A Correlation of

enVisionMATH
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to the

Common Core State Standards for Mathematics Oregon

Grade 2

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Common Core State Standards for Mathematics Oregon Grade 2	enVisionMATH ©2009 with Common Core Transition Kit Grade 2 Topics - Lessons
Mathematical Practices	**2.MP**
The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.	
2.MP.1 Make sense of problems and persevere in solving them.	enVisionMATH is built on a foundation of problem-based instruction that has sense-making at its heart. Each topic includes at least one problem-solving lesson in which students focus on honing their sense-making and problem-solving skills. Problem-solving lessons present to students a process that begins with making sense of the problem. Read and Understand, the first phase of the process, has students ask themselves, What am I trying to find? and What do I know?, questions that will help identify the givens and constraints of the problem. In the second phase, Plan and Solve, students decide on a solution plan. In the final phase, Look Back and Check, students verify that their work is reasonable and reflects the information given. Each lesson begins with Problem-Based Interactive Learning, an activity in which students interact with their peers and teachers to make sense of and decide on a workable solution for a real-world situation. Another feature of each lesson is the set of problem-solving exercises in which students persevere by applying different skills and strategies to solve problems.

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2.MP.2 Reason abstractly and quantitatively.	enVisionMATH provides scaffolded instruction to help students develop both quantitative and abstract reasoning. In the Visual Learning Bridge, students can see how to represent a given situation numerically or algebraically. They will have opportunities later in the lesson to reason abstractly as they endeavor to represent situations symbolically. Reasonableness exercises remind students to compare their work to the original situation. In the Do You Understand? part of the Guided Practice (found in the Topic Teacher's Guide), students gain experiences with quantitative reasoning as they consider concepts or the meaning of different parts of an equation. Reasoning problems throughout the exercise sets focus students' attention on the structure or meaning of an operation, for example, rather than merely the solution.
2.MP.3 Construct viable arguments and critique the reasoning of others.	Consistent with a focus on reasoning and sense-making is a focus on critical reasoning — argumentation and critique of arguments. In Pearson's enVisionMATH, the Problem-Based Interactive Learning affords students opportunities to share with classmates their thinking about problems, their solution methods, and their reasoning about the solutions. Many exercises found throughout the program specifically call for students to justify or explain their solutions. Journal activities help students develop foundational critical reasoning skills by having them construct explanations for processes. The ability to articulate a clear explanation for a process is a stepping stone to critical analysis and reasoning of both the student's own processes and those of others.

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2.MP.4 Model with mathematics.	Students in Pearson's 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 grades, students expand their modeling skills to include representations such as tables and graphs, as well as equations.
2.MP.5 Use appropriate tools strategically.	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 digital 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 most helpful in a particular situation.
2.MP.6 Attend to precision.	Students are expected to use mathematical terms and symbols with precision. Key terms and concepts are highlighted in each lesson. The Problem-Based Interactive Learning activity provides repeated opportunities for children to use precise language to explain their solution paths while solving problems. In the Do You Understand? feature, students revisit these key terms or concepts and provide explicit definitions or explanations.

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2.MP.7 Look for and make use of structure.	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. This focus on looking for and recognizing structure enables students to draw from patterns as they formalize their thinking about the structure of operations.
2.MP.8 Look for and express regularity in repeated reasoning.	Students are prompted to look for repetition in computations to help them develop shortcuts and become more efficient problem-solvers. Students are reminded to think about problems they have encountered previously that may share features or processes. They are encouraged to draw on the solution plan developed for such problems, and as their mathematical thinking matures, to look for and apply generalizations to similar situations. The Problem-Based Interactive Learning activities offer students opportunities to look for regularity in the way operations behave.

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Operations and Algebraic Thinking **2.OA**	
A. Represent and solve problems involving addition and subtraction.	
2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. *(*See Glossary)	1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 2-1, 2-2, 2-3, 2-4, 2-5, 2-8, 3-1, 3-2, 3-3, 3-4, 3-6, 6-1, 6-2, 6-3, 6-4, 7-3, 7-4, 7-5, 8-1, 8-7, 9-7, 10-7, 15-6
B. Add and subtract within 20.	
2.OA.2 Fluently add and subtract within 20 using mental strategies. (See standard 1.OA.6 for a list of mental strategies.) By end of Grade 2, know from memory all sums of two one-digit numbers.	2-1, 2-2, 2-3, 3-1, 3-2, 3-3, 3-4
C. Work with equal groups of objects to gain foundations for multiplication.	
2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	4-9
2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	19-2, 19-3, 19-5, 19-6
Number and Operations in Base Ten **2.NBT**	
D. Understand place value.	
2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:	17-1, 17-2, 17-3
a. 100 can be thought of as a bundle of ten tens — called a “hundred.”	17-1, 17-3

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b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	17-1, 17-2, 17-3
2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.	17-1, 17-5 **CC:** 17-6A
2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	4-2, 4-3, 17-2, 17-3
2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	17-6, 17-8
E. Use place value understanding and properties of operations to add and subtract.	
2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	1-7, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 3-1, 3-2, 3-3, 3-4, 3-5, 5-6, 6-1, 6-2, 6-3, 6-4, 6-5, 7-1, 7-2, 7-3, 7-4, 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 10-1, 10-3, 10-4, 10-6 12-1, 12-2, 12-3 **CC:** 6-5A, 7-3A
2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	8-1, 8-2, 8-3, 8-4, 8-5, 8-6 **CC:** 8-6A, 9-6A
2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	18-1, 18-2, 18-3, 18-4, 18-5, 18-6, 18-7, 18-8 **CC:** 18-1A, 18-5A

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2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	17-4, 17-5, 18-1, 18-5 **CC:** 6-5A, 7-3A, 18-1A
2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)	2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 3-1, 3-2, 3-3, 3-4, 3-5, 6-1, 6-2, 6-3, 6-4, 7-1, 7-2, 7-3, 7-4, 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 10-1, 10-3, 10-4, 10-6, 18-3, 18-4, 18-5, 18-7, 18-8 **CC:** 6-5A, 7-3A, 8-6A, 9-6A
Measurement and Data	**2.MD**
F. Measure and estimate lengths in standard units.	
2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	13-4, 13-5 **CC:** 13-4A, 13-5A
2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	13-3 **CC:** 13-6A
2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.	13-4, 13-5 **CC:** 13-4A, 13-5A
2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	**CC:** 13-6C
G. Relate addition and subtraction to length.	
2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	**CC:** 13-6B

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2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	**CC:** 8-6A, 9-6A
H. Work with time and money.	
2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	15-1, 15-2
2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*	5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 10-7
I. Represent and interpret data.	
2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	13-4, 13-5 **CC:** 16-2A
2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems (See Glossary) using information presented in a bar graph.	16-1, 16-2, 16-3, 16-7, 18-9
Geometry **2.G**	
J. Reason with shapes and their attributes.	
2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared directly or visually, not compared by measuring.) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	11-1, 11-2, 11-3, 11-4, 11-8 **CC:** 11-3A

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2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	13-7, 13-8, 19-5 **CC:** 11-5A
2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	12-1, 12-2, 12-3