Correlation to the Common Core State Standards

Saxon Math Intermediate 4

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Grade 4

COMMON CORE

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Saxon Math Intermediate 4 ©2012 correlated to the
Common Core State Standards for Mathematics, Grade 4

Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations	Description
Standards for Mathematical Practice	**1.**	Make sense of problems and persevere in solving them.	This standard is covered throughout the program; the following are examples. **<u>INSTRUCTION:</u>** **New Concept**: Problem Solving Overview, pages 1–6, Lesson 11, pp. 67-69; Lesson 25, pp. 152-155; Lesson 31, pp. 193-195; Lesson 49, pp. 313-314; Lesson 52, pp. 332-334, Ex. 3, 4, 5; Lesson 57, pp. 365-366; Lesson 60, pp. 383-384; Lesson 70, pp. 446-448; Lesson 72, pp. 461-463; Lesson 83, pp. 532-535; Lesson 88, pp. 558-559; Lesson 94, pp. 595-598; Lesson 95, pp. 602-604; Lesson 96, pp. 607-609 **Problem Solving (Discussions)**: Introductory Strategy Lessons 1, 3, 9, 15, 20, 28, 46 **Investigation(s):** Investigation 8, pp. 514-518 **<u>MAINTENANCE:</u>** **Problem Solving:** Lessons 6, 15, 17, 21, 26, 29, 37, 38, 49, 56, 65, 69, 71, 73, 77, 83, 87, 95, 99, 104, 119 **Written Practice:** Lesson 14 (#2), Lesson 28 (#2, #28), Lesson 46 (#1), Lesson 67 (#1, #15, #16), Lesson 88 (#1, #8)	Problem solving is integrated into the *Saxon Math* program every day. Focusing on a four-step problem solving process, which guides students to understand, plan, solve and check, *Saxon Math* teaches students a consistent process for evaluating different problem solving situations and persevering in solving them. The four steps closely mirror the different aspects of this Standard for Mathematical Practice, encouraging students to understand the problem and make a plan before solving. Students also end by checking their solutions, providing opportunities to ask, "Does this make sense?" and re-direct if necessary. In *Intermediate 4*, the first page of the Student Edition outlines the four-step problem solving process, emphasizing the importance of making sense of problems and persevering in solving them. Students then go on to use the four-step problem solving process in the Power Up section of every lesson. Additional opportunities occur in the cumulative written practice every day. Lesson reference numbers allow students to go back to the lesson where the concept was instructed to aid them in solving the problem. There are additional Investigations and Performance Tasks for focused activities and applications of complex problems. Many of these are hands-on and explorative in nature. The Teacher's Manual provides support with questioning prompts, math conversations, and checks for understanding.

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Standards for Mathematical Practice	**2.**	Reason abstractly and quantitatively.	This standard is covered throughout the program; the following are examples. **<u>INSTRUCTION:</u>** **New Concept**: Lessons 1, pp. 8-12; Lesson 11, pp. 67-69; Lesson 25, pp. 152-155; Lesson 31, pp. 193-195; Lesson 32, pp. 200-202; Lesson 49, pp. 313-314; Lesson 52, pp. 332-333; Lesson 57, pp. 365-366; Lesson 58, pp. 371-373; Lesson 60, pp. 383-384; Lesson 70, pp. 446-448; Lesson 88, pp. 558-559; Lesson 94, pp. 595-598; Lesson 95, pp. 602-604 **Problem Solving (Discussions)**: Introductory Strategy Lessons 15, 28 **Investigation(s):** Investigation 2, pp. 122-126 **<u>MAINTENANCE:</u>** **Problem Solving:** Lessons 44, 65, 69, 71, 73, 78, 87, 95 **Written Practice:** Lesson 46 (#1, #2, #29), Lesson 77 (#11, #13, #17), Lesson 78 (#1, #2, #14), Lesson 84 (#2, #3, #9), Lesson 92 (#4, #12, #22), Lesson 104 (#2, #3), Lesson 106 (#18, #19, #20) **Performance Task(s):** 3 **Test Day Activity:** 3	The goal of *Saxon Math* is to produce mathematically proficient students – including fluency with computational and conceptual understanding. The distributed nature of *Saxon Math* lends itself naturally to developing abstract and quantitative reasoning. Because students are exposed to different concepts at the same time through incremental instruction and mixed practice, review, and assessment, they learn the importance of making sense of quantities and their relationships and of carefully considering the units involved. Problems do not focus simply on one concept, but rather may involve multiple concepts just as they would in real-world situations. Therefore, it is essential that students are able to make connections, think about what the quantities actually mean in a specific context, and solve appropriately. For example, on page 3 of the *Intermediate 4* Performance Tasks, students must consider the relationships between quantities and coins in order to solve the problem and consider the units involved to effectively explain their answers.

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Standards for Mathematical Practice	**3.**	Construct viable arguments and critique the reasoning of others.	This standard is covered throughout the program; the following are examples. **INSTRUCTION:** **New Concept**: Lesson 10, pp. 55-57; Lesson 13, pp. 78-79; Lesson 15, pp. 89-91; Lesson 22, pp. 134-137; Lesson 78, pp. 496-498; Lesson 83, pp. 532-535; Lesson 93, pp. 592-593 **Investigation(s):** Investigate Further, p. 66; Investigate Further, p. 191 **MAINTENANCE:** **Problem Solving:** Lessons 20, 48, 102 **Written Practice:** Lesson 15 (#1, #3, #5), Lesson 67 **Performance Task(s):** 5	*Saxon Math* is based on the belief that people learn by doing. Students learn mathematics not only by watching or listening to others, but by communicating and solving the problems themselves and with their classmates. *Saxon Math's* incremental and distributed structure enables students to view the big picture of mathematics and therefore make viable arguments between and among all of the math strands. For example, on page 13 of the *Intermediate 4* Performance Tasks, students are presented with a problem that asks them to consider two allowance plans that Bob and Jim can select. Students are told that Bob quickly chooses Plan A, but that Jim would like their advice on which plan to choose and why. This problem offers excellent opportunities for students to construct viable arguments and critique the reasoning of others.

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Standards for Mathematical Practice	**4.**	Model with mathematics.	This standard is covered throughout the program; the following are examples. **<u>INSTRUCTION:</u>** **New Concept**: Lesson 1, pp. 8-12; Lesson 9, pp. 51-52; Lesson 11, pp. 67-69; Lesson 13, pp. 78-79; Lesson 14, pp. 83-85, Ex. 1, 2; Lesson 15, pp. 89-91; Lesson 25, pp. 152-155; Lesson 26, pp. 158-159; Lesson 31, pp. 193-195; Lesson 38, pp. 238-239; Lesson 40, pp. 250-252; Lesson 49, pp. 313-314; Lesson 52, pp. 332-334, Ex. 3, 4, 5; Lesson 57, pp. 365-366; Lesson 60, pp. 383-384; Lesson 70, pp. 446-448; Lesson 95, pp. 602-604; Lesson 106, pp. 671-672; Lesson 108, pp. 680-684 **Problem Solving (Discussions)**: Introductory Strategy Lessons 3, 9 **Investigation(s):** Investigation 2, pp. 122-126; Investigation 3, pp. 185-191; Investigation 4, pp. 260-262; Investigation 6, pp. 387-393; Investigation 7, pp. 451-454; Investigation 8, pp. 514-518; Investigation 11, pp. 699-703 **<u>MAINTENANCE:</u>** **Problem Solving:** Lessons 4, 5, 10, 16, 32, 34, 36, 39, 58, 70, 82 **Written Practice:** Lesson 25 (#15, #23, #28), Lesson 65 (#2, #4, #15), Lesson 68 (#1, #12, #29), Lesson 70 (#1, #4, #16), Lesson 84 (#2, #3, #9), Lesson 92 (#9, #12, #16), Lesson 102 (#4, #18, #29), Lesson 104 (#1, #11, #27)	Students use many different types of models throughout *Saxon Math* to analyze mathematical relationships and solve problems. Models serve as visual aids to help make sense of situations so students truly understand the problem at hand and both how and why their solutions work. For example, on page 55B of Teacher's Manual Volume 1, teachers help guide students through a problem that involves array models to visualize carrots planted in a garden.

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Standards for Mathematical Practice	**5.**	Use appropriate tools strategically.	This standard is covered throughout the program; the following are examples. **INSTRUCTION:** **New Concept**: Lesson 18, pp. 104-107; Lesson 21, pp. 127-130; Lesson 39, pp. 244-246; Lesson 46, pp. 295-298; Lesson 51, pp. 327-328, Ex. 1, 2; Lesson 55, pp. 351-355; Lesson 69, pp. 440-443; Lesson 77, pp. 490-493; Lesson 79, pp. 502-505; Lesson 80, pp. 510-512; Lesson 81, pp. 520-522; Lesson 101, pp. 640-644; Lesson 102, pp. 649-651; Lesson 103, pp. 654-657; Lesson 104, pp. 660-662 **Problem Solving (Discussions)**: Introductory Strategy Lessons 3, 9 **Investigation(s):** Investigation 2, pp. 122-126; Investigate Further, p. 453 **MAINTENANCE:** **Problem Solving:** Lessons 44, 77, 82, 88, 91 **Calculator Activities:** Lessons 2, 22, 46, 57, 87, 91, 112 **Test Day Activity:** 2	*Saxon Math* provides and supports grade level appropriate tools for instruction and problem solving. This begins with concrete models at the primary levels and moves to more sophisticated tools like geometry software at the secondary levels. Saxon offers instruction and guidance for appropriate usage throughout the program. For example, on page 34 of the *Intermediate 4* Instructional Masters, students are asked to consider each question and select the most appropriate tool – mental math, a calculator or pencil and paper – to solve. Students then explain why they selected that tool, reinforcing the importance of thinking strategically.

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Standards for Mathematical Practice	**6.**	Attend to precision.	This standard is covered throughout the program; the following are examples. **INSTRUCTION:** **New Concept**: Lesson 19, pp. 110-113; Lesson 37, pp. 234-235; Lesson 39, pp. 244-246; Lesson 45, pp. 288-291; Lesson 50, pp. 318-319; Lesson 62, pp. 400-402; Lesson 69, pp. 440-443; Lesson 75, pp. 478-481; Lesson 91, pp. 579-581; Lesson 101, pp. 640-644; Lesson 102, pp. 649-651 **Investigation(s):** Investigation 1, pp. 60-66; Investigation 2, pp. 122-126; Investigation 3, pp. 185-191; Investigation 11, pp. 699-703 **MAINTENANCE:** **Problem Solving:** Lessons 42, 64, 90, 104 **Written Practice:** Lesson 79 (#16, #22, #28), Lesson 84 (#13, #15), Lesson 96 (#25), Lesson 102 (#2, #9, #29), Lesson 108 (#21, #25, #27)	Saxon students are encouraged to attend to precision throughout the program, both directly in their student materials and indirectly through teacher tips in the Teacher's Edition. Additionally, because practice, review and assessment are mixed, it is especially important that students precisely identify units and symbols to accurately assess how to solve the problem correctly. Not all questions will cover the same concept, so students learn to look carefully at each situation and attend to precision in their answers. For example, on page 269B of the Teacher's Manual Volume 1, teachers guide students through the four-step problem solving process to answer a question about the length of a pencil. Students are prompted to consider what the tick marks on the yardstick stand for so that they can precisely calculate the correct length. They then must ensure the use the correct units when providing their final answer.

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Standards for Mathematical Practice	**7.**	Look for and make use of structure.	This standard is covered throughout the program; the following are examples. **<u>INSTRUCTION:</u>** **New Concept:** Lesson 3, pp. ; Lesson 9, pp. 51-52; Lesson 13, pp. 78-79; Lesson 28, pp. 169-171; Lesson 38, pp. 238-239; Lesson 45, pp. 288-291; Lesson 52, pp. 332-334, Ex. 3, 4, 5; Lesson 57, pp. 365-366; Lesson 60, pp. 383-384; Lesson 62, pp. 400-402; Lesson 63, pp. 405-408; Lesson 65, pp. 417-421; Lesson 78, pp. 496-498; Lesson 87, pp. 553-554; Lesson 94 pp. 597-598, Ex. 5; Lesson 108, pp. 680-684; Lesson 110, pp. 694-695 **Problem Solving (Discussions)**: Introductory Strategy Lessons 3, 8, 20, 46 **Investigation(s):** Investigation 1, pp. 60-66; Investigation 3, pp. 185-191 **<u>MAINTENANCE:</u>** **Problem Solving:** Lessons 20, 25, 50, 55 **Written Practice:** Lessons 28, 46 **Test Day Activity:** 4	*Saxon Math* emphasizes structure throughout the program, explicitly teaching number properties, including the communicative, associative and distributive properties. A strong focus on number properties also prepares students to utilize structure in problem-solving situations. Because the fundamentals of numbers and operations are highlighted in every lesson through mixed review, students develop a strong sense of mental math and comfort composing and decomposing numbers. For example, on page 332 of the Student Edition, a Thinking Skill asks students to analyze why 5,000 is equal to 499 tens plus 10 ones. Students use an understanding of place value and the structure of the base ten system to explain their reasoning.

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Standards for Mathematical Practice	**8.**	Look for and express regularity in repeated reasoning.	This standard is covered throughout the program; the following are examples. **INSTRUCTION:** **New Concept:** Lesson 20, pp. 117-119; Lesson 27, pp. 163-165, Ex. 1; Lesson 29, pp. 176-178; Lesson 42, pp. 270-273; Lesson 44, pp. 283-284; Lesson 49, pp. 313-314; Lesson 52, pp. 332-334, Ex. 3, 4, 5; Lesson 55, pp. 351-355; Lesson 57, pp. 365-366; Lesson 58, pp. ; Lesson 59, pp. 377-379; Lesson 60, pp. 383-384; Lesson 70, pp. 446-448; Lesson 67, pp. 429-431; Lesson 85, pp. 544-545; Lesson 86, pp. 548-549; Lesson 90, pp. 568-570; Lesson 95, pp. 602-604; Lesson 109, pp. 688-690; Lesson 112, pp. 710-712; Lesson 115, pp. 725-726; Lesson 116, pp. 730-731 **Problem Solving (Discussions)**: Introductory Strategy Lessons 13, 20, 28 **Investigation(s):** Investigation 3, pp. 185-191 **MAINTENANCE:** **Problem Solving:** Lessons 28, 31, 100	Regularity and repeated reasoning are explicitly identified in the *Saxon Math* program to ensure students understand their importance and how they can be used to solve problems. This includes lessons that clearly present multiplication as repeated addition and division as repeated subtraction. These and other repeated reasoning scenarios allow students to make better sense of number and operations. Lessons draw out and explain how and why repeated reasoning works. Subsequent practice helps to solidify that understanding. For example, on page 544 of the Student Edition, students learn how multiplying a whole number by a power of ten always corresponds to adding a specific number of zeros to the end of that number. This repeated reasoning can then be used to make multiplication easier and quicker for students.

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.OA Operations and Algebraic Thinking		**Use the four operations with whole numbers to solve problems.**	*Saxon Intermediate 4* provides a solid development of all four operations through facts, word problems, as well as non-routine problem solving experiences. Every day, students have the opportunity to learn, practice and problem solve using the all four operations to develop a strong mastery of these concepts. The idea of using multiplication to demonstrate multiplicative comparisons is established in the equal group lessons with visual illustrations building to formal equation development. The equal group lessons provide students with strong mathematical links between operations as well as foundational pieces for later division experiences. The concept of integrated, incremental development found in *Saxon Math* allows students to understand word problems that build to multistep levels across the year providing deep mastery for each operation. Linking all four operations, students solve various levels of problems using equations, which include a letter (variable) for the unknown quantity, as well as determining the reasonableness of estimation problems.
	4.OA.1	Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 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.	**<u>INSTRUCTION:</u>** **New Concept**: *Lesson 27, pp. 163-165, Ex. 1; Lesson 28, pp. 169-171; Lesson 29, pp. 176-178; Lesson 38, T.E. Extend the Example, p. 239; Lesson 46, pp. 295-298; Lesson 47, pp. 302-304; Lesson 49, pp. 313-314; Lesson 52, pp. 332-334* **Standards Success Activity:** Activity 3 **<u>MAINTENANCE:</u>** **Written Practice:** *Lesson 47 (#18, #19, #20), Lesson 48 (#22, #23, #24), Lesson 49 (#4, #7, #11), Lesson 50 (#4, #10, #14), Lesson 51 (#1, #4, #28), Lesson 52 (#6, #29), Lesson 53 (#12, #13), Lesson 56 (#4, #10, #18), Lesson 57 (#3, #11, #27), Lesson 58 (#2, #3, #316), Lesson 60 (#2, #27), Lesson 61 (#2, #25, #29), Lesson 62 (#1, #3, #15), Lesson 63 (#2, #14, #26)* **Learning Stations:** *Lessons 46, 47*

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4.OA Operations and Algebraic Thinking	**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.[1] [[1] See Glossary, Table 2.]	**INSTRUCTION:** **New Concept**: *Lesson 41, pp. 265-266, Ex. 3; Lesson 46, pp. 295-298; Lesson 47, pp. 302-304; Lesson 49, pp. 313-314; Lesson 52, pp. 332-334, Ex. 3, 4, 5; Lesson 53, pp. 338-341; Lesson 60, pp. 383-384; Lesson 64, pp. 412-414; Lesson 68, pp. 435-437* **Standards Success Activity:** Activity 3 **MAINTENANCE:** **Problem Solving:** Lessons 28, 30, 104 **Written Practice:** *Lesson 41 (#7, #18, #19), Lesson 42 (#18, #19), Lesson 43 (#1, #3, #17), Lesson 44 (#5, #10, #13), Lesson 45 (#4, #11, #16), Lesson 49 (#4, #11, #15), Lesson 51 (#1, #4, #14), Lesson 52 (#13, #19, #29), Lesson 54 (#14, #21, #22), Lesson 57 (#11, #18, #21), Lesson 60 (#8, #27), Lesson 62 (#1, #20, #21), Lesson 64 (#2, #3, #5), Lesson 66 (#1, #9, #22), Lesson 67 (#1, #16, #21), Lesson 68 (#12, #21, #25), Lesson 69 (#2, #8, #18), Lesson 70 (#4, #11, #26), Lesson 72 (#2, #3, #26), Lesson 73 (#3, #12, #24), Lesson 74 (#2, #3, #27), Lesson 76 (#2, #4, #14), Lesson 77 (#13, #11, #13), Lesson 78 (#1, #25, #26), Lesson 79 (#7, #19), Lesson 80 (#4, #12, #13), Lesson 81 (#14, #26, #27), Lesson 82 (#2, #22), Lesson 85 (#2, #19), Lesson 86 (#13, #25, #28),* Lesson 87 (#22), *Lesson 89 (#3, #12, #21), Lesson 92 (#16, #24, #25), Lesson 93 (#2, #26, #27), Lesson 94 (#3, #23, #24), Lesson 95 (#3, #20, #24), Lesson 96 (#12, #18), Lesson 97 (#20), Lesson 100 (#22, #25), Lesson 105 (#21, #24),* Lesson 107 (#25), *Lesson 108 (#22), Lesson 109 (#24)* **Learning Stations:** Lesson 60

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.OA Operations and Algebraic Thinking	**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.	**INSTRUCTION:** **New Concept**: *Lesson 2, pp. 14-15; Lesson 11, pp. 67-69; Lesson 12, pp. 72-74; Lesson 24, pp. 148-149;* Lesson 59, pp. 377-379; Lesson 60, pp. 383-384; *Lesson 61, p. 396, Ex. 4;* Lesson 64, pp. 412-414; Lesson 65, pp. 417-421; Lesson 80, pp. 510-512; Lesson 83, pp. 532-535; Lesson 88, pp. 558-559; Lesson 94, pp. 595-598 **Problem Solving (Discussions)**: Introductory Strategy Lessons 28, 57 **MAINTENANCE:** **Problem Solving:** Lessons 71, 77, 80, 83, 99, 101, 104, 114 **Written Practice:** Lesson 61 (#4, #6, #10), Lesson 62 (#5, #7, #16), Lesson 63 (#5, #12, #14), Lesson 64 (#9, #12, #28), Lesson 65 (#5, #7, #12), Lesson 66 (#2, #8, #22), Lesson 68 (#8, #12, #23), Lesson 69 (#9, #11, #27), Lesson 71 (#26, #27), Lesson 73 (#14, #24, #26), Lesson 75 (#6, #22, #26), Lesson 76 (#3, #25, #27), Lesson 77 (#4, #11, #22), Lesson 78 (#4, #9, #27), Lesson 80 (#18, #24, #28), Lesson 81 (#20, #21, #22), Lesson 82 (#6, #24), Lesson 83 (#10, #17, #23), Lesson 84 (#4, #14, #20), Lesson 85 (#4, #21, #22), Lesson 86 (#23, #27), Lesson 87 (#3, #22), Lesson 88 (#19, #20), Lesson 89 (#1, #20), Lesson 90 (#13, #21), Lesson 91 (#5, #22), Lesson 93 (#25, #27), Lesson 94 (#4, #15), Lesson 95 (#19, #21), Lesson 96 (#12, #27), Lesson 97 (#22, #29), Lesson 98 (#14, #21), Lesson 99 (#8, #24), Lesson 100 (#20, #21), Lesson 101 (#11, #20), Lesson 102 (#22, #23), Lesson 103 (#1, #20), Lesson 104 (#25, #27), Lesson 105 (#8, #19), Lesson 106 (#13, #29), Lesson 108 (#8, #24), Lesson 109 (#23, #30), Lesson 110 (#10, #11), Lesson 111 (#24), Lesson 112 (#1), Lesson 113 (#1, #12), Lesson 114 (#3, #24), Lesson 115 (#22, #23), Lesson 116 (#24, #), Lesson 118 (#10, #21), Lesson 120 (#4, #23) **Learning Stations:** Lessons 61, 94

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4.OA Operations and Algebraic Thinking		**Gain familiarity with factors and multiples.**	The strength of Saxon is the vertical alignment of the elementary grades to develop a deep, rich understanding. The concept of multiples and factors begin in the primary grades' Math Meetings, where students use calendars and skip counting to begin to develop this concept. The idea of finding factors for a whole number is explored using a multiplication table to locate and determine factor pairs for various numbers as well as identify the multiples of the factors. An activity of building arrays and grids using counters is a hands-on, visual way to develop the concept. Once the mathematical concept is understood, the appropriate label of prime and composite is assigned with definitions given.
	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.	**INSTRUCTION:** **New Concept**: Lesson 28, pp. 169-171; Lesson 41, pp. 265-266, Ex. 3; Lesson 55, pp. 351-355 **MAINTENANCE:** **Power Up:** Lessons 10, 13, 14, 16, 18, 19, 21, 23 **Written Practice:** Lesson 55 (#6, #7, #29), Lesson 56 (#21, #24, #25), Lesson 57 (#7, #8, #9), Lesson 58 (#6, #24, #25), Lesson 59 (#6, #29), Lesson 60 (#8), Lesson 61 (#7), Lesson 62 (#9), Lesson 63 (#9, #28), Lesson 64 (#3, #16, #30), Lesson 67 (#4), Lesson 69 (#12, #18), Lesson 70 (#26, #29), Lesson 71 (#9, #27), Lesson 72 (#11, #26), Lesson 73 (#8, #24), Lesson 74 (#27, #30), Lesson 78 (#25, #26, #30), Lesson 79 (#19), Lesson 84 (#6, #24), Lesson 89 (#6, #21), Lesson 111 (#12, #13, #23), Lesson 112 (#6) **Learning Stations:** Lesson 55
		Generate and analyze patterns.	The concept of patterns starts in the primary grades in Saxon Math. The Math Meeting presents visual patterns daily. Here a strong link is developed with number patterns where a rule can be applied. Saxon uses counting sequences not only to determine the rule, but to also allow the student to extend and explain the thinking behind the rule and the features of the pattern. This skill later builds to the patterns in the function table as well as algebraic patterns. Shape or growing patterns are a key element on the non-routine problem solving lessons to show how patterns increase and decrease in size.

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4.OA Operations and Algebraic Thinking	**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.	**INSTRUCTION:** **New Concept**: Problem Solving Overview, pages 2-3, Lesson 3, pp. 19-21; *Lesson 28, pp. 169-171;* Lesson 32, pp. 200-202; Lesson 38, pp. 238-239; Lesson 57, pp. 365-366; Lesson 94 pp. 597-598, Ex. 4 **Problem Solving (Discussions)**: Introductory Strategy Lesson 8 **Investigation:** *Investigation 1, pp. 60-66;* Investigation 3, pp. 185-191; *Investigation 6 (see "Investigate Further"), p. 393;* Investigation 11 (see "Investigate Further"), p. 702 **MAINTENANCE:** **Problem Solving:** Lessons 11, 12, 22, 24, 25, 30, 31, 33, 35, 41, 62, 92, 94, 105, 108, 112, 113, 115, 117, 120 **Written Practice:** Lesson 3 (#3, #4, #7), Lesson 4 (#3, #10, #11), Lesson 5 (#11, #12, #13), Lesson 6 (#16, #17, #18), Lesson 7 (#15, #16, #17), Lesson 8 (#19, #20, #27), Lesson 9 (#19, #20, #27), Lesson 10 (#19, #20), Lesson 11 (#22), Lesson 12 (#20, #21, #22), Lesson 13 (#25), Lesson 14 (#25), Lesson 15 (#24), Lesson 16 (#7, #25), Lesson 17 (#23, #24), Lesson 18 (#5), Lesson 19 (#23, #25, #29), Lesson 21 (#25), Lesson 22 (#4, #5, #11), Lesson 23 (#4), Lesson 24 (#4, #5), Lesson 25 (#5), Lesson 27 (#4, #5), Lesson 28 (#4, #5, #6), Lesson 29 (#4, #5, #10), Lesson 32 (#4, #7, #16), Lesson 33 (#7, #13, #29), Lesson 34 (#13, #14, #28), Lesson 35 (#13, #24, #29), Lesson 36 (#14, #27, #28), Lesson 38 (#13, #14, #28), Lesson 39 (#13, #14, #15), Lesson 41 (#4, #16, #24), Lesson 42 (#1, #5, #11), Lesson 54 (#9, #29) **Learning Stations:** Lesson 3

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten[2]		**Generalize place value understanding for multi-digit whole numbers.** **[**[2] Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.]	With the concept of place value developed across the year through experiences with concrete objects, base ten grids and place value charts, students can see that whole numbers and their place value can be determined using multiplication and division. Money provides a strong visual for students to transfer and link place value to a unit based on ten. Students explore multi-digit whole numbers using money as a visual to support base-ten place value as well as to help assign names to the proper place. Once students master the names and places, the expanded form can be added incrementally. *Saxon Math* provides students the time to explore, practice and master place value concepts before adding comparison aspects to two multi-digit numbers. Number lines are used to support the efforts of comparing two numbers and add a visual example for the students to use. The students begin to master comparing numbers based on their place value as well as their development of using the comparison symbol. Saxon develops place value for an exact amount as a well as using place value to estimate. The process of using place value to determine an estimation involves rounding a number by looking at the nearest one, ten, hundred, thousand, and then looking at the nearest multiple of ten. The number line provides a visual image to see the closest multiple assigned. Moving to the place value chart as an additional support is an alternate method for students to use. With an integrated approach, students can explore a variety of methods to better understand, practice and master place value in a base ten system.

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten	**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.	**INSTRUCTION:** **New Concept**: Lesson 4, pp. 24-26; Lesson 13, pp. 78-79; Lesson 33, pp. 206-209; Lesson 34, pp. 212-215; Lesson 50, pp. 318-319; Lesson 67, pp. 429-431; Lesson 85, pp. 544-545; Lesson 86, pp. 548-549; Lesson 105, pp. 666-667 **MAINTENANCE:** **Written Practice:** Lesson 4 (#16, #17, #21), Lesson 5 (#16, #18, #19), Lesson 6 (#20, #21), Lesson 7 (#19), Lesson 9 (#21), Lesson 12 (#6), Lesson 13 (#9, #10, #11), Lesson 14 (#9, #10, #11), Lesson 15 (#1, #9, #10), Lesson 16 (#2, #9, #10), Lesson 17 (#2, #8, #9), Lesson 18 (#2, #4, #9), Lesson 20 (#2, #9, #10), Lesson 21 (#1, #3, #8), Lesson 22 (#8), Lesson 24 (#15), Lesson 25 (#15), Lesson 26 (#3, #4, #15), Lesson 28 (#14, #26), Lesson 33 (#18, #26, #28), Lesson 34 (#4, #10, #15), Lesson 35 (#23, #27, #28), Lesson 36 (#6, #7, #19), Lesson 37 (#3, #9, #28), Lesson 38 (#2, #3, #26), Lesson 39 (#2, #3, #19), Lesson 40 (#4, #5), Lesson 42 (#22), Lesson 44 (#14, #16, #17), Lesson 45 (#8, #10), Lesson 47 (#12, #29), Lesson 48 (#5), Lesson 49 (#9), Lesson 50 (#7, #12, #29), Lesson 85 (#9, #11, #16), Lesson 91 (#16), Lesson 98 (#15, #17, #22), Lesson 100 (#16, #18), Lesson 101 (#15, #21, #24), Lesson 104 (#11, #14, #19), Lesson 105 (#15, #18, #20), Lesson 107 (#15, #23, #29), Lesson 108 (#13, #14, #23), Lesson 109 (#19, #22) **Learning Stations:** Lessons 4, 33, 34, 67

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten	**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.	**INSTRUCTION:** **New Concept**: Lesson 4, pp. 24-26; Lesson 13, pp. 78-79; Lesson 16, pp. 95-96, Ex. 1, 2; Lesson 33, pp. 206-209; Lesson 34, pp. 212-215 **MAINTENANCE:** **Written Practice:** Lesson 4 (#16, #17, #21), Lesson 5 (#16, #18, #19), Lesson 6 (#20, #21), Lesson 7 (#19), Lesson 8, Lesson 9 (#21), Lesson 10, Lesson 1112 (#, #), Lesson 13 (#9, #10, #11), Lesson 14 (#10, #11, #12), Lesson 15 (#1, #9, #10), Lesson 16 (#2, #9, #21), Lesson 17 (#2, #8, #14), Lesson 18 (#2, #4, #12), Lesson 20 (#4, #10, #11), Lesson 21 (#1, #3, #4), Lesson 22 (#8, #9, #24), Lesson 23 (#19, #20), Lesson 24 (#15), Lesson 25 (#15), Lesson 26 (#3, #4, #15), Lesson 28 (#11, #14, #26), Lesson 29 (#15), Lesson 30 (#8), Lesson 31 (#5, #29), Lesson 32 (#6, #28), Lesson 33 (#2, #18, #28), Lesson 34 (#4, #15), Lesson 35 (#23, #27, #28), Lesson 36 (#7, #19, #24), Lesson 37 (#3, #9, #28), Lesson 38 (#2, #3, #26), Lesson 39 (#3, #4, #19), Lesson 40 (#4, #5), Lesson 41 (#25), Lesson 42 (#22), Lesson 43 (#24, #27), Lesson 44 (#2, #23), Lesson 45 (#8, #10), Lesson 47 (#12, #29), Lesson 48 (#5), Lesson 49 (#9), Lesson 50 (#29) **Learning Stations:** Lessons 4, 33, 34

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten	**4.NBT.3**	Use place value understanding to round multi-digit whole numbers to any place.	**INSTRUCTION:** **New Concept**: Lesson 20, pp. 117-119; Lesson 42, pp. 270-273; Lesson 54, pp. 346-347, Ex. 4, 5, 6; Lesson 117, pp. 735-737 **MAINTENANCE:** **Power Up:** Lessons 32, 33, 34, 61, 62, 66, 68, 69, 72, 73, 74, 76, 81, 82, 83, 89, 91, 95, 101, 104, 107, 115, 116 **Written Practice:** Lesson 20 (#8, #25, #28), Lesson 21 (#29, #30), Lesson 22 (#12), Lesson 23 (#7), Lesson 24 (#7), Lesson 25 (#7), Lesson 26 (#8), Lesson 27 (#8), Lesson 28 (#7, #29), Lesson 29 (#28), Lesson 30 (#21), Lesson 32 (#9), Lesson 34 (#9, #30), Lesson 35 (#25), Lesson 36 (#10, #30), Lesson 37 (#29), Lesson 38 (#29), Lesson 42 (#6, #13, #14), Lesson 43 (#5, #18, #19), Lesson 44 (#24, #27, #30), Lesson 46 (#4), Lesson 47 (#11, #27, #30), Lesson 51 (#6, #11, #18), Lesson 52 (#17, #21, #26), Lesson 53 (#6, #14), Lesson 54 (#3, #19, #27), Lesson 55 (#9, #16, #27), Lesson 56 (#3, #5, #8), Lesson 66, Lesson 69 (#13), Lesson 102 (#9), Lesson 104 (#7), Lesson 106 (#15), Lesson 107 (#8, #11), Lesson 110 (#8), Lesson 113 (#5), Lesson 117 (#26), Lesson 118 (#4, #25, #26), Lesson 119 (#5) **Learning Stations:** Lessons 42, 54, 117
		Use place value understanding and properties of operations to perform multi-digit arithmetic.	Computational fluency is developed through a strong knowledge of basic facts, place value, and an understanding of the process using the standard algorithm. Students explore all these vital elements to come together as a strong foundation for developing word problem solutions and multi-digit understanding of operations. The concept of multiplication and division is developed across the year in an incremental structure that begins with visual models of investigating area grids as well as arrays during Investigation 3. These concepts are extended in subsequent lessons, as well as with equal group story problems that develop equations and support students as they determine the facts and place value properties of operations in order to solve problems.

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten	**4.NBT.4**	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	**INSTRUCTION:** **New Concept:** *Lesson 8, pp. 46-47; Lesson 9, pp. 51-52;* Lesson 13, pp. 78-79; Lesson 14, pp. 83-85, Ex. 1, 2; Lesson 15, pp. 89-91; Lesson 17, pp. 100-101; Lesson 25, pp. 152-155; Lesson 30, pp. 179-181; Lesson 31, pp. 193-195; Lesson 41, pp. 264-266, Ex. 1, 2; Lesson 51, pp. 327-328, Ex. 1, 2; Lesson 52, pp. 332, 334, Ex. 1, 2; Lesson 59, pp. 377-379 **MAINTENANCE:** **Power Up:** Lessons 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 32, 35, 36, 49, 50 **Problem Solving:** Lessons 38, 101 **Written Practice:** Lesson 13 (#1, #9, #24), Lesson 14 (#5, #12, #13), Lesson 15 (#1, #2, #9), Lesson 16 (#1, #2, #17), Lesson 17 (#2, #18, #19), Lesson 18 (#1, #2, #15), Lesson 19 (#2, #10, #15), Lesson 20 (#1, #2, #16), Lesson 21 (#1, #2, #14), Lesson 23 (#1, #2, #14), Lesson 24 (#15, #16, #22), Lesson 25 (#15, #23, #28), Lesson 26 (#3, #15, #23), Lesson 27 (#15, #22, #23), Lesson 28 (#14, #21, #22), Lesson 29 (#14, #15, #16), Lesson 30 (#1, #13, #16), Lesson 31 (#1, #16, #29), Lesson 32 (#15, #21, #28), Lesson 33 (#16, #18, #28), Lesson 34 (#1, #2, #16), Lesson 35 (#1, #3, #8), Lesson 36 (#1, #2, #19), Lesson 37 (#1, #17, #28), Lesson 38 (#1, #17, #23), Lesson 39 (#4, #19, #28), Lesson 40 (#1, #3), Lesson 41 (#7, #18, #30), Lesson 42 (#2, #3, #21), Lesson 51 (#11, #14, #19), Lesson 52 (#4, #5, #15), Lesson 54 (#11, #13, #21), Lesson 56 (#10, #11, #12), Lesson 57 (#9, #11, #21), Lesson 58 (#20, #16, #17), Lesson 59 (#2, #13, #14), Lesson 62 (#1, #2, #14), Lesson 64 (#3, #13, #16), Lesson 66 (#2, #15, #22), Lesson 67 (#1, #9, #15), Lesson 69 (#1, #18, #21), Lesson 70 (#1, #3, #26), Lesson 71 (#2, #12, #27), Lesson 73 (#3, #7, #24), Lesson 74 (#1, #2, #27), Lesson 75 (#6, #13, #15), Lesson 77 (#4, #10, #13), Lesson 80 (#2, #13, #15), Lesson 81 (#1, #28, #29), Lesson 82 (#1, #13, #22), Lesson 83 (#3), Lesson 86 (#2, #12, #14), Lesson 89 (#11, #12, #21), Lesson 96 (#14, #18, #27), Lesson 103 (#15), Lesson 104 (#16), Lesson 105 (#21, #22, #23), Lesson 106 (#18, #19, #29) **Learning Stations:** Lessons 13, 14, 17, 41, 51

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten	**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.	**INSTRUCTION:** **New Concept:** *Lesson 28, pp. 169-171;* Lesson 42, pp. 270-273; Lesson 44, pp. 283-284; Lesson 45, pp. 288-291, Ex. 1, 2, 3; Lesson 46, pp. 295-298; Lesson 48, pp. 307-309; Lesson 49, pp. 313-314; Lesson 58, pp. 371-373; Lesson 62, pp. 400-402, Ex. 1, 2; Lesson 67, pp. 429-431; Lesson 86, pp. 548-549; Lesson 87, pp. 553-554; Lesson 90, pp. 568-570; Lesson 108, pp. 680-684; Lesson 113, p. 716 **Investigation:** Investigation 3, pp. 185-191 **MAINTENANCE:** **Written Practice:** Lesson 42 (#1, #13, #14), Lesson 43 (#4, #5, #18), Lesson 44 (#4, #25, #30), Lesson 45 (#13, #19, #21), Lesson 46 (#4, #12, #17), Lesson 47 (#11, #10, #16), Lesson 48 (#11, #14, #23), Lesson 49 (#17, #20, #22), Lesson 50 (#8, #11), Lesson 51 (#1, #2, #6), Lesson 52 (#17, #21), Lesson 53 (#6, #10, #26), Lesson 54 (#2, #15, #19), Lesson 55 (#15, #16, #17), Lesson 56 (#8, #16, #18), Lesson 57 (#6, #14, #23), Lesson 58 (#15, #16, #26), Lesson 59 (#8, #18, #19), Lesson 60 (#11, #15, #16), Lesson 61 (#2, #15, #17), Lesson 62 (#12, #13, #17), Lesson 63 (#9, #20, #21), Lesson 64 (#2, #5, #26), Lesson 65 (#11, #19, #30), Lesson 66 (#1, #9, #12), Lesson 68 (#5, #15, #17), Lesson 69 (#2, #8, #20), Lesson 70 (#13, #18, #21), Lesson 71 (#3, #17, #19), Lesson 72 (#14, #15, #16), Lesson 73 (#15, #17, #27), Lesson 74 (#3, #7, #13), Lesson 75 (#1, #23, #27), Lesson 77 (#15, #16), Lesson 78 (#19, #21, #26), Lesson 79 (#12, #13, #22), Lesson 80 (#14, #19, #28), Lesson 82 (#16, #17, #18), Lesson 83 (#1, #12, #15), Lesson 84 (#2, #13, #17), Lesson 85 (#1, #14), Lesson 86 (#15, #21), Lesson 87 (#16, #24), Lesson 88 (#16, #28), Lesson 89 (#3, #17), Lesson 90 (#17, #25), Lesson 91 (#4, #14), Lesson 92 (#6, #22), Lesson 94 (#3, #18), Lesson 95 (#13, #18), Lesson 96 (#19, #20), Lesson 97 (#13, #14), Lesson 98 (#18, #22), Lesson 99 (#18, #19), Lesson 100 (#15, #18), Lesson 101 (#7, #23), Lesson 102 (#16, #20), Lesson 103 (#2, #13), Lesson 104 (#11, #20), Lesson 105 (#16, #25), Lesson 106 (#4, #20), Lesson 107 (#11, #29), Lesson 111 (#3, #21), Lesson 116 (#21, #30), Lesson 117 (#19, #20), Lesson 119 (#5, #21) **Learning Stations:** Lessons 44, 45, 58, 67, 87, 90

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NBT Number and Operations in Base Ten	**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.	**INSTRUCTION:** **New Concept:** *Lesson 46, pp. 295-298; Lesson 47, pp. 302-304; Lesson 52, pp. 332-334, Ex. 3, 4, 5; Lesson 53, pp. 338-341;* Lesson 64, pp. 412-414; Lesson 65, pp. 417-421; Lesson 68, pp. 435-437; Lesson 71, pp. 455-457; Lesson 76, pp. 485-487; Lesson 80, pp. 510-512; Lesson 88, pp. 558-559; Lesson 93, pp. 592-593; Lesson 94, pp. 595-598; Lesson 105, pp. 666-667; Lesson 110, pp. 694-695 **MAINTENANCE:** **Problem Solving:** Lesson 114 **Written Practice:** Lesson 64 (#4, #17, #19), Lesson 65 (#1, #4, #13), Lesson 66 (#2, #15), Lesson 67 (#1, #15, #16), Lesson 68 (#21, #23, #24), Lesson 69 (#18, #21, #22), Lesson 70 (#11, #16, #17), Lesson 71 (#15, #16, #22), Lesson 72 (#2, #3, #21), Lesson 73 (#3, #12, #13), Lesson 74 (#2, #14, #24), Lesson 75 (#18, #21, #30), Lesson 76 (#2, #15, #26), Lesson 77 (#11, #13, #14), Lesson 78 (#1, #14, #25), Lesson 79 (#7, #10, #21), Lesson 80 (#4, #9, #13), Lesson 81 (#11, #24, #26), Lesson 82 (#19, #22), Lesson 83 (#17, #19), Lesson 84 (#10, #21, #23), Lesson 85 (#17, #20), Lesson 86 (#23, #25), Lesson 87 (#17, #22), Lesson 88 (#20, #22), Lesson 89 (#21, #22), Lesson 90 (#13, #20), Lesson 91 (#20, #21), Lesson 92 (#2, #25), Lesson 93 (#26, #28), Lesson 94 (#4, #23), Lesson 95 (#20, #23), Lesson 96 (#23, #27), Lesson 97 (#20, #22), Lesson 98 (#21, #24), Lesson 99 (#1, #3), Lesson 100 (#1, #25), Lesson 101 (#18, #20), Lesson 102 (#22, #24), Lesson 103 (#1, #20), Lesson 104 (#25, #26), Lesson 105 (#1, #10), Lesson 106 (#22, #25), Lesson 107 (#24, #28), Lesson 108 (#22, #24), Lesson 109 (#10, #23), Lesson 110 (#1, #2), Lesson 111 (#2, #23), Lesson 112 (#1, #24), Lesson 113 (#12, #13), Lesson 115 (#1, #23), Lesson 116 (#3, #26), Lesson 117 (#1, #22), Lesson 118 (#10, #21), Lesson 119 (#23, #24), Lesson 120 (#4, #23) **Learning Stations:** Lessons 64, 65, 68, 71, 76, 80

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Number and Operations – Fractions[3]		**Extend understanding of fraction equivalence and ordering.** [[3] Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.]	Fractions have a very strong foundation in *Saxon Math* and develop across the year to provide a solid understanding of equivalent and non-equivalent fractions using both concrete and visual models of fraction circles and bars. Investigation 9 allows students to use manipulatives to explore how two fractions can be the same and different depending on the numerators and denominators given, as well as, the fact that two fractions can be the same size with different fractional parts. In subsequent lessons, students begin to explore that fraction comparisons can only be valid using fractions with the same whole. Students then record their results using comparison symbols or a visual fraction model. With the unique *Saxon Math* structure, a much greater time to explore and master fractions allows students to clarify various fractional units before comparing and ordering each fraction. This time to practice and master fractions allows students to develop a deep and clear understanding to build to the next stage or operations with fractions.
	4.NF.1	Explain why a fraction *a*/*b* is equivalent to a fraction (*n* x *a*)/(*n* x *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.	**INSTRUCTION:** **New Concept:** *Lesson 37, pp. 234-235; Lesson 39, pp. 244-246;* Lesson 103, pp. 654-657; Lesson 104, pp. 660-662; Lesson 109, pp. 688-690; Lesson 112, pp. 710-712; Lesson 115, pp. 725-726; Lesson 116, pp. 730-731; Lesson 119, pp. 746-747; Lesson 120, pp. 750-751 **Investigation:** Investigation 9, pp. 574-577 **MAINTENANCE:** **Written Practice:** Lesson 109 (#5, #9, #313), Lesson 111 (#5, #6, #8), Lesson 112 (#5, #7, #9), Lesson 113 (#8, #9), Lesson 114 (#7, #8), Lesson 115 (#8, #9, #10), Lesson 116 (#6, #7, #8), Lesson 117 (#5, #6), Lesson 118 (#5, #7, #8), Lesson 119 (#9, #15, #29), Lesson 120 (#10, #15, #16) **Learning Stations:** Lessons 109, 115

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Number and Operations – Fractions	**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.	**INSTRUCTION:** **New Concept:** Lesson 56, pp. 360-361; Lesson 103, pp. 654-657; *Lesson 116, pp. 730-731* **Investigation:** Investigation 9, pp. 574-577 **Standards Success Activity:** Activity 10 **MAINTENANCE:** **Written Practice:** Lesson 56 (#7), Lesson 57 (#5, #24), Lesson 59 (#9), Lesson 61 (#9), Lesson 62 (#8), Lesson 64 (#10), Lesson 66 (#10), Lesson 71 (#10), Lesson 78 (#11), Lesson 100 (#26), Lesson 103 (#26, #29), Lesson 104 (#6, #29), Lesson 105 (#6), Lesson 106 (#14), Lesson 107 (#6, #10), Lesson 108 (#6, #30), Lesson 109 (#5), Lesson 111 (#6), Lesson 116 (#6), Lesson 117 (#6), Lesson 118 (#8, #30), Lesson 119 (#9) **Learning Stations:** Lessons 56, 103, 116
		Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers	Fractions have a very strong foundation in Saxon and develop across the year to provide a solid understanding of equivalent and non-equivalent fractions using both concrete and visual models of fraction circles and bars. Both addition and subtraction of fractions requires locating and understanding the process of finding common denominators to allow the students the opportunity to see the relationship of joining and separating parts referring to the same whole. Saxon relates the action of decomposing a fraction into a sum of fractions using concrete objects and visuals as well as having the student draw a model to represent the action with an equation. Addition and subtraction with mixed numbers is a fluid process for Saxon students based on developed process of replacing mixed numbers with an equivalent fraction that started earlier in the year prior to the entrance of the operations. Operations with fractions are developed using simple concepts using models and equations leading to word problems involving both operations.

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Number and Operations - Fractions	**4.NF.3**	Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*.	
4.NF Number and Operations - Fractions	**4.NF.3.a**	Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	**INSTRUCTION:** **New Concept:** Lesson 107, pp. 675-677; Lesson 114, pp. 720-722; Lesson 119, pp. 746-747; Lesson 120, pp. 750-751 **Investigation:** Investigation 9, pp. 574-577 **MAINTENANCE:** **Written Practice:** Lesson 107 (#13, #16, #18), Lesson 109 (#25, #26, #28), Lesson 111 (#16, #17, #18), Lesson 112 (#12, #13, #15), Lesson 113 (#21, #22), Lesson 114 (#8, #14, #15), Lesson 116 (#5, #18, #19), Lesson 117 (#13, #14, #15), Lesson 118 (#12, #13, #28), Lesson 119 (#14, #15, #16), Lesson 120 (#14, #15, #16) **Learning Stations:** Lessons 107, 114, 119, 120
4.NF Number and Operations - Fractions	**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.*	**INSTRUCTION:** **New Concept:** Lesson 89, pp. 564-565; Lesson 104, pp. 660-662 **Investigation:** Investigation 9, pp. 574-577 **MAINTENANCE:** **Written Practice:** Lesson 89 (#26), Lesson 90 (#26), Lesson 91 (#23), Lesson 92 (#30), Lesson 93, Lesson 94 (#26), Lesson 95 (#25), Lesson 96 (#24), Lesson 97 (#26), Lesson 104 (#9), Lesson 105 (#9), Lesson 106 (#10), Lesson 107 (#9), Lesson 108 (#9), Lesson 109 (#9), Lesson 110 (#9), Lesson 112 (#5), Lesson 116 (#5), Lesson 118 (#4) **Learning Stations:** Lessons 89, 104

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Number and Operations – Fractions	**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.	**INSTRUCTION:** **New Concept:** *Lesson 89, pp. 564-565;* Lesson 107, pp. 675-677; Lesson 114, pp. 720-722 **Investigation:** Investigation 9, pp. 574-577 **Standards Success Activity:** Activity 9 **MAINTENANCE:** **Written Practice:** Lesson 107 (#13, #16, #18), Lesson 108 (#15, #16, #18), Lesson 109 (#25, #26, #28), Lesson 110 (#22, #23), Lesson 111 (#16, #17, #18), Lesson 112 (#12, #13, #15), Lesson 113 (#21, #22, #29), Lesson 114 (#8, #15), Lesson 115 (#13, #16, #18), Lesson 116 (#18, #19, #20), Lesson 117 (#13, #15, #17) **Learning Stations:** Lessons 107, 114
	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.	**INSTRUCTION:** **New Concept:** *Lesson 74, p. 474;* Lesson 107, pp. 675-677; Lesson 114, pp. 720-722 **Investigation:** Investigation 9, pp. 574-577 **MAINTENANCE:** **Written Practice:** Lesson 107 (#13, #16, #18), Lesson 108 (#15, #16, #18), Lesson 109 (#25, #26, #28), Lesson 110 (#3, #2), Lesson 111 (#16, #17, #18), Lesson 112 (#12, #13, #15), Lesson 113 (#21, #22, #29), Lesson 114 (#8, #15, #28), Lesson 115 (#13, #16, #18), Lesson 116 (#18, #19, #20), Lesson 117 (#13, #15, #17) **Learning Stations:** Lesson 107

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Number and Operations - Fractions	4.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	Saxon develops fractions across the year with a strong link from equivalents to decimals and percentages. A natural progression from whole number multiplication to fraction multiplication is taught through the visual models using fraction bars to compare whole numbers and fractions. Once students have the introduction visually, then students are asked to draw and explain the operation before moving on to the final step of writing and equation to solve the problem.
	4.NF.4.a	Understand a fraction *a*/*b* as a multiple of 1/*b*.	**INSTRUCTION:** **Investigation:** *Investigation 9, pp. 574-577* **Standards Success Activity:** Activity 6
	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.	**INSTRUCTION:** **New Concept:** *Lesson 70, pp. 446-448; Lesson 95, pp. 602-604* **Investigation:** *Investigation 9, pp. 574-577* **Standards Success Activity:** Activity 6 **MAINTENANCE:** **Power Up:** *Lessons 106, 107, 108, 109, 110, 111, 112, 116* **Written Practice:** *Lesson 70 (#7, #9), Lesson 95 (#4), Lesson 97 (#2), Lesson 98 (#6, #7), Lesson 99 (#4), Lesson 101 (#2), Lesson 102 (#4), Lesson 103 (#5), Lesson 104 (#4), Lesson 105 (#4), Lesson 107 (#4), Lesson 108 (#4), Lesson 109 (#3), Lesson 111 (#4), Lesson 115 (#4), Lesson 116 (#4), Lesson 117 (#3), Lesson 120 (#2)* **Learning Stations:** *Lesson 95*

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Numbers and Operations – Fractions	**4.NF.4c**	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.	**INSTRUCTION:** **New Concept:** Lesson 70, pp. 446-448; Lesson 95, pp. 602-604 **Standards Success Activity:** Activity 6 **MAINTENANCE:** **Problem Solving:** Lesson 116 **Written Practice:** Lesson 70 (#7, #9), Lesson 71 (#6, #7), Lesson 72 (#5), Lesson 73 (#1, #2), Lesson 81 (#4), Lesson 83 (#4), Lesson 84 (#8), Lesson 85 (#7), Lesson 86 (#8, #9), Lesson 89 (#9, #25), Lesson 90 (#7), Lesson 91 (#8), Lesson 92 (#9), Lesson 93 (#9), Lesson 94 (#2, #9), Lesson 95 (#4), Lesson 96 (#5), Lesson 97 (#2), Lesson 98 (#6, #7), Lesson 99 (#4), Lesson 100 (#5), Lesson 101 (#2), Lesson 102 (#4), Lesson 103 (#5), Lesson 104 (#4), Lesson 105 (#4), Lesson 106 (#5), Lesson 107 (#4), Lesson 108 (#4), Lesson 109 (#3), Lesson 110 (#4), Lesson 111 (#4), Lesson 112 (#4), Lesson 115 (#4), Lesson 116 (#4), Lesson 117 (#3), Lesson 119 (#3), Lesson 120 (#2) **Learning Stations:** Lessons 70, 95

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Numbers and Operations – Fractions		**Understand decimal notation for fractions and compare decimal fractions.**	Fractions and decimals have a very strong foundation in Saxon and develop across the year to provide a solid understanding using both concrete and visual models of fraction circles and bars. One element of the visual models includes representations of money to reflect the place value models of 10 and 100 that are then translated into base ten models of bars and flats. Once these skills are developed, students can compare fractions using comparison symbols.
	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.[4] [[4] 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.]	**INSTRUCTION:** **New Concept**: *Lesson 50, pp. 318-319* **Investigation(s):** Investigation 4, pp. 260-262; *Investigation 9, pp. 574-577* **Standards Success Activity:** Activity 2

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.NF Numbers and Operations – Fractions	**4.NF.6**	Use decimal notation for fractions with denominators 10 or 100.	**INSTRUCTION:** **New Concept:** *Lesson 35, pp. 219-222; Lesson 36, pp. 228-230;* Lesson 69, pp. 440-443; Lesson 102, pp. 649-651 **Investigation(s):** Investigation 4, pp. 260-262; Investigation 9, pp. 574-577 **MAINTENANCE:** **Written Practice:** Lesson 41 (#2, #9, #14), Lesson 42 (#7, #23, #24), Lesson 43 (#6), Lesson 47 (#3, #5, #8), Lesson 51 (#10, #29), Lesson 52 (#26), Lesson 53 (#9), Lesson 54 (#10, #24, #30), Lesson 55 (#27, #28), Lesson 56 (#22, #29, #30), Lesson 61 (#3, #28), Lesson 63 (#3), Lesson 64 (#27), Lesson 67 (#26, #28), Lesson 69 (#3, #6, #10), Lesson 70 (#12, #13, #28), Lesson 86 (#11, #19), Lesson 87 (#7, #26), Lesson 91 (#1, #7, #9), Lesson 92 (#7, #8), Lesson 93 (#7), Lesson 94 (#7, #28), Lesson 95 (#2), Lesson 97 (#9), Lesson 98 (#8, #9, #11), Lesson 100 (#8), Lesson 102 (#6, #7, #8), Lesson 103 (#6), Lesson 104 (#5), Lesson 105 (#11, #13), Lesson 107 (#5), Lesson 111 (#5), Lesson 112 (#3), Lesson 115 (#5), Lesson 116 (#5), Lesson 118 (#28)
	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.	**INSTRUCTION:** **New Concept:** Lesson 91, pp. 579-581 **Investigation:** Investigation 4, pp. 260-262; Investigation 5 (see "Investigate Further"), p. 325; Investigation 9, pp. 574-577 **MAINTENANCE:** **Written Practice:** Lesson 41 (#1, #5, #8), Lesson 42 (#24, #26, #27), Lesson 43 (#6), Lesson 47 (#3, #5), Lesson 91 (# 3), Lesson 100 (#29), Lesson 102 (#8) **Learning Stations:** Lesson 91

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.MD Measurement and Data		**Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.**	Measurement is developed in both customary and metric units across the year. The concept of measurement is displayed in a visual tool using a table to show equivalent converting units within the same system. This two-column table allows the students to see the units as they master the equivalents for each unit. With each unit Saxon allows time to provide a basic explanation then builds to mastery before adding the measurement concept in the form of a word problem. Within the context of the word problem, an appropriate operation is selected and implemented to best address the request to either reduce or increase the unit. Additionally, various strategies are used to demonstrate the various unit changes such as diagrams. Both area and perimeter are developed across the year allowing students to begin by building area and perimeter models as well as use concrete objects to create a visual representation of both prior to applying a formula to represent both actions. Students are allowed time to develop a strong mastery of the area and perimeter model before moving to problem solving with both formulas.

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.MD Measurement and Data	**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.	**INSTRUCTION:** **New Concept:** *Lesson 19, pp. 110-113;* Lesson 32, pp. 200-202; Lesson 40, pp. 250-252; Lesson 69, pp. 440-443; Lesson 77, pp. 490-493; Lesson 102, pp. 649-651 **Investigation:** Investigation 2, pp. 122-126 **MAINTENANCE:** **Power Up:** Lessons 22, 23, 24, 25, 28, 29, 30, 31, 35, 36, 39, 40, 41, 42, 43, 44, 45, 46, 50, 55, 58, 70, 74, 75, 77, 78, 81, 86, 87, 88, 89, 93, 105, 114 **Written Practice:** Lesson 21 (#28), Lesson 22 (#6, #7, #13), Lesson 23 (#12), Lesson 24 (#9), Lesson 25 (#9), Lesson 26 (#10), Lesson 27 (#2), Lesson 28 (#3, #8, #25), Lesson 29 (#3), Lesson 30 (#11), Lesson 31 (#7), Lesson 32 (#5, #16, #18), Lesson 33 (#13, #29, #30), Lesson 34 (#13, #14, #28), Lesson 35 (#13, #29), Lesson 37 (#13, #24, #26), Lesson 38 (#9, #22, #24), Lesson 39 (#10, #29), Lesson 40 (#16, #28), Lesson 41 (#13), Lesson 42 (#1, #8), Lesson 43 (#9, #23, #26), Lesson 44 (#6, #25), Lesson 45 (#12, #25), Lesson 46 (#29), Lesson 48 (#7, #8, #9), Lesson 49 (#26), Lesson 50 (#5), Lesson 51 (#, #), Lesson 52 (#25), Lesson 53 (#7, #8, #25), Lesson 54 (#29), Lesson 56 (#2, #9), Lesson 57 (#26, #30), Lesson 58 (#4), Lesson 59 (#26), Lesson 60 (#7), Lesson 61 (#12), Lesson 62 (#27), Lesson 63 (#6), Lesson 64 (#8), Lesson 65 (#4, #7), Lesson 66 (#9), Lesson 67 (#2), Lesson 68 (#29), Lesson 69 (#3, #6, #10), Lesson 70 (#12, #13), Lesson 71 (#4, #8), Lesson 72 (#6, #7, #10), Lesson 74 (#11), Lesson 75 (#8, #9), Lesson 76 (#11), Lesson 77 (#1, #7, #30), Lesson 78 (#5, #7, #8), Lesson 79 (#23), Lesson 80 (#8, #10), Lesson 81 (#7, #8, #9), Lesson 82 (#3, #26), Lesson 83 (#26), Lesson 84 (#7, #12), Lesson 85 (#5), Lesson 86 (#7, #29), Lesson 87 (#4, #26), Lesson 88 (#4, #5), Lesson 89 (#5, #7), Lesson 90 (#6, #28), Lesson 92 (#3), Lesson 95 (#26, #29), Lesson 97 (#9), Lesson 100 (#1, #27), Lesson 101 (#4, #9), Lesson 102 (#7, #9), Lesson 103 (#6, #28), Lesson 104 (#5, #28), Lesson 105 (#11, #13), Lesson 108 (#12, #27), Lesson 110 (#26), Lesson 112 (#2, #3), Lesson 113 (#2, #3), Lesson 114 (#2, #4), Lesson 116 (#2, #27), Lesson 117 (#2, #28), Lesson 118 (#2), Lesson 119 (#2), Lesson 120 (#1, #3) **Learning Stations:** Lessons 40, 77, 102

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.MD Measurement and Data	**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.	**INSTRUCTION:** **New Concept:** Lesson 19, pp. 110-113; Lesson 22, pp. 134-137; Lesson 27, pp. 163-165, Ex. 1; Lesson 40, pp. 250-252; Lesson 43, pp. 277-279; Lesson 58, pp. 371-373; Lesson 69, pp. 440-443; Lesson 77, pp. 490-493; Lesson 83, pp. 532-535; Lesson 102, pp. 649-651 **Investigation:** Investigation 2, pp. 122-126; Investigation 11, pp. 699-703 **Standards Success Activity:** Activity 1 **MAINTENANCE:** **Problem Solving:** Lessons 42, 51, 56, 67, 73, 78, 87 **Written Practice** Lesson 21 (#28), Lesson 22 (#1, #6, #7), Lesson 23 (#11, #12, #16), Lesson 24 (#9, #11, #17), Lesson 25 (#9, #11, #17), Lesson 26 (#10, #12, #17), Lesson 27 (#13, #17, #25), Lesson 28 (#6, #9, #10), Lesson 29 (#8, #17, #24), Lesson 30 (#4, #14, #23), Lesson 31 (#7, #13, #20), Lesson 32 (#5, #7, #13), Lesson 33 (#20, #29, #30), Lesson 34 (#6, #7, #8), Lesson 35 (#9, #19), Lesson 37 (#10, #18), Lesson 38 (#9, #18), Lesson 39 (#8, #17, #26), Lesson 40 (#11, #18), Lesson 41 (#6, #1, #13), Lesson 42 (#1, #4, #9), Lesson 43 (#9, #1, #26), Lesson 45 (#1, #2, #4), Lesson 46 (#7, #13, #28), Lesson 48 (#7, #8, #12), Lesson 49 (#7, #16, #26), Lesson 50 (#2, #5, #13), Lesson 51 (#3, #15, #20), Lesson 52 (#5, #14, #30), Lesson 53 (#7, #11, #25), Lesson 54 (#8), Lesson 56 (#2, #10), Lesson 57 (#12, #13, #27), Lesson 58 (#3, #4), Lesson 59 (#26), Lesson 60 (#12, #15, #16), Lesson 61 (#13, #15, #17), Lesson 62 (#2, #3, #17), Lesson 63 (#6, #20, #21), Lesson 64 (#8, #13, #26), Lesson 65 (#9, #14, #19), Lesson 66 (#5, #9, #14), Lesson 67 (#3, #5, #18), Lesson 68 (#14, #20, #29), Lesson 69 (#3, #16, #28), Lesson 70 (#2, #6, #14), Lesson 72 (#4, #12, #13), Lesson 74 (#9, #13), Lesson 75 (#8, #9), Lesson 76 (#3, #12, #18), Lesson 77 (#1, #7, #30), Lesson 78 (#7, #10, #15), Lesson 79 (#1, #11, #23), Lesson 80 (#8, #16, #19), Lesson 81 (#7, #8, #9), Lesson 82 (#3, #26), Lesson 83 (#2, #30), Lesson 84 (#7, #19), Lesson 85 (#4, #5), Lesson 86 (#1, #12), Lesson 87 (#1, #26), Lesson 88 (#6, #10), Lesson 89 (#2, #7), Lesson 90 (#8, #11), Lesson 92 (#11, #14), Lesson 95 (#11, #12), Lesson 97 (#11, #24), Lesson 100 (#13, #15), Lesson 101 (#14, #23), Lesson 102 (#3, #7), Lesson 103 (#13, #23), Lesson 104 (#13, #28), Lesson 105 (#11, #13), Lesson 108 (#12, #27), Lesson 110 (#8, #27), Lesson 112 (#3, #19), Lesson 113 (#2, #3), Lesson 114 (#1, #22), Lesson 116 (#2, #27), Lesson 117 (#9, #28), Lesson 118 (#2), Lesson 119 (#2, #7), Lesson 120 (#1, #3) **Learning Stations:** Lesson 19

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<table>
<tr><th>Domain</th><th>Standard</th><th>Text of Objective</th><th>Saxon Math Intermediate 4 Citations/Examples
References in italics indicate foundational.</th></tr>
<tr><td rowspan="2">4.MD Measurement and Data</td><td></td><td>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</td><td>Measurement is developed in both customary and metric units across the year. The concept of measurement is displayed in a visual tool using a table to show equivalent converting units within the same system. This two-column table allows the students to see the units as they master the equivalents for each unit. With the introduction of each unit Saxon Math allows time to provide a basic explanation then builds to mastery before adding the next measurement concept in the form of a word problem. Within the context of the word problem, an appropriate operation is selected and implemented to best address the request to either reduce or increase the unit. Additionally, various strategies are used to demonstrate the unit changes such as diagrams. Both area and perimeter are developed across the year allowing students to begin by building area and perimeter models as well as use concrete objects to create a visual representation of both prior to applying a formula to represent both actions. Students are allowed time to develop a strong mastery of the area and perimeter model before moving to problem solving with both formulas.</td></tr>
<tr><td>4.MD.3</td><td>Apply the area and perimeter formulas for rectangles in real world and mathematical problems.</td><td><u>INSTRUCTION:</u>
New Concept: Lesson 21, pp. 127-130; Lesson 55, pp. 351-355; Lesson 62, p. 401, Ex. 5; Lesson 69, pp. 440-443; Lesson 108, pp. 680-684
Investigation: Investigation 2, pp. 122-126; Investigation 3, 185-191
Standards Success Activity: Activity 8

<u>MAINTENANCE:</u>
Power Up: Lessons 23, 32, 33, 39, 57, 62, 68
Written Practice: Lesson 21 (#11, #12, #27), Lesson 28 (#3, #8, #25), Lesson 30 (#7, #11), Lesson 33 (#23, #29, #30), Lesson 37 (#6, #24), Lesson 38 (#4, #22), Lesson 41 (#13, #26), Lesson 43 (#4, #8, #22), Lesson 45 (#12, #25, #26), Lesson 46 (#6, #10, #27), Lesson 48 (#7, #8, #13), Lesson 54 (#7, #26), Lesson 55 (#6, #7, #29), Lesson 56 (#6, #9, #21), Lesson 59 (#6, #12), Lesson 62 (#9, #12, #13), Lesson 72 (#7, #15), Lesson 74 (#29, #30), Lesson 77 (#7, #25), Lesson 83 (#8, #23), Lesson 89 (#6, #27, #29), Lesson 97 (#9, #16), Lesson 103 (#6, #7, #17), Lesson 104 (#18), Lesson 106 (#7), Lesson 108 (#20, #27), Lesson 100 (#7, #14, #23), Lesson 110 (#18, #19, #20), Lesson 113 (#2, #3, #4), Lesson 118 (#2)</td></tr>
</table>

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.MD Measurement and Data		**Represent and interpret data.**	In the process of collecting and interpreting data students begin by taking survey information given to complete and create various graphs to show the results. Using a line plot and a data set of measures given, students locate and place measure points at the appropriate location. Once the skill is mastered, students make a number line to display a data set of measures in fractional form. This process allows students to see the visual representation on a line plot to help solve both addition and subtraction problems involving fractions. After the introduction of this skill, students continue this skill in the subsequent grade to offer extensive mastery of the skill using additional fraction parts with a greater variety of denominators.
	4.Md.4	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots.	**INSTRUCTION:** **Standards Success Activity:** Activity 7 **ASSESSMENT:** **Standards Success Extension Test:** Extension Test 7

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.MD Measurement and Data		**Geometric measurement: understand concepts of angle and measure angles.**	With a strong vertical alignment across the elementary grades, the components of rays, endpoints, angles, vertex, and angle names are introduced as concepts and built upon in subsequent lessons when conceptually and developmentally appropriate. This vertical alignment allows for *Saxon Math*, grade 4 students to review the basic concepts and then move incrementally to the more advanced skills of determining angles and degrees of angles The concepts of angles and angle measures are introduced visually using concrete tools of everyday items such as dials, clocks and circles. Students take the knowledge of angles and angle measures to use a student-made protractor as well as develop the skill of drawing and labeling angles using the tool.
	4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.	
	4.MD.5a	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.	**<u>INSTRUCTION:</u>** **New Concept:** *Lesson 23, pp. 141-144; Lesson 75, pp. 478-481; Lesson 78, pp. 496-498;* Lesson 81, pp. 520-522 **<u>MAINTENANCE:</u>** **Written Practice:** Lesson 84 (#30), Lesson 85 (#6, #25), Lesson 87 (#27), Lesson 94 (#29), Lesson 97 (#28) **Learning Stations:** Lesson 81
	4.MD.5.b	An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	**<u>INSTRUCTION:</u>** **New Concept:** *Lesson 75, pp. 478-481;* Lesson 78, pp. 496-498; Lesson 81, pp. 520-522 **<u>MAINTENANCE:</u>** **Written Practice:** Lesson 84 (#30), Lesson 85 (#6, #25), Lesson 87 (#25, #27), Lesson 94 (#29), Lesson 97 (#28) **Learning Stations:** Lesson 81

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.MD Measurement and Data	**4.Md.6**	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	**INSTRUCTION:** **New Concept:** *Lesson 81, pp. 520-522* **Standards Success Activity:** Activity 4 **MAINTENANCE:** **Learning Stations:** Lesson 81
	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.	**INSTRUCTION:** **New Concept:** Lesson 81, pp. 520-522 **Standards Success Activity:** Activity 5

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.G Geometry		**Draw and Identify lines and angles, and classify shapes by properties of their lines and angles.**	Students use the prior knowledge lessons of lines, line segments, rays and angles to draw and then identify angles using the correct mathematical vocabulary. When perpendicular lines and parallel lines are introduced it is within the context of shapes and angles. Using the qualities mastered, students can then identify two-dimensional figures using their attributes. Once the shapes are identified, the classification of various two-dimensional figures based on those attributes and similarities can then begin. Categories are then developed to classify two-dimensional shapes by their attributes. One attribute used to categorize shapes is the test for a line of symmetry. Students can determine if a two-dimensional figure is symmetrical by locating a line that crosses the shape and then folding that shape along that line to determine if the two parts match. Once students master that skill they are given shapes and figures to determine the line of symmetry and later asked to draw lines of symmetry.
	4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	**INSTRUCTION:** **New Concept:** Lesson 23, pp. 141-144; Lesson 45, pp. 288-291, Ex. 4, 5, 6; Lesson 78, pp. 496-498; Lesson 92, pp. 584-588 **MAINTENANCE:** **Written Practice:** Lesson 23 (#10, #27), Lesson 24 (#10, #13, #27), Lesson 25 (#10, #27), Lesson 26 (#11, #27), Lesson 27 (#24), Lesson 28 (#8), Lesson 29 (#11), Lesson 30 (#12), Lesson 31 (#30), Lesson 32 (#11), Lesson 33 (#3), Lesson 34 (#25), Lesson 35 (#30), Lesson 36 (#5), Lesson 38 (#6, #27), Lesson 39 (#25), Lesson 40 (#12), Lesson 41 (#10), Lesson 42 (#10), Lesson 43 (#7), Lesson 46 (#8, #9), Lesson 47 (#10, #13), Lesson 49 (#17, #20, #27), Lesson 51 (#26), Lesson 52 (#22), Lesson 56 (#26), Lesson 57 (#23), Lesson 58 (#9, #12, #16), Lesson 59 (#8, #25), Lesson 60 (#24, #11, #30), Lesson 61 (#15, #20, #21), Lesson 62 (#28), Lesson 63 (#20, #30), Lesson 65 (#11, #30), Lesson 69 (#10, #30), Lesson 70 (#13, #30), Lesson 72 (#14, #28), Lesson 75 (#29), Lesson 84 (#30), Lesson 85 (#6, #9), Lesson 87 (#25, #27), Lesson 88 (#5, #27), Lesson 89 (#28), Lesson 99 (#21, #29), Lesson 103 (#23, #30), Lesson 119 (#2, #13), Lesson 120 (#5, #12, #13) **Learning Stations:** Lessons 23, 78, 92

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Domain	Standard	Text of Objective	*Saxon Math Intermediate 4* Citations/Examples ***References in italics indicate foundational.***
4.G Geometry	**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.	**INSTRUCTION:** **New Concept:** Lesson 23, pp. 141-144; Lesson 45, pp. 288-291, Ex. 4, 5, 6; Lesson 63, pp. 405-408; Lesson 66, pp. 425-426; Lesson 78, pp. 496-498; Lesson 92, pp. 584-588 **MAINTENANCE:** **Problem Solving:** Lesson 27 **Written Practice:** Lesson 45 (#13, #14, #23), Lesson 46 (#8, #9), Lesson 47 (#10, #13), Lesson 48 (#11, #27), Lesson 49 (#17, #20, #27), Lesson 50 (#11, #25), Lesson 52 (#22), Lesson 55 (#23), Lesson 56 (#26), Lesson 57 (#23), Lesson 58 (#9, #16), Lesson 59 (#8, #25), Lesson 60 (#11, #24, #30), Lesson 61 (#15, #20, #21), Lesson 65 (#11, #30), Lesson 69 (#28, #30), Lesson 70 (#13, #30), Lesson 71, Lesson 72 (#14, #28, #29), Lesson 73 (#27), Lesson 74 (#13), Lesson 78 (#28), Lesson 79 (#22), Lesson 80 (#14, #28, #30), Lesson 82 (#29), Lesson 83 (#12, #29), Lesson 85 (#3, #25), Lesson 87 (#25, #27), Lesson 88 (#27, #29), Lesson 90 (#14), Lesson 91 (#27), Lesson 101 (#30), Lesson 113 (#25), Lesson 119 (#2), Lesson 120 (#5) **Learning Stations:** Lessons 78, 92
	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.	**INSTRUCTION:** **New Concept:** Lesson 79, pp. 502-505; Lesson 92 p. 587, Activity 2 **MAINTENANCE:** **Written Practice:** Lesson 79 (#26), Lesson 80 (#30), Lesson 82 (#27), Lesson 83 (#29), Lesson 85 (#24), Lesson 89, Lesson 91 (#27), Lesson 94 (#29), Lesson 95 (#27), Lesson 100 (#28), Lesson 105 (#28), Lesson 109 (#11, #18), Lesson 112 (#8), Lesson 113 (#27), Lesson 116 (#29) **Learning Stations:** Lesson 79

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