards, miles; ounces, pounds, tons), metric (millimeters, centimeters, meters, kilometers; grams, kilograms), money, or time] and use the units to solve problems. <p style="text-align: right;">DOK 2</p>	SE/TE: 348–349, 350–351, 352–353, 354–355, 356–357
Geometry Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.	
Shapes and Relationships	
MA-05-3.1.1 Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices, radius, diameter] and will apply these elements to solve real-world and mathematical problems. <p style="text-align: right;">DOK 2</p>	SE/TE: 200–202, 204–205, 206–207, 208–209, 310–312, 322–324
MA-05-3.1.2 Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), all quadrilaterals, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems. <p style="text-align: right;">DOK 2</p>	SE/TE: 206–207, 208–209, 210–211, 310–312

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<p>MA-05-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms), will identify three-dimensional objects from two-dimensional representations (nets) and will apply the attributes to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 322–324, 326–327, 328–329</p>
<p>MA-05-3.1.5 Students will identify and describe congruent and similar figures in real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 210, 212–213, 472–473, 478–479 TE: 217F</p>
Transformations of Shapes	
<p>MA-05-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply line symmetry to construct a geometric design.</p> <p style="text-align: right;">DOK 3</p>	<p>SE/TE: 474–477 207, 211</p>
<p>MA-05-3.2.2 Students will identify 90° rotations, reflections or translations of basic shapes within a plane.</p> <p style="text-align: right;">DOK 1</p>	<p>SE/TE: 464–467, 468–469, 470–471, 472–473, 474–476, 478–479</p>
<p>MA-05-3.3.1 Students will identify and graph ordered pairs on a positive coordinate system scaled by ones, twos, threes, fives or tens; locate points on a grid; and apply graphing in the coordinate system to solve real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 414–416, 418–419, 420–421, 437–438 464–466, 469, 471, 473</p>
<p>Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	
<p>Data Representations</p>	

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>MA-05-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs).</p> <p style="text-align: right;">DOK 3</p>	<p>SE/TE: 233, 430–431, 432–435, 436–439, 440–443, 446–448 455</p>
<p><i>MA-05-4.1.2</i> <i>Students will collect data (e.g., tallies, surveys) and explain how the skills apply in real-world and mathematical problems.</i></p>	<p>SE/TE: 430–431 TE: 428C–428D, 429, 435B, 486B, 488B, 492B 484C–484D</p>
<p>MA-05-4.1.3 Students will construct data displays (pictographs, bar graphs, line plots, line graphs, Venn diagrams, tables).</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 431, 434, 437–439, 454–455 444–445, 446–448 TE: 217F</p>
Characteristics of Data Sets	
<p>MA-05-4.2.1 Students will determine and apply the mean, median, mode and range of a set of data.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 433, 441, 450–451, 452–453 430, 438, 454, 487, 490</p>
Experiments and Samples	
<p><i>MA-05-4.3.1</i> <i>Students will describe and give examples of the process of using data to answer questions (e.g., pose a question, plan, collect data, organize and display data, interpret data to answer questions).</i></p>	<p>SE/TE: 430–431, 432–435, 436–439, 440–443, 444–445, 446–449, 454–455</p>
Probability	
<p>MA-05-4.4.1 Students will determine all possible outcomes of an activity/event with up to 12 possible outcomes.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 486–487, 488–490, 495</p>
<p>MA-05-4.4.2 Students will determine the likelihood of an event and the probability of an event (expressed as a fraction).</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 488–491, 492–493 331</p>

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<p>Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.</p>	
Patterns, Relations, and Functions	
<p>MA-05-5.1.1 Students will extend patterns, find the missing term(s) in a pattern or describe rules for patterns (numbers, pictures, tables, words) from real-world and mathematical problems.</p> <p style="text-align: right;">DOK 3</p>	<p>SE/TE: 14–16, 33, 148–151, 203, 382–384, 404–405, 494–495 178–179, 213</p>
<p>MA-05-5.1.2 Students will describe functions (input-output) through pictures, tables, or words and will construct tables to analyze functions based on real-world or mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 105, 133, 151, 366–367, 382–384, 404–405, 420–421</p>
<p>MA-05-5.1.3 Students will determine an output value or an input value for a function rule given the other value.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 105, 133, 151, 382–384, 404–405, 420–421</p>
Variables, Expressions and Operations	
<p>MA-05-5.2.1 Students will model verbal descriptions of real-world and mathematical problems using a variable or a missing value in an expression.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 146–147, 148–151, 152–154, 157</p>
Equations and Inequalities	
<p>MA-05-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or missing value (e.g., $4 = 2 \times N$, $___ + 5 > 14$) and apply simple number sentences to solve mathematical and real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 34–35, 74–75, 110–112, 228, 259, 288–289, 300–302, 376–377, 378–379, 380–381, 382–384, 386–388 327</p>

**Scott Foresman – Addison Wesley enVisionMATH
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Grade Six

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
<p>Number Properties and Operations Middle grades students understand fractions, decimals, percents and integers, compare them and locate their relative positions on a number line. They develop and use proportional reasoning to solve problems. They work with large numbers and small numbers. They use factors, multiples and prime factorizations. They perform arithmetic operations with fractions, decimals and integers, use properties in computation, develop fluency and develop strategies to estimate the result of operations on rational numbers.</p>	
<p>Number Sense</p>	
<p>MA-06-1.1.1 Students will provide examples of and identify fractions, decimals and percents.</p>	<p>SE/TE: 14–15, 128–130, 344–346, 348–349, 350–351 132–133, 134–135, 352–353, 354–355 TE: 14B, 128B, 344B</p>
<p><i>MA-06-1.1.2</i> <i>Students will describe and provide examples of representations of numbers (whole numbers, fractions in simplest form, mixed numbers, decimals, percents) and operations in a variety of equivalent forms using models, diagrams, and symbols (e.g., number lines, 10 by 10 grids, rectangular arrays, number sentences), based on real-world and mathematical problems.</i></p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 4–6, 14–15, 22–23, 134–135, 144, 148–149, 150–151, 226–229, 345 348–349, 350–351 TE: 128B, 348B</p>
<p>MA-06-1.1.3 Students will convert between any two of the following numbers: fractions, decimals, and percents (less than or equal to 100%); and will compare and order these numbers. DOK 2</p>	<p>SE/TE: 146–147, 150–152, 348–349 TE: 146B, 147B, 150B, 153B, 348B, 349B</p>
<p>Estimation</p>	
<p>MA-06-1.2.1 Students will estimate to solve real-world and mathematical problems with whole numbers, fractions, decimals and percents, checking for reasonable and appropriate computational results. DOK 2</p>	<p>SE/TE: 62–63, 66–68, 170–171, 186–187, 202–203, 352–353</p>

Kentucky Core Content for Mathematics	Scott Foresman – Addison Wesley enVisionMATH
Number Operations	
<p>MA-06-1.3.1 Students will add, subtract, multiply and divide whole numbers, fractions and decimals to solve real-world problems and apply order of operations to simplify numerical expressions. DOK 2</p>	<p><i>This objective is taught throughout the program. For examples, see the following pages:</i> SE/TE: 36–38, 64–65, 70–72, 74–75, 76–77, 162–163, 164–165, 172–173, 186–187, 190–191, 204–205, 206–207, 210–211</p>
<p><i>MA-06-1.3.2</i> <i>Students will explain how operations (addition and subtraction; multiplication and division) are inversely related.</i></p>	<p>SE/TE: 95, 96–97, 185, 201, 242, 221, 357, 389</p>
Ratios and Proportional Reasoning	
<p>MA-06-1.4.1 Students will describe and apply ratios to solve real-world problems. DOK 2</p>	<p>SE/TE: 302–304, 306–307, 308–309, 310–312, 322–323, 324–325, 326–327, 328–329, 330–332, 334–337</p>
Properties of Numbers and Operations	
<p>MA-06-1.5.1 Students will identify and apply prime numbers, composite numbers, prime factorization, factors, multiples and divisibility to solve real-world and mathematical problems (e.g., prime factorization to determine a least common multiple [LCM] or greatest common factor [GCF]). DOK 2</p>	<p>SE/TE: 120–122, 124–125, 126–127, 519</p>
<p>MA-06-1.5.2 Students will identify the use of properties (commutative properties of addition and multiplication, the associative properties of addition and multiplication and the identity properties for addition and multiplication) to simplify numerical expressions. DOK 1</p>	<p>SE/TE: 34–35, 239 TE: 34B, 35B</p>

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<p>Measurement Students continue to measure and estimate measurements including fractions and decimals. They use formulas to find perimeter, area, circumference and volume. They use rulers and protractors. They use US Customary and metric units of measurement.</p>	
<p>Measuring Physical Attributes</p>	
<p>MA-06-2.1.1 Students will measure lengths (to the nearest eighth of an inch or the nearest centimeter) and will determine and use in real-world and mathematical problems:</p>	<p>SE/TE: 408–409 400–401, 404–406 TE: 408B, 411B</p>
<ul style="list-style-type: none"> ○ area and perimeter of triangles; 	<p>SE/TE: 434–435 TE: 434B, 435B</p>
<ul style="list-style-type: none"> ○ area and perimeter of quadrilaterals (rectangles, squares); (using the Pythagorean theorem will not be required as a strategy) and 	<p>SE/TE: 426–428, 430–433 TE: 326B, 328B, 430B, 433B</p>
<ul style="list-style-type: none"> ○ area and perimeter of compound figures composed of triangles and quadrilaterals. 	<p>SE/TE: 430–432 444–446 TE: 430B, 433B</p>
<p><i>MA-06-2.1.2</i> <i>Students will estimate measurements in standard units including fractions and decimals.</i></p>	<p>SE/TE: 408–411, 413, 440 TE: 408B, 412B, 412B</p>
<p><i>MA-06-2.1.3</i> <i>Students will explain how measurements and measurement formulas are related or different (perimeter and area of rectangles).</i></p>	<p>SE/TE: 431</p>
<p>Systems of Measurement</p>	
<p><i>MA-06-2.2.1</i> <i>Students will convert units within the same measurement system and use these units to solve real-world problems.</i></p>	<p>SE/TE: 400–403, 404–406 TE: 400B, 403B, 404B, 406B</p>

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<p>Geometry Middle grades students expand analysis of two-dimensional shapes and three-dimensional shapes. They translate shapes in a coordinate plane. They extend work with congruent and similar figures, including proportionality. They use the Pythagorean theorem.</p>	
<p>Shapes and Relationships</p>	
<p>MA-06-3.1.1 Students will describe and provide examples of the basic geometric elements (points, rays, lines, segments, angles [acute, right, obtuse], planes, radius, diameter, circumference). DOK 2</p>	<p>SE/TE: 262–265, 266–269, 282–283, 438–441 TE: 262B, 265B, 266B, 269B, 282B, 283B, 438B, 441B</p>
<p>MA-06-3.1.2 Students will describe, and provide examples of the elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles, quadrilaterals, regular polygons), and will apply these elements and figures to solve real-world and mathematical problems. DOK 2</p>	<p>SE/TE: 274–276, 278–281, 282–283, 290–291 TE: 274B, 276B, 278B, 282B, 283B</p>
<p><i>MA-06-3.1.3</i> <i>Students will describe, provide examples of, and identify elements (e.g., vertices, angles, faces, edges, congruent parts) of common three-dimensional figures (spheres, cones, cylinders, prisms, and pyramids).</i></p>	<p>SE/TE: 454–456 466–467 TE: 4548B, 457B</p>
<p>MA-06-3.1.4 Students will identify and describe congruent figures, and will apply congruent figures to solve real-world and mathematical problems. DOK 2</p>	<p>SE/TE: 284–287 TE: 284B, 287B</p>
<p><i>MA-06-3.1.5</i> <i>Students will identify similar figures and apply similar figures to solve real-world and mathematical problems.</i></p>	<p>SE/TE: 330–333 TE: 330B, 333B</p>
<p>Transformations of Shapes</p>	
<p><i>MA-06-3.2.1</i> <i>Students will describe, provide examples of, and apply line symmetry to real-world and mathematical problems.</i></p>	<p>TE: 288B, 289B</p>

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<p>MA-06-3.2.2 Students will:</p> <ul style="list-style-type: none"> • reflect figures across a horizontal or vertical line in the first quadrant; • translate figures in a plane in the first quadrant and • determine the coordinates of the image after transformation in the first quadrant. <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 284–286 288–289</p>
<p><i>MA-06-3.2.3</i> <i>Students will identify rotations of figures in the plane (90° and 180°).</i></p>	<p>SE/TE: 284–286</p>
<p>Coordinate Geometry</p>	
<p>MA-06-3.3.1 Students will identify and graph ordered pairs on a positive coordinate system (Quadrant I), correctly identifying the origin, axes and ordered pairs; and will apply graphing in the coordinate system to solve real-world and mathematical problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 246–249, 380–381, 382–385, 386–388 TE: 246B, 249B, 380B, 381B, 382B, 385B, 386B, 389B</p>
<p>Data Analysis and Probability Middle grades students extend the early development of data representations and examine the appropriateness of graphs and representations of data. They examine central tendencies and dispersion. They develop organized approaches to counting and use experimental and theoretical probabilities.</p>	
<p>Representations of Data Sets</p>	
<p>MA-06-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots).</p> <p style="text-align: right;">DOK 3</p>	<p>SE/TE: 123, 127, 476–479, 480–482, 484–485, 488–490, 494–495, 498–499 TE: 476B, 479B, 480B, 483B, 484B, 487B, 488B, 498B, 499B</p>
<p><i>MA-06-4.1.2</i> <i>Students will explain how different representations of data (e.g., tables, graphs, diagrams, plots) are related.</i></p>	<p>SE/TE: 476, 479, 494</p>

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<p>MA-06-4.1.4 Students will determine and construct appropriate data displays (bar graphs, line plots, Venn diagrams, tables, line graphs), and will explain why the type of display is appropriate for the data.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 488–489 TE: 488B, 489B</p>
Characteristics of Data Sets	
<p>MA-06-4.2.1 Students will determine and apply the mean, median, mode and range of a set of data. <i>DOK 2</i></p>	<p>SE/TE: 490–493, 494–497, 498–499, 500–501, 506–508 TE: 490B, 493B, 494B, 497B, 498B, 499B, 506B, 508B</p>
Probability	
<p>MA-06-4.4.1 Students will describe or determine (e.g., tables, tree diagrams) the sample space of an event for a real-world or mathematical situation. DOK 2</p>	<p>SE/TE: 520–523 TE: 520B, 523B</p>
<p>MA-06-4.4.2 Students will determine single event probabilities based on the results of an experiment and will make inferences based on the data. DOK 3</p>	<p>SE/TE: 530–533 TE: 530B, 533B</p>
<p><i>MA-06-4.4.3</i> <i>Students will explore the theoretical probability of simple events.</i></p>	<p>SE/TE: 530–533 TE: 530B, 533B</p>
<p>Algebraic Thinking Middle grades students extend pattern work to include arithmetic sequences. They use linear functions and linear equations. They plot rational number pairs in the Cartesian plane. They simplify algebraic and numeric expressions. They explore the effects of change on related variables. They use and solve two-step single variable equations and inequalities.</p>	
Patterns, Relations and Functions	
<p>MA-06-5.1.1 Students will extend, describe rules for patterns and find a missing term in a pattern from real-world and mathematical problems. DOK 3</p>	<p>SE/TE: 48–49, 214–215, 290–291, 376–377, 378–379 TE: 48B, 49B, 214B, 215B, 290B, 291B, 376B, 377B, 378B, 379B</p>

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<p>MA-06-5.1.2 Students will create tables for functions and will apply the tables to solve real-world problems.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 50–51, 178–179, 290–291, 386–389 TE: 50B, 51B, 178B, 179B, 290B, 291B, 386B, 389B</p>
<p><i>MA-06-5.1.3</i> <i>Students will describe, define, provide examples of, and apply to real-world and mathematical problems functions using tables, graphs and verbal rules.</i></p>	<p>SE/TE: 50–51, 178–179, 290–291, 386–389 TE: 50B, 51B, 178B, 179B, 290B, 291B, 386B, 389B</p>
<p><i>MA-06-5.1.4</i> <i>Students will explain how tables, graphs and patterns relate to each other.</i></p>	<p>SE/TE: 380–381, 382–384 TE: 380B, 381B, 382B, 384B</p>
<p><i>MA-06-5.1.5</i> <i>Students will explain how the change in one quantity affects change in another quantity (e.g., in tables or graphs, input/output tables).</i></p>	<p>SE/TE: 49, 377, 378–379 TE: 376B, 378B, 380B, 382B</p>
Variables, Expressions and Operations	
<p>MA-06-5.2.1 Students will substitute values for variables (up to two different variables) and evaluate algebraic expressions.</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 46–47, 48–49 TE: 46B, 47B, 48B, 49B</p>
<p><i>MA-06-5.2.2</i> <i>Students will describe, define and provide examples of variables and expressions with a missing value based on real-world and mathematical problems.</i></p>	<p>SE/TE: 32–33, 46–47, 48–49 TE: 32B, 33B, 46B, 47B, 48B, 49B</p>
Equations and Inequalities	
<p>MA-06-5.3.1 Students will model and solve real-world and mathematical problems with simple equations and inequalities (e.g., $8x = 4$, $x+2 > 5$).</p> <p style="text-align: right;">DOK 2</p>	<p>SE/TE: 13, 98–101, 102–105, 106–108, 110–112, 206–207, 298–300, 389 TE: 98B, 101B, 102B, 105B, 106B, 108B, 110B, 112B</p>