A Correlation of

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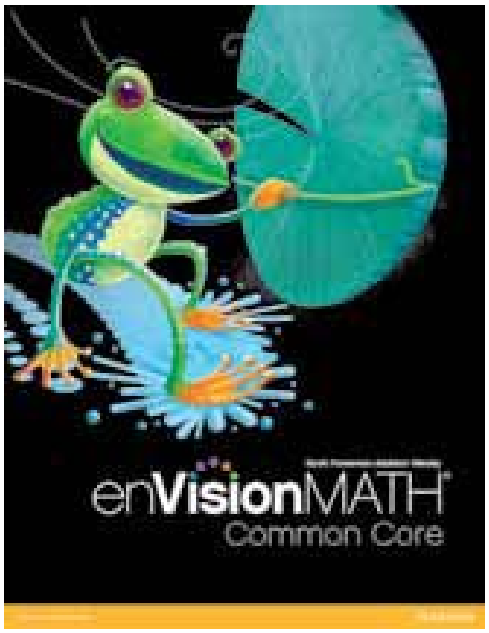

to the

Common Core State Standards for Mathematics

Grade 2

A Correlation of *enVisionMATH* Common Core
to the Common Core State Standards for Mathematics

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Common Core State Standards for Mathematics **Mathematical Practices**	**enVisionMATH *Common Core*** **Grade 2**
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.	***enVisionMATH Common Core*** 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. The problem-solving lessons in Grades K–2 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. **SE / TE:** Topic 1: 6, 10, 18, 22, 26, 27-30; Topic 2: 44, 48, 49, 52, 53, 54, 55, 56, 60, 61-64; Topic 3: 82, 90, 91-94; Topic 4: 104, 105, 113-116; Topic 5: 126, 130, 146, 147-150; Topic 6: 160, 164, 168, 176, 177-180; Topic 7: 190, 194, 202, 203-206; Topic 8: 216, 220, 224, 232, 236, 244, 245-248, 271; Topic 9: 271, 282, 289-290; Topic 10: 304, 308, 312, 320, 324, 328, 329-332; Topic 11: 342, 346, 351, 355, 358, 362, 366, 367, 370, 371-374; Topic 12: 392, 409-412; Topic 13: 422, 423, 430, 434, 435-438; Topic 14: 448, 452, 453, 457-460; Topic 15: 470, 478, 482, 490, 498, 499-502; Topic 16: 516, 517, 520, 528, 529-532 **TE:** Topic 1: 1B, 18A, 27A-30B; Topic 2: 35A, 60A, 60B; Topic 3: 69B; Topic 4: 99B; Topic 5: 130A; Topic 6: 155B; Topic 10: 300A, 304A, 308A; Topic 14: 443A; Topic 15: 486A; Topic 16: 517A, 520B, 529A, 532A, 532B

SE = Student Edition TE = Teacher Edition

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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.	***enVisionMATH Common Core*** 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, students gain experiences with quantitative reasoning as they consider the meaning of different parts of an expression or 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. **SE / TE:** Topic 1: 26; Topic 2: 45; Topic 3: 86; Topic 5: 131, 134, 138; Topic 7: 199; Topic 8: 221, 225, 229, 237; Topic 10: 297, 309; Topic 11: 371; Topic 12: 385, 401; Topic 13: 419, 426; Topic 14: 456; Topic 15: 491 **TE:** Topic 2: 48A, 52A, 56A; Topic 8: 211B; Topic 13: 417A, 434A; Topic 15: 465A

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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 ***enVisionMATH Common Core,*** 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 use reasoning and to justify or explain their solutions. *Journal* activities in Grades K–2 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. **SE / TE:** Topic 5: 144; Topic 6: 157; Topic 10: 325; Topic 11: 339; Topic 12: 389, 397; Topic 13: 427; Topic 15: 483; Topic 16: 524 **TE:** Topic 5: 146A; Topic 9: 253B, 270A, 278A, 282A

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH *Common Core* Grade 2**
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 *enVisionMATH Common Core* 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* 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. **SE / TE:** Topic 1: 10, 14; Topic 2: 61, 62, 63, 64; Topic 3: 78, 90; Topic 7: 187, 195; Topic 8: 217, 245, 247; Topic 9: 258, 259, 263, 274, 279, 282; Topic 10: 308; Topic 12: 404, 407; Topic 13: 426; Topic 14: 460; Topic 15: 494, 502 **TE:** Topic 1: 6A, 14A, 22A; Topic 2: 61A, 64A, 64B; Topic 3: 74A, 82A, 90A, 94A; Topic 4: 99A, 112A; Topic 12: 405A, 408B, Topic 16: 507B, 520A, 543

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH *Common Core* Grade 2**
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 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. **SE / TE:** Topic 1: 3, 7, 11, 15, 16, 17, 18, 19, 23, 27; Topic 2: 37, 41, 57; Topic 3: 71, 75, 79, 82, 83, 86, 87; Topic 4: 101, 104, 108, 109, 112, 113, 115; Topic 5: 123, 127; Topic 6: 161, 169, 172, 173; Topic 7: 191; Topic 8: 213, 233, 236, 241; Topic 9: 255, 262, 267, 270, 275; Topic 10: 300, 301, 328; Topic 11: 343, 347, 350, 354, 359; Topic 12: 393; Topic 13: 431, 432, 433, 434; Topic 15: 471, 479, 487, 499, 502; Topic 16: 509, 512, 517, 518, 519, 520, 521, 525, 526, 527, 528 **TE:** Topic 1: 18A, 18B; Topic 4: 99B; Topic 6: 155B; Topic 7: 185A; Topic 11: 337A, 337B, 366A; Topic 13: 434A, 434B; Topic 14: 443B; Topic 15: 465B; Topic 16: 507A, 517A, 520A, 520B, 525A, 528A, 528B

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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. 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. Students are reminded to use appropriate units of measure in their solutions as well as in labels for diagrams, graphs, and other kinds of displays. **SE / TE:** Topic 1: 6, 14, 22; Topic 2: 37, 40, 61; Topic 3: 74, 94; Topic 4: 112; Topic 5: 134, 142, 149, 150; Topic 6: 165; Topic 7: 198; Topic 8: 216, 224, 228, 244; Topic 9: 258, 266, 274, 278; Topic 10: 304, 312, 317, 321, 324; Topic 11: 339, 340, 341, 342, 363, 364, 365; Topic 14: 445, 448, 449; Topic 15: 474, 475, 479, 494, 495; Topic 16: 525 **TE:** Topic 1: 1A, 1D; Topic 2: 35D, 37A, 61A, 64A, 64B; Topic 3: 69D; Topic 4: 99D; Topic 5: 121D, 126A, 134A; Topic 6: 155D; Topic 7: 185D; Topic 8: 211A, 211D; Topic 9: 253B, 253D; Topic 10: 295D, 320A; Topic 11: 337D, 342A, 342B, 363A, 366A, 366B; Topic 12: 379D; Topic 13: 417D; Topic 14: 443B, 443D; Topic 15: 465D, 470A, 482A, 494A, 498A; Topic 16: 507D, 528A

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH *Common Core* Grade 2**
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 × 5 + 7 × 3, in preparation for learning about the distributive property. In the expression x2 + 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.	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. **SE / TE:** Topic 1: 23, 24, 25, 26, 29; Topic 2: 49, 50, 51, 52; Topic 5: 135, 139, 142, 143; Topic 8: 240; Topic 10: 300, 316; Topic 12: 381, 384, 388, 396, 400, 408, 411; Topic 15: 482; Topic 16: 513, 514, 515, 516 **TE:** Topic 1: 1D, 23A, 26A, 26B; Topic 2: 35B, 35D, 49A, 52A, 52B; Topic 3: 69B, 69D; Topic 4: 99D; Topic 5: 121B, 121D; Topic 6: 155D; Topic 7: 185D; Topic 8: 211B, 211D; Topic 9: 253D; Topic 10: 295A, 295D, 312A; Topic 11: 337B, 337D; Topic 12: 379D, 388A; Topic 13: 417B, 417D; Topic 14: 443D; Topic 15: 465D; Topic 16: 507D, 513A, 516A, 516B

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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 $(x – 1)(x + 1)$, $(x – 1)(x2 + x + 1)$, and $(x – 1)(x3 + x2 + x + 1)$ 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.	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. **SE / TE:** Topic 1: 15, 16, 17, 18; Topic 2: 53, 54, 55, 56; Topic 6: 180; Topic 8: 232; Topic 10: 313, 320, 329-332; Topic 11: 363, 364, 365, 366; Topic 13: 435, 436, 437, 438; Topic 15: 490; Topic 16: 513, 514, 515, 516, 529 **TE:** Topic 1: 15A, 18A, 18B; Topic 2: 35B, 56A, 56B; Topic 7: 185B; Topic 10: 329A, 332A, 332B; Topic 11: 363A, 366A, 366B; Topic 12: 396A; Topic 13: 435A, 438A, 438B; Topic 16: 513A, 516A, 516B, 529A

Common Core State Standards for Mathematics Grade 2	***enVisionMATH Common Core* Grade 2**
Operations and Algebraic Thinking	
Represent and solve problems involving addition and subtraction.	
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. [2.OA.1]	**SE/TE:** Topic 1: 3-6, 7-10, 11-14, 15-18, 19-22, 23-26, 27-30; Topic 2: 37-40, 41-44, 45-48, 49-52, 53-56, 61-64; Topic 3: 71-70, 75-78, 79-82, 83-86, 87-90, 91-94; Topic 4: 113-116; Topic 5: 147-150; Topic 6: 173-176; Topic 7: 199-202; Topic 8: 245-247; Topic 9: 287-290 **TE:** Topic 1: 3A, 6A-6B, 7A, 10A-10B, 11A, 14A-14B, 15A, 18A-18B, 19A, 22A-22B, 23A, 26A-26B, 27A, 30A-30B; Topic 2: 37A, 40A-40B, 41A, 44A-44B, 45A, 48A-48B, 49A, 52A-52B, 53A, 56A-56B, 61A, 64A-64B; Topic 3: 71A, 74A-74B, 75A, 78A-78B, 79A, 82A-82B, 83A, 86A-86B, 87A, 90A-90B, 91A, 94A-94B; Topic 4: 113A, 116A-116B; Topic 5: 147A, 150A-150B; Topic 6: 173A, 176A-176B; Topic 7: 199A, 202A-202B; Topic 8: 245A, 248A-248B; Topic 9: 287A, 290A-290B
Add and subtract within 20.	
2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. [2.OA.2]	**SE/TE:** Topic 2: 37-40, 41-44, 45-48, 57-60; Topic 3: 71-70, 75-78, 79-82, 83-86, 87-90 **TE:** Topic 2: 37A, 40A-40B, 41A, 44A-44B, 45A, 48A-48B, 57A, 60A-60B; Topic 3: 71A, 74A-74B, 75A, 78A-78B, 79A, 82A-82B, 83A, 86A-86B, 87A, 90A-90B
Work with equal groups of objects to gain foundations for multiplication.	
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. [2.OA.3]	**SE/TE:** Topic 5: 143-147, 149, 152 **TE:** Topic 5: 143A, 146A-146B
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. [2.OA.4]	**SE/TE:** Topic 4: 101-104, 105-108, 109-112, 113-116 **TE:** Topic 4: 101A, 104A-104B, 105A, 108A-108B, 109A, 112A-112B, 113A, 116A-116B

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Number and Operations in Base Ten	
Understand place value.	
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: [2.NBT.1]	**SE / TE:** Topic 5: 123-126, 127-130, 151; Topic 10: 297-300, 301-304, 305-308, 333 **TE:** Topic 5: 121A, 121B, 121C, 121D, 123A, 126A-126B, 127A, 130A-130B, Topic 10: 297A, 300A, 300B, 305A, 308A, 308B
a. 100 can be thought of as a bundle of ten tens — called a "hundred." [2.NBT.1.a]	**SE / TE:** Topic 5: 123-126, 151; Topic 10: 297-300, 305-308 **TE:** Topic 5: 123A, 126A-126B, Topic 10: 297A, 300A, 300B, 305A, 308A, 308B
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). [2.NBT.1.b]	**SE / TE:** Topic 10: 297-300, 305-308 **TE:** Topic 10: 297A, 300A, 300B, 305A, 308A, 308B
2. Count within 1000; skip-count by 5s, 10s, and 100s. [2.NBT.2]	**SE / TE:** Topic 5: 135-138; Topic 6: 177-180; Topic 10: 297-300, 313-316, 317-320, 329-332 **TE:** Topic 5: 135A, 138A-138B; Topic 6: 177A, 180A-180B; Topic 10: 297A, 300A-300B, 313A, 316A-316B, 317A, 320A-320B, 329A, 332A-332B
3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. [2.NBT.3]	**SE / TE:** Topic 5: 123-126, 127-130, 151; Topic 10: 301-304, 305-308, 333 **TE:** Topic 5: 123A, 126A-126B, 127A, 130A-130B; Topic 10: 301A, 304A-304B, 305A, 308A-308B
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. [2.NBT.4]	**SE / TE:** Topic 5: 131-134, 154; Topic 10: 321-324, 325-328, 329-332, 335 **TE:** Topic 5: 131A, 134A-134B, Topic 10: 321A, 324A-324B, 325A, 328A-328B, 329A, 332A-332B

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Use place value understanding and properties of operations to add and subtract.	
5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. [2.NBT.5]	**SE / TE:** Topic 1: 23-26; Topic 2: 37-40, 41-44, 45-48, 49-52, 53-56, 57-60; Topic 3: 71-74, 75-78, 79-82, 83-86, 87-90; Topic 5: 139-142, 147-150; Topic 6: 157-160, 161-164, 165-168, 169-172, 173-176; Topic 7: 187-190, 191-194, 195-198, 199-202, 203-206; Topic 8: 213-216, 217-220, 221-224, 226-228, 229-232, 237-240, 241-244, 245-248; Topic 9: 259-262, 263-266, 267-270, 271-274, 275-278, 279-282, 283-286, 287-290; Topic 14: 445-448, 449-452, 453-456 **TE:** Topic 1: 23A, 26A-26B, Topic 2: 37A, 40A-40B, 41A, 44A-44B, 45A, 48A-48B, 49A, 52A-52B, 53A, 56A-56B, 57A, 60A-60B, Topic 3: 71A, 74A-74B, 75A, 78A-78B, 79A, 82A-82B, 83A, 86A-86B, 87A, 90A-90B; Topic 5: 139A, 142A-142B, 147A, 150A-150B; Topic 6: 157A, 160A-160B, 161A, 164A-164B, 165A, 168A-168B, 169A, 172A-172B, 173A, 176A-176B; Topic 7: 187A, 190A-190B, 191A, 194A-194B, 195A, 198A-198B, 199A, 202A-202B, 203A, 206A-206B; Topic 8: 213A, 216A-216B, 217A, 220A-220B, 221A, 224A-224B, 225A, 228A-228B, 229A, 232A-232B, 233A, 236A-236B, 2237A, 240A-240B, 241A, 244A-244B; Topic 9: 259A, 262A-262B, 263A, 266A-266B, 267A, 270A-270B, 271A, 274A-274B, 275A, 278A-278B, 279A, 282A-282B, 283A, 286A-286B, 2867A, 290A-290B; Topic 14: 445A, 448A-448B, 449A, 452A-452B, 453A, 456A-456B

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6. Add up to four two-digit numbers using strategies based on place value and properties of operations. [2.NBT.6]	**SE / TE:** Topic 5: 139-142; Topic 8: 226-228, 229-232, 233-236, 237-240, 241-244; Topic 9: 275-278, 283-286 **TE:** Topic 5: 139A, 142A-142B: Topic 8: 225A, 228A-228B, 229A, 232A-232B, 233A, 236A-236B, 237A, 240A-240B, 241A, 244A-244B; Topic 9: 275A, 278A-278B, 283A, 286A-286B
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. [2.NBT.7]	**SE / TE:** Topic 7: 203-206; Topic 11: 339-342, 343-346, 347-350, 351-354, 355-358, 359-362, 363-366, 367-370, 371-374 **TE:** Topic 7: 2230A, 206A-206B; Topic 11: 339A, 342A-342B, 343A, 346A-346B, 347A, 350A-350B, 351A, 354A-354B, 355A, 358A-358B, 359A, 362A-362B, 363A, 366A-366B, 67A, 370A-370B, 371A, 374A-374B
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. [2.NBT.8]	**SE / TE:** Topic 6: 157-160, 161-164, 165-168, 173-176; Topic 7: 187-190, 199-202, Topic 10: 309-312, 313-316; Topic 11: 339-342, 343-346, 359-362 **TE:** Topic 6: 157A, 160A-160B, 161A, 164A-164B, 165A, 168A-168B, 173A, 176A-176B; Topic 7: 187A, 190A-190B, 199A, 202A-202B; Topic 10: 309A, 312A-312B, 313A, 316A-316B; Topic 11: 339A, 342A-342B, 343A, 346A-346B, 359A, 362A-362B

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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.NBT.9]	**SE / TE:** Topic 2: 37-40, 41-44, 45-48, 49-52, 53-56, 57-60; Topic 3: 71-74, 75-78, 79-82, 83-86; Topic 5: 143-146; Topic 6: 157-160, 161-164, 165-168, 169-172, 173-176; Topic 7: 187-190, 191-194, 195-198, 199-202; Topic 8: 213-216, 217-220, 221-224, 226-228, 229-232, 233-236, 237-240, 241-244; Topic 9: 259-262, 263-266, 267-270, 271-274, 275-278, 279-282, 283-286; Topic 11: 339-342, 343-346, 347-350, 351-354, 359-362, 363-366, 367-370; Topic 14: 445-448, 449-452, 453- 456 **TE:** Topic 2: 37A, 40A-40B, 41A, 44A-44B, 45A, 48A-48B, 49A, 52A-52B, 53A, 56A-56B, 57A, 60A-60B; Topic 3: 71A, 74A-74B, 75A, 78A-78B, 79A, 82A-82B, 83A, 86A-86B; Topic 5: 143A, 146A-146B; Topic 6: 157A, 160A-160B, 161A, 164A-164B, 165A, 168A-168B, 169A, 172A-172B, 173A, 176A-176B; Topic 7: 187A, 190A-190B, 191A, 194A-194B, 195A, 198A-198B, 199A, 202A-202B; Topic 8: 213A, 216A-216B, 217A, 220A-220B, 221A, 224A-224B, 225A, 228A-228B, 229A, 232A-232B, 233A, 236A-236B, 237A, 240A-240B, 241A, 244A-244B; Topic 9: 259A, 262A-262B, 263A, 266A-266B, 267A, 270B, 271A, 274A-274B, 275A, 278A-278B, 279A, 282A-282B, 283A, 286A-286B; Topic 11: 339A, 342A-342B, 343A, 346A-346B, 347A, 350A-350B, 351A, 354A-354B, 359A, 362A-362B, 363A, 366A-366B, 367A, 370A-370B; Topic 14: 445A, 448A-448B, 449A, 452A-452B, 453A, 456A-456B
Measurement and Data	
Measure and estimate lengths in standard units.	
1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. [2.MD.1]	**SE / TE:** Topic 15: 467-470, 471-474, 475-478, 479-482, 483-486, 499-502 **TE:** Topic 15: 467A, 470A, 470B, 471A, 474A-474B, 475A, 478A-478B, 479A, 482A-482B, 483A, 486A-486B, 499A, 502A-502B
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. [2.MD.2]	**SE / TE:** Topic 15: 487-490 **TE:** Topic 15: 487A, 490A-490B

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3. Estimate lengths using units of inches, feet, centimeters, and meters. [2.MD.3]	**SE / TE:** Topic 15: 471-474, 475-478, 479-482, 483-486, 499-502 **TE:** Topic 15: 471A, 474A-474B, 475A, 478A-478B, 479A, 482A-482B, 483A, 486A-486B, 499A, 502A-502B
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. [2.MD.4]	**SE / TE:** Topic 15: 495-498, 504 **TE:** Topic 15: 495A, 498A-498B
Relate addition and subtraction to length.	
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. [2.MD.5]	**SE / TE:** Topic 15: 491-494, 499-502 **TE:** Topic 15: 491A, 494A-494B, 499A, 502A-502B
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. [2.MD.6]	**SE / TE:** Topic 8: 233-236, 250; Topic 9: 275-278, 292 **TE:** Topic 8: 233A, 236A-236B; Topic 9: 275A, 278A-278B
Work with time and money.	
7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. [2.MD.7]	**SE / TE:** Topic 16: 509-512, 513-516, 533 **TE:** Topic 16: 509A, 512A-512B, 513A, 516A-516B
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. [2.MD.8]	**SE / TE:** Topic 13: 419-422, 423-426, 427-430, 431-434, 435-438; Topic 14: 445-448, 449-452, 453-456, 457-460 **TE:** Topic 13: 419A, 422A-422B, 423a, 426A-426B, 427A, 430A-430B, 431A, 434A-434B, 435A, 438A-438B; Topic 14: 4454A, 448A-448B, 449A, 452A-452B, 453A, 456A-456B, 457A, 460A-460B

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Represent and interpret data.	
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. [2.MD.9]	**SE / TE:** Topic 16: 521-524, 534 **TE:** Topic 16: 521, 524A-524B
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 using information presented in a bar graph. [2.MD.10]	**SE / TE:** Topic 16: 517-520, 525-528, 529-532, 534 **TE:** Topic 16: 517A, 520A-520B, 525A, 528A-528B, 529A, 532A-532B
Geometry	
Reason with shapes and their attributes.	
1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. *(Sizes are compared directly or visually, not compared by measuring.)* [2.G.1]	**SE / TE:** Topic 16: 521-524, 534 **TE:** Topic 16: 521, 524A-524B
2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. [2.G.2]	**SE / TE:** Topic 16: 517-520, 525-528, 529-532, 534 **TE:** Topic 16: 517A, 520A-520B, 525A, 528A-528B, 529A, 532A-532B
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. [2.G.3]	**SE / TE:** Topic 16: 521-524, 534 **TE:** Topic 16: 521, 524A-524B