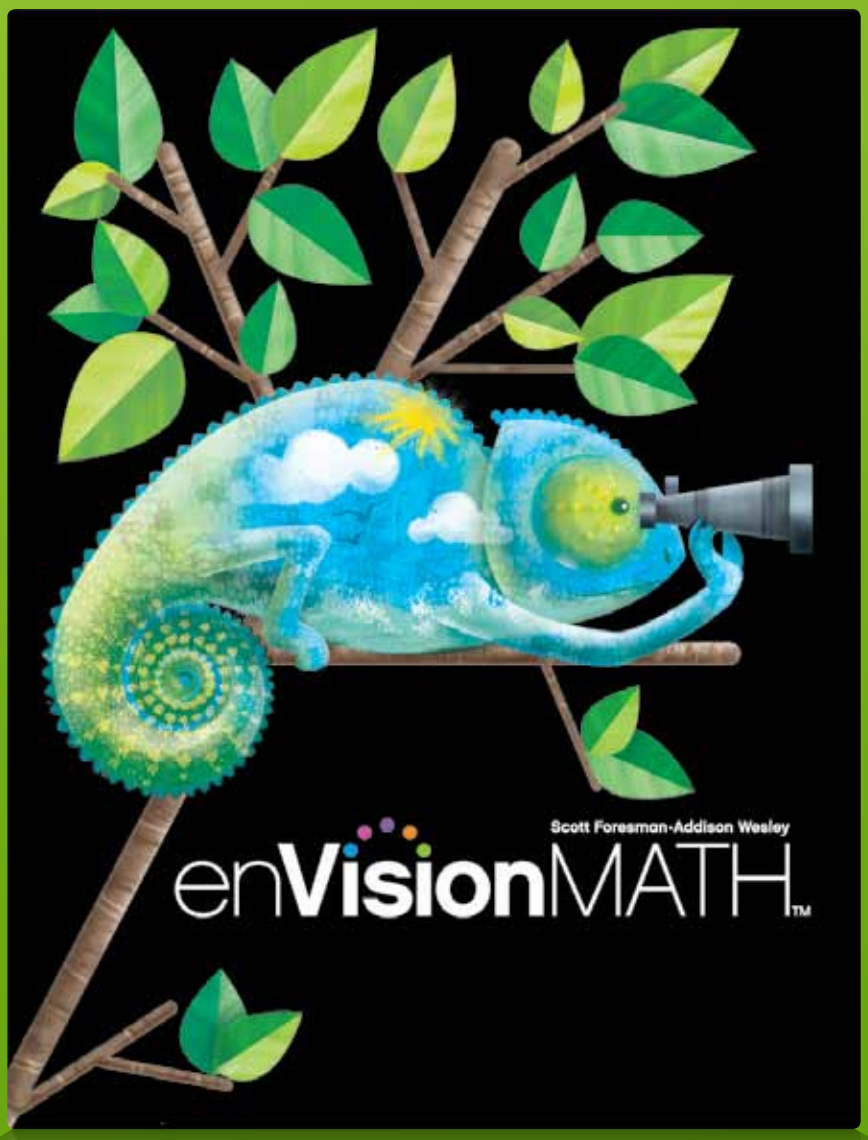
Transitioning to the

Common Core State Standards

with **Pearson**



PEARSON

Grade 4 Transition Kit 1.0

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Transitioning to a Common Core Curriculum
with *enVisionMATH*™

Pearson is committed to supporting teachers as they transition to a mathematics curriculum that is based on the Common Core State Standards for Mathematics. This commitment includes not just curricular support, but also professional development support to help members of the education community gain greater understanding of the new standards and of the expectations for instruction.

With this Transition Kit 1.0, we offer overview information about both the Standards for Mathematical Content and for Mathematical Practice, the two sets of standards that make up the Common Core State Standards for Mathematics. In the Overview of the Standards for Mathematical Content, teachers can become aware of critical shifts in content or instructional focus in the new standards as they begin planning a Common Core-based curriculum. In the Standards for Mathematical Practices essay, we present the features and elements of *Scott Foresman Addison Wesley enVisionMATH* ©2009/2011 that provide students with opportunities to develop mathematical proficiency.

You will also find a correlation of *enVisionMATH* ©2009/2011 to the Common Core State Standards for Grade 4. We have included in the correlation the supplemental lessons that we will be making available to ensure comprehensive coverage of all of the Standards for Mathematical Content of the Common Core State Standards. Additionally, we have included Pacing for a Common Core Curriculum, a pacing guide that recommends when each of the supplemental lessons should be taught.

Finally, we offer a "sneak peek" of these supplemental lessons with a complete listing of the supplemental lessons that will be made available in May 2011. As you'll notice, these lessons maintain the successful instructional approach of the *enVisionMATH* ©2009/2011, while highlighting the connections to the Standards for Mathematical Practices and Content.

Common Core State Standards

Overview of Standards for Mathematical Content Grade 4

Main Areas of Emphasis

The three areas of emphasis in Grade 4 are:

- Multi-digit multiplication and concepts of division with multi-digit dividends
- Fraction equivalence and operations (addition, subtraction, and multiplication) with fractions and whole numbers
- Analysis and classification of two-dimensional shapes based on properties and attributes

Students extend their study of multiplication to four-digit numbers by one- and two-digit numbers. Drawing on their understanding of models of multiplication developed in Grade 3, students develop strategies and methods to find products of multi-digit whole numbers. Students also build on their conceptual understanding of division, place value, properties of operations, and the relationship between multiplication and division to develop procedures to find quotients involving multi-digit dividends.

Students build on their understanding of unit fractions and fraction equivalence to compare fractions with different numerators and denominators. They extend their understanding of operations and unit fractions to add and subtract fractions with like denominators, and use visual representations to explain their work; for example, they decompose fractions into the sum of unit fractions to add and subtract fractions and mixed numbers with like denominators. Further, they draw from their understanding of multiplication and unit fractions as they explore multiplying fractions and whole numbers.

Grade 4 students extend their understanding of the properties of two-dimensional shapes by describing and analyzing shapes, looking in particular at the angles and lines of shapes to categorize them (e.g., triangles, quadrilaterals). Students also explore line symmetry.

New Approaches to Content in Grade 4

The Common Core State Standards for Mathematics promote the development of not just conceptual and procedural understandings of operations, but also an analytic framework from which students begin to see patterns in the way operations function. In Grade 4, students formalize their understanding of the standard algorithm for multiplication and division. They explore another meaning of multiplication: as comparison; for example, one student has five times as many pencils as another student. They analyze the multiplicative comparison and the additive comparison. Students interpret remainders of division problems to maintain a contextual meaning for the operations.

As students develop fluency with multiplication, they explore another classification of numbers as factors and multiples. They find all factor pairs for whole numbers to 100 and identify numbers as multiples of a single-digit number. Students classify numbers as prime or composite.

In Grade 4, students begin a formal study of patterns to lay a foundation for algebraic thinking. Students generate patterns that follow a rule and describe the pattern, identifying features of the pattern that are not explicit to the rule itself. Students also begin to represent problem situations with equations that include a letter or symbol to represent an unknown as part of the foundation for algebraic thinking.

The Common Core State Standards recommend using the unit fraction to build students' knowledge of fractions. In Grade 4, addition and subtraction of fractions grow from composing unit fractions into fractions and decomposing fractions to unit fractions. Similarly, students' work with multiplying fractions begins with the understanding of a fraction as a multiple of a unit fraction, with special attention to the size of the whole. This contextualization of fractions to the parts of the wholes that they represent is an important concept in the study of fractions. Students realize while ½ always represents one half of a whole, the halves are not equal if the whole are different sizes.

Students' work with data displays integrates their study of fractions. They make line plots with the horizontal scale marked off in halves, fourths, and eighths and solve problems involving addition and subtraction of fractional values presented on the line plots.

Students extend their study of place value and rounding to 1,000,000 in Grade 4. They formalize the relationship among the places in a multi-digit number (i.e., power of 10). Further, they express numbers in different forms: using base-ten numerals (standard form), number names (word form) and expanded form. They achieve fluency with multi-digit addition and subtraction.

Important Progressions across Grades

Grade 4 students continue the study of multiplication and division that they started in Grade 3. They expand their understandings of the meaning of multiplication to include multiplication as comparison (e.g., 5 times as many objects) and distinguish between multiplicative comparison and additive comparison (e.g., 5 more). Student multiply multi-digit numbers, using strategies based on place value and properties of operations, and provide visual explanations of their calculations (e.g., area models, rectangular arrays). By Grade 5, students will achieve fluency with multi-digit multiplication using the standard algorithm.

Grade 4 students carry out multi-digit division calculations with dividends up to four digits and one-digit divisors. They use strategies based on place value, properties of operations, and the inverse relationship between multiplication and division. As they did with multiplication calculations, students explain their solutions to division problems using visual models or equations. Students also interpret remainders, explaining the meaning for each problem context. In Grade 5, students will find quotients of division problems with four-digit dividends and two-digit divisors and in Grade 6, will achieve fluency with multi-digit whole number division using the standard algorithm.

Students began their formal study of fractions in Grade 3, with an emphasis on unit fractions and their representation on the number line. In Grade 4, students focus on equivalence of fractions and compare fractions using visual models. They apply their knowledge of unit fractions and fraction equivalence to compare fractions with different numerators or denominators. Grade 4 students draw from their understanding of operations and fraction equivalence to add and subtract fractions and mixed numbers with like denominators. In Grade 5, they will extend these operations to fraction with unlike denominators. Students will explore multiplying fractions by whole numbers to ground their understanding in the meaning of the operation. In Grade 5, students will multiply fractions and fractions, and explore division of fractions by whole numbers and vice versa. By Grade 6, students become fluent with all operations involving fractions, including decimal fractions.

Grade 4 students begin their study of decimal fractions. They use decimal notation for fractions with denominators of 10 and 100, and compare decimals to hundredths. Grade 5 students undertake a comprehensive study of decimals. Starting with decimal place value, students read, write, and compare decimals to the thousandths. They apply their understandings of operations (addition, subtraction, multiplication, and division) with whole numbers to operations with decimals. By the end of Grade 6, they have mastered operations with decimals.

Grade 4 students draw from the measurement concepts and skills developed in earlier years to solve problems involving distance (linear measure from Grades 1 through 3), time intervals (Grades 1 and 2), liquid volume (Grades 2 and 3), mass (Grades 2 and 3), and money (Grade 2). Students know the relative sizes of units of measurement and can express unit measurements from a larger in terms of a smaller unit.

In Grade 4, students continue to build on their reasoning on the attributes of shapes from Grades 1 through 3. They focus specifically on angles and lines. Students classify shapes based on the angles (right, acute, obtuse) and lines (perpendicular, parallel) that make up the shapes. Students also look for line symmetry in shapes as a defining attribute.

What's Different?

Unlike many state curriculum frameworks, the Common Core State Standards do not present a spiral curriculum in which students revisit numerous topics from one year to the next with progressively more complex study. Rather, the CCSS identify a limited number of topics at each grade level, allowing enough time for students to achieve mastery of these concepts. The subsequent year of study builds on the concepts of the previous year. While some review of topics from earlier grades is appropriate and encouraged, the CCSS writers assert that reteaching of these topics should not be needed.

Certain topics that have often been part of the Grade 4 curriculum are not included in the CCSS. Among the most noticeable are a pared-down set of geometry and data analysis standards, and the absence of probability concepts. Other topics, such as operations with fractions and decimals have been shifted to different grades.

Number and Operations The study of decimals in Grade 4 is limited to an exploration of decimal fractions. Students undertake operations with decimals in Grade 5. Operations with fractions are limited to addition and subtraction with like denominators and multiplication of fractions and whole numbers.

Measurement The study of temperature is not part of the CCSS.

Geometry The CCSS introduce the study of congruence and transformations in Grade 8, and the study of coordinate grids begins in Grade 5. While students in Kindergarten through Grade 2 explore three-dimensional shapes, compose them and compare and contrast them to two-dimensional shapes, students do not revisit three-dimensional shapes until Grade 5 with the study of volume.

Data Analysis Students represent data in picture or bar graphs in Grades 2 and 3, but have limited experiences with other data displays except line plots.

Probability Students first encounter probability concepts in Grade 7.

Common Core State Standards
Standards for Mathematical Practices
Grade 4

The Standards for Mathematical Practice are an important part of the Common Core State Standards. They describe varieties of proficiency that teachers should focus on developing in their students. These practices draw from the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections and the strands of mathematical proficiency specified in the National Research Council's report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding, procedural fluency, and productive disposition.

For each of the Standards for Mathematical Practices presented in the text that follows, is a explanation of the different features and elements of Pearson's *Scott Foresman • Addison Wesley enVisionMATH*$_{TM}$ that help students develop mathematical proficiency.

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense? "They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Scott Foresman • Addison Wesley enVisionMATH, is built on a foundation of problem-based instruction that has sense-making at its heart. The Problem Solving Handbook, found on pages xviii-xxix, presents to students a 3-phase process that begins with making sense of the problem to solve. The first phase of the process has students ask themselves, *What am I trying to find? What do I know?* to help them identify the givens and constraints of a problem situation. In the second phase, the plan and solve phase, students decide on a solution plan. The Problem-Solving Recording Sheet, a reproducible teaching resource, provides students with a useful structured outline to help them become fluent with thinking about (making sense of) a problem and planning a workable solution pathway.

The structure of each lesson facilitates students' implementation of this process. Every lesson begins with **Problem-Based Interactive Learning,** an activity in which students are presented a problem to solve. They interact with their peers and teachers to make sense of the problem presented and to look for a workable solution. A second feature of each lesson are the Problem Solving exercises for which students persevere to find solutions for each exercise. In each topic

is at least one Problem Solving lesson with a primary focus of honing students' sense-making and problem-solving skills.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 1-3, 1-8, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 3-6, 4-6,
5-5, 6-6, 10-6, 10-8, 12-11, 13-10, 14-4, 14-6, 14-9, 14-10, 14-11, 15-5

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Scott Foresman • *Addison Wesley enVisionMATH* Program provides scaffolded instruction to help students develop both quantitative and abstract reasoning. In the Visual Learning Bridge students learn how to represent the given situation numerically or algebraically. Later in a lesson, students have opportunities to reason abstractly as they endeavor to represent situations symbolically. Throughout the solving process, students are reminded to check back to the problem situation with the **Reasonableness** exercises. In the **Do You Understand** part of the Guided Practice, students gain experiences with quantitative reasoning as they consider the meaning of different parts of an expression or equation. Throughout the exercise sets are Reasoning exercises that focus students' attention on the structure or meaning of an operation rather than the solution.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 2-6, 5-4, 5-5, 7-3, 7-4, 8-5, 9-2, 10-3, 10-8, 11-3, 12-5, 13-6, 14-11, 15-5.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Consistent with a focus on reasoning and sense-making is a focus on critical reasoning – argumentation and critique of arguments. In Pearson's *Scott Foresman • Addison Wesley enVisionMATH*, the Problem-Based Interactive Learning affords students opportunities to share with classmates their thinking about problems, their solutions, and their reasoning about the solutions. The many Reasoning exercises found throughout the program specifically call for students to justify or explain their solutions. The **Writing to Explain** exercises help students develop foundational critical reasoning skills by having them construct explanations for processes. Articulating clearly an explanation for a process is a stepping stone to critical analysis and reasoning of both their own processes and those of others.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 5-6, 7-5, 11-8, 14-5, 16-11

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Students in Pearson's *Scott Foresman • Addison Wesley enVisionMATH,* are introduced to mathematical modeling in the early grades. They first use manipulatives and drawings and then equations to model addition and subtraction situations. The Visual Learning Bridge and Visual Learning Animation often present real-world situations and students are shown how these can be modeled mathematically. In later years, students expand their modeling skills to include other graphical representations such as tables, graphs, as well as equations.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 1-1, 1-9, 2-2, 3-3, 3-6, 4-2, 5-5, 7-5, 8-4, 9-1, 9-5, 10-5, 11-4, 11-6, 12-1, 12-2, 12-5, 12-6, 12-9, 12-11, 13-1, 13-2, 13-5, 13-7, 13-8, 14-11, 15-5, 16-1, 16-2, 16-6, 16-7

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Students become fluent in the use of a wide assortment of tools ranging from physical objects, including manipulatives, rulers, protractors, and even pencil and paper, to technological tools, such as etools, calculators and computers. As students become more familiar with the tools available to them, they are able to begin making decisions about which tools are more appropriate to solve different kinds of problems.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 1-2, 1-4, 2-1, 2-5, 3-1, 4-1, 4-6, 5-1, 5-3, 6-1, 6-6, 8-1, 8-3, 9-4, 10-3, 10-6, 11-2, 13-9, 14-1, 14-6, 15-1, 16-5, 16-10

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Students are expected to use mathematical terms and symbols with precision. Key terms and concepts are highlighted in each lesson. In the **Do You Understand** feature, students often revisit these key terms and provide explicit definitions or explanations of the terms. For the Writing to Explain and Think About a Process exercises, students are to provide clear explanations of terms, concepts, or processes and to use new terms accurately and precisely. Students are reminded to use appropriate units of measure when working through solutions and accurate labels on axes when making graphs to represent solutions.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 6-3, 6-4, 6-5, 8-1, 8-2, 8-3, 9-4, 10-3, 10-6, 11-1, 11-2, 13-9, 14-1, 14-6, 15-1, 16-5, 16-6, 16-10

7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure .Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 \times 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$.They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see 5 $3(x\ y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Throughout the program, students are encouraged to look for structure as they develop solution plans. In the **Look for a Pattern Problem-Solving** lessons, children in the early years develop a sense of patterning with visual and physical objects.

As students mature in their mathematical thinking, they look for structure in numerical operations by focusing on place value and properties of operations. From this focus on looking for and recognizing structure, students become well-equip to draw from patterns to formalize their thinking about the structure of operations.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 1-5, 1-6, 2-1, 2-2, 2-3, 3-3, 3-4, 3-5, 4-1, 4-2, 4-3, 4-4, 4-5, 5-1, 5-2, 5-3, 5-4, 5-5, 6-1, 6-2, 6-3, 6-4, 6-5, 7-1, 7-2, 7-3, 7-4, 8-1, 8-4, 9-1, 9-2, 9-4, 9-5, 10-4, 11-1, 11-3, 11-4, 11-7, 12-1, 12-3, 12-4, 12-7, 12-8, 12-9, 13-4, 13-5, 13-6, 13-7, 13-8, 13-9, 14-2, 14-3, 14-4, 14-8, 14-9, 14-10, 16-1, 16-2, 16-7, 16-8, 16-9

8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y – 2)/(x – 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x – 1)(x + 1)$, $(x – 1)(x^2 + x + 1)$, and $(x – 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Once again, throughout the program as a whole, students are prompted to look for repetition in computations to derive shortcuts that can make the problem-solving process more efficient. Students are prompted to think about problems they encountered previously that may share features or processes. They are encouraged to draw on the solution plan developed for that problem, and as their mathematical thinking matures, to look for generalizations that can be applied to other problem situations. The **Problem-Based Interactive Learning** activities offer students opportunities to look for regularity in the way operations behave.

Throughout the program; for examples, see *enVisionMATH* Grade 4 Lessons 1-5, 1-7, 4-3, 4-4, 4-5, 5-2, 7-2, 9-2, 9-5.

Correlation of Standards for Mathematical Content

enVisionMATH™ Grade 4

The following shows the alignment of *enVisionMATH* Grade 4 ©2009/2011 to the Common Core State Standards for Grade 4. Included in this correlation are the supplemental lessons that will be available as part of the transitional support that Pearson is providing. These lessons will be part of the Transition Kit 2.0, available in May 2011.

Standards for Mathematical Content Grade 4		Where to find in enVisionMATH ©2009/2011
Operations and Algebraic Thinking		
Use the four operations with whole numbers to solve problems.		
4.OA.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	3-1, 3-3, 3-7, 5-8
4.OA.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	3-1, 3-7, 5-8
4.OA.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	2-1, 2-2, 5-2, 5-4, 6-1, 6-4, 7-2, 7-7, 8-2, 8-3, 8-10, 16-12, 18-1, 18-2, 18-3, 18-5, CC-4, CC-7
Gain familiarity with factors and multiples.		
4.OA.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	3-2, 3-4, 3-5, 3-6, 8-8, 8-9
Generate and analyze patterns.		
4.OA.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*	3-2, 6-2, 6-3, 9-7

Standards for Mathematical Content Grade 4		Where to find in enVisionMATH ©2009/2011
Number and Operations in Base Ten [1]		
Generalize place value understanding for multi-digit whole numbers.		
4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*	CC-1
4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	1-1, 1-2, 1-3, CC-1
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.	1-4, 2-2, 5-2, 5-3, 5-4
Use place value understanding and properties of operations to perform multi-digit arithmetic.		
4.NBT.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	2-4, 2-5, 2-6, 2-7
4.NBT.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7, 5-8, 7-1, 7-3, 7-4, 7-5, CC-3, CC-4, CC-5, CC-6
4.NBT.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	4-1, 4-2, 4-3, 4-5, 8-1, 8-3, 8-4, 8-5, 8-6, 8-7, CC-7, CC-8, CC-9, CC-10

[1] *(Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.)*

Standards for Mathematical Content Grade 4		Where to find in enVisionMATH ©2009/2011
Number and Operations—Fractions[2]		
Extend understanding of fraction equivalence and ordering.		
4.NF.1	Explain why a fraction *a*/*b* is equivalent to a fraction (*n* × *a*)/(*n* × *b*) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	10-4, 10-5, 10-9, CC-14
4.NF.2	Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	10-7, 10-8, 10-9, CC-14
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.		
4.NF.3	Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*.	11-1, 11-4, CC-15
4.NF.3.a	Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	11-1
4.NF.3.b	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.*	CC-15, CC-16
4.NF.3.c	Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	CC-16, CC-17, CC-18
4.NF.3.d	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	11-1
4.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	CC-20
4.NF.4.a	Understand a fraction *a*/*b* as a multiple of 1/*b*. *For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).*	CC-19
4.NF.4.b	Understand a multiple of *a*/*b* as a multiple of 1/*b*, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5),*	CC-20, CC-21

[2] (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.)

	recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)	
4.NF.4.c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*	CC-21
Understand decimal notation for fractions, and compare decimal fractions.		
4.NF.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. *For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.* (*Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.*)	12-3, 12-4, CC-22
4.NF.6	Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*	12-1, 12-3, CC-22
4.NF.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	12-2

Standards for Mathematical Content Grade 4		Where to find in enVisionMATH ©2009/2011
Measurement and Data		
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.		
4.MD.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …*	16-1, 16-3, 16-4, 16-5, 16-6, 16-7, 16-8, 16-9
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	11-4, 12-6, 13-7, 16-4, 16-8, 16-9, 16-12, CC-2, CC-24
4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*	14-2, 14-6, CC-23
Represent and interpret data.		
4.MD.4	Make a line plot to display a data set of measurements in fractions of a unit (1/2, ¼, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*	CC-25
Geometric measurement: understand concepts of angle and measure angles.		
4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:	9-2, 9-3, CC-11
4.MD.5.a	An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.	9-3, CC-11, CC-12
4.MD.5.b	An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	CC-12, CC-13
4.MD.6	Measure angles in whole-number degrees using a protractor.	9-3, CC-13

	Sketch angles of specified measure.	
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	CC-13

Standards for Mathematical Content Grade 4		Where to find in enVisionMATH ©2009/2011
Geometry		
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.		
4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	9-1, 9-2, CC-11, CC-12
4.G.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	9-4, 9-5, 9-6, 9-7
4.G.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	19-5

Pacing for a Common Core Curriculum
with *enVisionMATH*™ Grade 4

This Pacing Chart is provided to help you plan your course as you look to implement the Common Core (CC) State Standards with *enVisionMATH* ©2009/2011 in your math classroom. The Chart indicates the CC standard(s) that each lesson addresses and proposes pacing for each topic. Included in the chart are CC Lessons that offer in-depth coverage of certain standards. These lessons, in addition to the lessons in the Student Edition provide complete coverage of all of the Common Core State Standards for Grade 4.

The suggested number of days for each chapter is based on a 45-minute class period. The total of 160 days of instruction allows time for all of the lessons that address the Common Core State Standards as well as some review and enrichment lessons.

- ✓ Content to meet the Grade 4 Common Core State Standards
- ● Content from earlier years to review and practice
- ▲ Content to prepare for future study or to enrich the curriculum

		Standard(s) for Mathematical Content	
Topic 1 Numeration			**9 days**
1-1	Thousands	4.NBT.2	✓
1-2	Millions	4.NBT.2	✓
CC-1	Place Value Relationships	4.NBT.1, 4.NBT.2	✓
1-3	Comparing and Ordering Whole Numbers	4.NBT.2	✓
1-4	Rounding Whole Numbers	4.NBT.3	✓
1-5	Using Money to Understand Decimals	Prepares for 4.MD.2	✓
1-6	Counting Money and Making Change	Prepares for 4.MD.2	✓
CC-2	Solving Problems Involving Money	4.MD.2	✓
1-7	Problem Solving: Make an Organized List	4.OA.3	✓

		Standard(s) for Mathematical Content	
Topic 2 Adding and Subtracting Whole Numbers			**8 days**
2-1	Using Mental Math to Add and Subtract	4.OA.3	✓
2-2	Estimating Sums and Differences of Whole Numbers	4.NBT.3, 4.OA.3	✓
2-3	Problem Solving: Missing or Extra Information	4.OA.3	✓
2-4	Adding Whole Numbers	4.NBT.4	✓
2-5	Subtracting Whole Numbers	4.NBT.4	✓
2-6	Subtracting Across Zeros	4.NBT.4	✓
2-7	Problem Solving: Draw a Picture and Write an Equation	4.NBT.4	✓
Topic 3: Multiplication Meanings and Facts			**8 days**
3-1	Meanings of Multiplication	4.OA.1, 4.OA.2	✓
3-2	Patterns for Facts	4.OA.4, 4.OA.5	✓
3-3	Multiplication Properties	4.OA.1	✓
3-4	3 and 4 as Factors	4.OA.4	✓
3-5	6, 7, and 8 as Factors	4.OA.4	✓
3-6	10, 11, and 12 as Factors	4.OA.4	✓
3-7	Problem Solving: Draw a Picture and Write an Equation	4.OA.1, 4.OA.2	✓
Topic 4: Division Meaning and Facts			**6 days**
4-1	Meanings of Division	4.NBT.6	✓
4-2	Relating Multiplication and Division	4.NBT.6	✓
4-3	Special Quotients	4.NBT.6	✓
4-4	Using Multiplication Facts to Find Division Facts	4.OA.2	✓
4-5	Problem Solving: Draw a Picture and Write an Equation	4.NBT.6	✓

		Standard(s) for Mathematical Content	
Topic 5: Multiplying by 1-Digit Numbers			**10 days**
5-1	Multiplying by Multiples of 10 and 100	4.NBT.5	✓
5-2	Using Mental Math to Multiply	4.NBT.5, 4.NBT.3, 4.OA.3	✓
5-3	Using Rounding to Estimate	4.NBT.5, 4.NBT.3	✓
5-4	Problem Solving: Reasonableness	4.OA.3, 4.NBT.5, 4.NBT.3	✓
5-5	Using an Expanded Algorithm	4.NBT.5	✓
5-6	Multiplying 2-Digit by 1-Digit Numbers	4.NBT.5	✓
5-7	Multiplying 3-Digit by 1-Digit Numbers	4.NBT.5	✓
CC-3	Multiplying 3- and 4-digit by 1-Digit Numbers	4.NBT.5	✓
5-8	Problem Solving: Draw a Picture and Write an Equation	4.OA.1, 4.OA.2, 4.NBT.5	✓
Topic 6: Patterns and Expressions			**6 days**
6-1	Variables and Expressions	4.OA.3	✓
6-2	Addition and Subtraction Expressions	4.OA.5	✓
6-3	Multiplication and Division Expressions	4.OA.5	✓
6-4	Problem Solving: Use Objects and Reasoning	4.OA.3	✓

		Standard(s) for Mathematical Content	
Topic 7: Multiplying by 2-Digit Numbers			**11 days**
7-1	Using Mental Math to Multiply 2-Digit Numbers	4.NBT.5	✓
7-2	Estimating Products	4.OA.3	✓
CC-4	Using Compatible Numbers to Estimate	4.NBT.5, 4.OA.3	✓
7-3	Arrays and an Expanded Algorithm	4.NBT.5	✓
CC-5	Arrays and using an Expanded Notation	4.NBT.5	✓
CC-6	Connecting the Expanded and Standard Algorithms	4.NBT.5	✓
7-4	Multiplying 2-Digit Numbers by Multiples of Ten	4.NBT.5	✓
7-5	Multiplying 2-Digit by 2-Digit Numbers	4.NBT.5	✓
7-6	Special Cases	4.NBT.5	✓
7-7	Problem Solving: Two-Question Problems	4.OA.3	✓

		Standard(s) for Mathematical Content	
Topic 8: Dividing by 1-Digit Divisors			**15 days**
8-1	Using Mental Math to Divide	4.NBT.6	✓
8-2	Estimating Quotients	4.OA.3	✓
CC-7	Estimating Quotients for Greater Dividends	4.NBT.6, 4.OA.3	✓
CC-8	Using Objects to Divide: Division as Repeated Subtraction	4.NBT.6	✓
CC-9	Division as Repeated Subtraction	4.NBT.6	✓
8-3	Dividing with Remainders	4.OA.3, 4.NBT.6	✓
8-4	Connecting Models and Symbols	4.NBT.6	✓
8-5	Dividing 2-Digit by 1-Digit Numbers	4.NBT.6	✓
8-6	Dividing 3-Digit by 1-Digit Numbers	4.NBT.6	✓
CC-10	Dividing 4-Digit by 1-Digit Numbers	4.NBT.6	✓
8-7	Deciding Where to Start Dividing	4.NBT.6	✓
8-8	Factors	4.OA.4	✓
8-9	Prime and Composite Numbers	4.OA.4	✓
8-10	Problem Solving: Multiple-Step Problems	4.OA.3	✓

		Standard(s) for Mathematical Content	
Topic 9: Lines, Angles, and Shapes12 days			
9-1	Points, Lines, and Planes	4.G.1	✓
9-2	Line Segments, Rays, and Angles	4.G.1, 4.MD.5	✓
CC-11	Understanding Angles and Unit Angles	4.MD.5.a, 4.G.1, 4.MD.5	✓
CC-12	Measuring with Unit Angles	4.MD.5.b, 4.MD.5.a, 4.G.1	✓
9-3	Measuring Angles	4.MD.5; 4.MD.5.a, 4.MD.6	✓
CC-13	Adding and Subtracting Angle Measures	4.MD.7, 4.MD.6, 4.MD.5.b	✓
9-4	Polygons	4.G.2	✓
9-5	Triangles	4.G.2	✓
9-6	Quadrilaterals	4.G.2	✓
9-7	Problem Solving: Make and Test Generalizations	4.G.2, 4.OA.5	✓
Topic 10: Understanding Fractions			**9 days**
10-1	Regions and Sets	Reviews 3.NF.1	●
10-2	Fractions and Division	Prepares for 5.NF.3	▲
10-3	Estimating Fractional Amounts	Extends 4.NF.2	▲
10-4	Equivalent Fractions	4.NF.1	✓
CC-14	Number Lines and Equivalent Fractions	4.NF.1, 4.NF.2	✓
10-5	Fractions in Simplest Form	4.NF.1	✓
10-6	Improper Fractions and Mixed Numbers	4.NF.3.b	✓
10-7	Comparing Fractions	4.NF.2	✓
10-8	Ordering Fractions	4.NF.2	✓
10-9	Problem Solving: Writing to Explain	4.NF.2, 4.NF.1	✓

		Standard(s) for Mathematical Content	
Topic 11: Adding and Subtracting Fractions			**11 days**
CC-15	Composing and Decomposing Fractions	4.NF.3, 4.NF.3.b	✓
11-1	Adding and Subtracting Fractions with Like Denominators	4.NF.3, 4.NF.3.a, 4.NF.3.d	✓
11-2	Adding Fractions with Unlike Denominators	Previews 5.NF.1	▲
11-3	Subtracting Fractions with Unlike Denominators	Previews 5.NF.1	▲
11-4	Problem Solving: Draw a Picture and Write an Equation	4.NF.3, 4.NF.3.c, 4.MD.2	✓
CC-16	Modeling Addition and Subtraction of Mixed Numbers	4.NF.3.c, 4.NF.3.b	✓
CC-17	Adding Mixed Numbers	4.NF.3.c	✓
CC-18	Subtracting Mixed Numbers	4.NF.3.c	✓
CC-19	Fractions as Multiples of Unit Fractions: Using Models	4.NF.4.a	✓
CC-20	Multiplying a Fraction by a Whole Number: Using Models	4.NF.4.b, 4.NF.4	✓
CC-21	Multiplying a Fraction by a Whole Number: Using Symbols	4.NF.4.c, 4.NF.4.b	✓
Topic 12: Understanding Decimals			**8 days**
12-1	Decimal Place Value	Prepares for 4.NF.7	✓
12-2	Comparing and Ordering Decimals	4.NF.7	✓
12-3	Fractions and Decimals	4.NF.5, 4.NF.6	✓
12-4	Fractions and Decimals on the Number Line	4.NF.5, 4.NF.6	✓
CC-22	Equivalent Fractions and Decimals	4.NF.6, 4.NF.5	✓
12-5	Mixed Numbers and Decimals on the Number Line	Extends 4.NF.5, 4.NF.6	✓
12-6	Problem Solving: Draw a Picture	4.MD.2	✓

		Standard(s) for Mathematical Content	
Topic 13: Operations with Decimals			**2–5 days**
13-1	Rounding Decimals	Previews 5.NBT.4	▲
13-2	Estimating Sums and Differences of Decimals	Prepares for 5.NBT.7	▲
13-3	Modeling Addition and Subtraction of Decimals	Prepares for 5.NBT.7	▲
13-4	Adding and Subtracting Decimals	Prepares for 5.NBT.7	✓
13-5	Multiplying a Whole Number by a Decimal	Prepares for 5.NBT.7	▲
13-6	Dividing a Decimal by a Whole Number	Prepares for 5.NBT.7	▲
13-7	Problem Solving: Try, Check, and Revise	4.MD.2	✓
Topic 14: Area and Perimeter			**6–8 days**
14-1	Understanding Area	Reviews 3.MD.5	●
14-2	Area of Squares and Rectangles	4.MD.3	✓
14-3	Area of Irregular Shapes	Extends 4.MD.3	▲
14-4	Area of Parallelograms	Extends 4.MD.3	▲
14-5	Area of Triangles	Extends 4.MD.3	▲
14-6	Perimeter	4.MD.3	✓
CC-23	Solving Perimeter and Area Problems	4.MD.3	✓
14-7	Same Perimeter, Different Area	Extends 4.MD.3	▲
14-8	Same Area, Different Perimeter	Extends 4.MD.3	▲
14-9	Problem Solving: Solve a Simpler Problem and Make a Table	4.OA.5	✓

		Standard(s) for Mathematical Content	
Topic 15: Solids			**0–4 days**
15-1	Solids	Prepares for 6.G.4	▲
15-2	Views of Solids: Nets	Prepares for 6.G.4	▲
15-3	Views of Solids: Perspective	Prepares for 6.G.4	▲
15-4	Volume	Prepares for 5.MD.3	▲
15-5	Problem Solving: Look for a Pattern	4.OA.5	✓
Topic 16: Measurement, Time, and Temperature			**15 days**
16-1	Using Customary Units of Length	4.MD.1	✓
16-2	Customary Units of Capacity	4.OA.3	✓
16-3	Units of Weight	4.MD.1	✓
16-4	Changing Customary Units	4.MD.1, 4.MD.2	✓
16-5	Using Metric Units of Length	4.MD.1	✓
16-6	Metric Units of Capacity	4.MD.1	✓
16-7	Units of Mass	4.MD.1	✓
16-8	Changing Metric Units	4.MD.1, 4.MD.2	✓
16-9	Units of Time	4.MD.1, 4.MD.2	✓
16-10	Elapsed Time	Extends 4.MD.2	✓
16-11	Temperature		▲
CC-24	Solving Measurement Problems	4.MD.2	✓
CC-25	Solving Measurement Problems Using Line Plots	4.MD.4	✓
16-12	Problem Solving: Work Backward	4.MD.2, 4.OA.3	✓

		Standard(s) for Mathematical Content	
Topic 17: Data and Graphs			**0–8 days**
17-1	Data from Surveys	Prepares for 6.SP.1	▲
17-2	Interpreting Graphs		▲
17-3	Line Plots	Extends 4.MD.4	▲
17-4	Ordered Pairs	Prepares for 5.G.1	▲
17-5	Line Graphs		▲
17-6	Mean	Prepares for 6.SP.3	▲
17-7	Median, Mode, and Range	Prepares for 6.SP.3	▲
17-8	Stem-and-Leaf Plots	Prepares for 6.SP.4	▲
17-9	Reading Circle Graphs		▲
17-10	Problem Solving: Make a Graph		▲
Topic 18: Equations			**5-6 days**
18-1	Equal or Not Equal	4.OA.3	✓
18-2	Solving Addition and Subtraction Equations	4.OA.3	✓
18-3	Solving Multiplication and Division Equations	4.OA.3	✓
18-4	Understanding Inequalities	Prepares for 6.EE.5	▲
18-5	Problem Solving: Work Backward	4.OA.3	✓

		Standard(s) for Mathematical Content	
Topic 19: Transformations, Congruence, and Symmetry			**3–6 days**
19-1	Translations		▲
19-2	Reflections		▲
19-3	Rotations		▲
19-4	Congruent Figures		▲
19-5	Line Symmetry	4.G.3	✓
19-6	Rotational Symmetry	Extends 4.G.3	✓
19-7	Problem Solving: Draw a Picture		▲
Topic 20: Probability			**0–3 days**
20-1	Finding Combinations		▲
20-2	Outcomes and Tree Diagrams		▲
20-3	Writing Probability as a Fraction		▲
20-4	Problem Solving: Use Reasoning		▲

Common Core Supplemental Lessons

enVisionMATH™ Grade 4

The supplemental lessons listed below will be available for *enVisionMATH* ©2009/2011 Grade 4 in May 2011. These lessons ensure comprehensive coverage of all of the Standards for Mathematical Content that are in Common Core State Standards.

CC-1 Place Value Relationships

CC-2 Solving Problems Involving Money

CC-3 Multiplying 3- and 4-Digit BY 1-Digit Numbers

CC-4 Using compatible Numbers to Estimate

CC-5 Arrays and an Expanded Algorithm

CC-6 Connecting the Expanded and Standard Algorithm

CC-7 Estimating Quotients for Greater Dividends

CC-8 Using Objects to Divide: Division as Repeated Subtraction

CC-9 Division as Repeated Subtraction

CC-10 Dividing 4-Digit by 1-Digit Numbers

CC-11 Understanding Angles and Unit Angles

CC-12 Measuring with Unit Angles

CC-13 Adding and Subtracting Angle Measures

CC-14 Number Lines and Equivalent Fractions

CC-15 Composing and Decomposing Fractions

CC-16 Modeling Addition and Subtraction of Mixed Numbers

CC-17 Adding Mixed Numbers

CC-18 Subtraction Mixed Numbers

CC-19 Fractions as Multiples of Unit Fractions: Using Models

CC-20 Multiplying a Fraction by a Whole Number: Using Models

CC-21 Multiplying a Fraction by a Whole Number: Using Symbols

CC-22 Equivalent Fractions and Decimals

CC-23 Solving Perimeter and Area Problems

CC-24 Solving Measurement Problems

CC-25 Solving Measurement Problems Using Line Plots