Correlation to the Common Core State Standards

Saxon Math Intermediate 5

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Grade 5

COMMON CORE

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Saxon Math Intermediate 5 ©2012 correlated to the
Common Core State Standards for Mathematics, Grade 5

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* 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. **INSTRUCTION:** **New Concept**: Problem Solving Overview (pp. 1–6), Lesson 11, pp. 65-69; Lesson 16, pp. 98-101; Lesson 21, pp. 133-136; Lesson 35, pp. 216-219; Lesson 46, pp. 289-291; Lesson 60, pp. 377-379 **Investigation(s):** Inv 1, pp. 60-64; Inv 5, pp. 317-324 **MAINTENANCE:** **Problem Solving:** Lesson 17, p. 104B; Lesson 25, p. 154B; Lesson 28, p. 171B; Lesson 32, p. 198B; Lesson 33, p. 205B; Lesson 35, p. 216B; Lesson 39, p. 239B; Lesson 45, p. 282B; Lesson 46, p. 289B; Lesson 51, p. 325H; Lesson 53, p. 339B; Lesson 55, p. 350B; Lesson 57, p. 359B; Lesson 58, p. 366B; Lesson 60, p. 377B; Lesson 65, p. 412B; Lesson 74, p. 479B; Lesson 79, p. 511B; Lesson 83, p. 539B; Lesson 99, p. 644B; Lesson 100, p. 649B; Lesson 106, p. 696B; Lesson 109, p. 717B; Lesson 113, p. 742B	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 5*, 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. **INSTRUCTION:** **New Concept**: Lesson 11, pp. 65-69; Lesson 14, pp. 87-90; Lesson 16, pp. 98-101; Lesson 21, pp. 133-136; Lesson 24, pp. 149-151; Lesson 72, pp. 465-469; Lesson 103, pp. 671-675; Lesson 114, p748-752; Lesson 115, p. 756 **Investigation(s):** Inv 1, pp. 60-64; Inv 4, pp. 251-256 **MAINTENANCE:** **Power Up:** Lesson 13, pp. 80-81; Lesson 16, p. 98; Lesson 21, pp. 132-133; Lesson 22, p. 139; Lesson 23, p. 145; Lesson 29, p. 177; Lesson 31, p. 192; Lesson 32, p. 198; Lesson 33, p. 205; Lesson 34, p. 211; Lesson 35, p. 216; Lesson 39, p. 239; Lesson 40, p. 244; Lesson 42, p. 263; Lesson 43, p. 269; Lesson 44, p. 275; Lesson 45, p. 282; Lesson 46, p. 289; Lesson 47, p. 294; Lesson 48, p. 299; Lesson 50, p. 311; Lesson 53, p. 339; Lesson 54, p. 345; Lesson 55, p. 350; Lesson 56, p. 354; Lesson 59, p. 371; Lesson 62, p. 394; Lesson 63, p. 400; Lesson 64, p. 405; Lesson 68, p. 431; Lesson 73, p. 472; Lesson 75, p. 485; Lesson 77, p. 498; Lesson 79, p. 511; Lesson 103, p. 670; Lesson 104, p. 679; Lesson 105, p. 687; Lesson 108, p. 710; Lesson 110, p. 723; Lesson 112, p. 736; Lesson 113, p. 742; Lesson 115, p. 755; Lesson 116, p. 760; Lesson 117, p. 767; Lesson 119, p. 778; Lesson 120, p. 783 **Problem Solving:** Lesson 65, p. 412B; Lesson 90, p. 586B **Performance Task(s):** 5	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 679B of the Teacher's Manual, teachers guide students to consider the units involved and how they relate to each other in order to determine a solution to the problem. Instead of simply computing, they use quantitative reasoning to draw additional figures that are the same in some ways, but different in others. This requires a deeper understanding of what quantities mean and how they can be applied.

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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 24, pp. 149-151; Lesson 29, pp. 177-179; Lesson 36, pp. 222-225; Lesson 37, pp. 228-230; Lesson 42, pp. 263-266; Lesson 89, pp. 580-582 **Investigation(s):** Inv 3 (see Investigate Further, page 191); Inv 9, pp. 592-596 **MAINTENANCE:** **Problem Solving:** Lesson 7, p. 39B; Lesson 43, p. 269B; Lesson 51, p. 325H; Lesson 63, p. 400B; Lesson 66, p. 418B; Lesson 73, p. 472B; Lesson 74, p. 479B; Lesson 76, p. 491B; Lesson 83, p. 539B; Lesson 90, p. 586B; Lesson 100, p. 649B; Lesson 113, p. 742B **Written Practice:** Lesson 22, pp. 143-144; Lesson 27, pp. 167-170; Lesson 34, pp. 213-215; Lesson 42, pp. 267-268; Lesson 43, pp. 273-274 **Performance Task(s):** 1, 5, 9	*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 3 of the *Intermediate 5* Performance Tasks, students construct viable arguments and put them into words. They are required to consider the meaning of definitions – here odd and even – and represent them concretely, pictorially and symbolically. This helps students make conclusions about what these concepts actually mean and construct viable arguments as to how they can be applied and extended.

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Standards for Mathematical Practice	**4.**	Model with mathematics.	This standard is covered throughout the program; the following are examples. **INSTRUCTION:** **New Concept**: Lesson 30, pp. 183-186; Lesson 35, pp. 216-219; Lesson 38, pp. 234-236; Lesson 39, pp. 240-241; Lesson 40, pp. 246-248; Lesson 41, pp. 258-260; Lesson 60, pp. 377-379; Lesson 64, pp. 406-408; Lesson 68, pp. 432-434; Lesson 84, pp. 546-549; Lesson 97, pp. 633-634; Lesson 107, pp. 704-706; Lesson 108, pp. 710-713 **Investigation(s):** Inv 2, pp. 128-131; Inv 3, pp. 189-191; Inv 4, pp. 251-256; Inv 5, pp. 317-324; Inv 6, pp. 383-386; Inv 7, pp. 450-456; Inv 11, pp. 728-730 **MAINTENANCE:** **Problem Solving:** Lesson 40, p. 244B; Lesson 45, p. 282B; Lesson 49, p. 305B; Lesson 52, p. 332B; Lesson 55, p. 350B; Lesson 67, p. 424B; Lesson 91, p. 597H; Lesson 114, p. 748B; Lesson 115, p. 755B	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 pages 711- 712 of the Student Edition, students make use of a chart to analyze problems involving time. The chart helps students model a real life situation to make sense of their solutions.

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Standards for Mathematical Practice	**5.**	Use appropriate tools strategically.	This standard is covered throughout the program; the following are examples. **<u>INSTRUCTION:</u>** **New Concept**: Lesson 27, pp. 165-167; Lesson 28, pp. 171-174; Lesson 43, pp. 269-272; Lesson 44, pp. 275-279; Lesson 55, pp. 350-352; Lesson 72, pp. 465-469; Lesson 98, pp. 638-640 **Investigation(s):** Inv 3, pp. 189-191; Inv 10, pp. 654-658 **<u>MAINTENANCE:</u>** **Power Up:** Lesson 41, p. 257; Lesson 43, p. 269; Lesson 49, p. 305; Lesson 61, p. 387; Lesson 70, p. 443; Lesson 71, p. 457; Lesson 76, p. 491; Lesson 78, p. 503; Lesson 80, p. 516 **Problem Solving:** Lesson 65, p. 412B; Lesson 95, p. 621B; Lesson 104, p. 679B; Lesson 111, p. 731H **Written Practice:** Lesson 27, pp. 167-170; Lesson 49, pp. 308-310 **Calculator Activities:** Lesson 11; Lesson 13; Lesson 22; Lesson 24; Lesson 49; Lesson 51; Lesson 72; Lesson 76; Lesson 81; Lesson 89; Lesson 96	*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 167 of the Student Edition, students learn how to strategically use thermometers to solve problems involving temperature.

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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 27, pp. 165-167; Lesson 44, pp. 275-279; Lesson 47, pp. 294-296; Lesson 53, pp. 340-342; Lesson 56, pp. 354-356, Example #3; Lesson 61, pp. 388-390; Lesson 65, pp. 413-415; Lesson 66, pp. 418-420; Lesson 73, pp. 473-475; Lesson 74, pp. 479-481; Lesson 77, pp. 498-500; Lesson 85, pp. 553-555; Lesson 88, pp. 573-576; Lesson 109, pp. 717-719; Lesson 110, pp. 723-724 **Investigation(s):** Inv 5, pp. 317-324; Inv 6, pp. 383-386; Inv 7, pp. 450-456; Inv 8, pp. 522-525 **MAINTENANCE:** **Power Up:** Lesson 15, p. 93; Lesson 16, p. 98; Lesson 17, p. 104; Lesson 18, pp. 111-112; Lesson 19, p. 118; Lesson 26, p. 159; Lesson 38, p. 233; Lesson 40, pp. 244-245; Lesson 44, p. 275; Lesson 48, pp. 299-300; Lesson 55, p. 350; Lesson 66, p. 418; Lesson 72, p. 464; Lesson 77, p. 498; Lesson 96, p. 627; Lesson 98, p. 638; Lesson 101, p. 659; Lesson 102, p. 664; Lesson 106, p. 696; Lesson 107, p. 703; Lesson 109, p. 717 **Written Practice:** Lesson 45(#6, #7, #25, #26); Lesson 46(#3, #11, #29); Lesson 47(#4, #8, #29)	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 167 of the Student Edition, students learn the necessity of attending to precision. The scale in the problem may look like it is pointing to 600 at first glance, but students need to look carefully to get the correct 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. **INSTRUCTION:** **New Concept**: Lesson 15, pp. 93-95; Lesson 22, pp. 139-142; Lesson 24, pp. 149-151; Lesson 26, pp. 159-162; Lesson 34, pp. 211-213; Lesson 48, pp. 294-296; Lesson 51, pp. 326-329, Example #2, #3, #4; Lesson 54, pp. 345-347; Lesson 55, pp. 350-352; Lesson 56, pp. 354-356; Lesson 59, pp. 371-374; Lesson 75, pp. 486-488; Lesson 78, pp. 504-508; Lesson 86, pp. 559-561; Lesson 92, pp. 605-607; Lesson 94, pp. 616-617; Lesson 102, pp. 665-666; Lesson 106, pp. 696-699; Lesson 116, pp. 761-763; Lesson 117, pp. 768-769; Lesson 118, pp. 773-775; Lesson 119, pp. 778-780; Lesson 120, p. 784 **Investigation(s):** Inv 4, pp. 251-256 **MAINTENANCE:** **Written Practice:** Lesson 24(#6, #7, #8, #9, #10, #11, #12, #25, #28)	*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, Investigation 4 on page 251 of the Student Edition focuses on discerning different types of patterns, and emphasizes their importance in problem solving. Students learn how finding a pattern can help them answer real-world problems like questions 5 and 6.

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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 13, pp. 81-84; Example 1; Lesson 22, pp. 139-142; Lesson 25, pp. 154-157; Lesson 29, pp. 177-179, Example 2; Lesson 35, pp. 216-219, Example 2, 3; Lesson 42, pp. 263-266; Lesson 59, pp. 371-374, Example 1, 2, 4, 5; Lesson 70, pp. 443-445; Lesson 71, pp. 457-461; Lesson 76, pp. 492-494; Lesson 79, pp. 511-513, Lesson 80, pp. 516-520, Example 2; Lesson 81, pp. 526-530; Lesson 82, pp. 535-536; Lesson 90, pp. 587-589; Lesson 91, pp. 598-600; Lesson 95, pp. 621-623, Example 4; Lesson 100, pp. 650-651, Lesson 101, pp. 660-661; Lesson 104, pp. 679-682, Example 2, 3, 4, 5; Lesson 111, pp. 732-733; Lesson 112, pp. 737-738; Lesson 113, pp. 743-744 **Investigation(s):** Inv 2, pp. 128-131 **MAINTENANCE:** **Power Up:** Lesson 25, p. 154; Lesson 26, p. 159; Lesson 27, p. 165; Lesson 28, p. 171 **Written Practice:** Lesson 43(#15, #16, #17, #28)	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 178 of the Student Edition, 5th graders see that every time they multiply a number by a power of ten, a certain number of zeros are added to the number. This repeated reasoning allows them to use mental math as a shortcut.

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5.OA Operations and Algebraic Thinking		**Write and interpret numerical expressions.**	In *Intermediate 5,* students develop an initial understanding of writing and interpreting numerical expressions by first learning how to easily evaluate repeated addition in lesson 13. The student goes on to learn how to use parentheses and the use of the associate property in Lesson 24 to be able to easily write and interpret the equation they would like to solve. Throughout the year students get further instruction on parenthesis and the use of the distributed property to help them interpret numerical expressions. The students are able to practice writing and interpreting numerical expressions during the mental math portion of the power-up, in frequent practice sets, and are given cumulative assessments throughout the year to ensure mastery.
	5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	**INSTRUCTION:** **New Concept**: Lesson 24, pp. 149-151; Lesson 48, pp. 300-301; Lesson 49, pp. 305-307, Example 3; Lesson 51, pp. 326-329, Example 3, 4; Lesson 52, p. 335, Example 5; Lesson 78, p. 506, Example 4 **MAINTENANCE:** **Power Up:** Lesson 82, p. 534; Lesson 83, p. 539; Lesson 84, p. 546; Lesson 85, p. 553; Lesson 86, p. 559; Lesson 87, p. 565; Lesson 88, p. 572; Lesson 89, p.580; Lesson 90, pp. 586-587 **Written Practice:** Lesson 24 (#6, #7); Lesson 25 (#6, #7, #8, #9); Lesson 27 (#9,#28); Lesson 28(#8); Lesson 29(#10, #28); Lesson 31(#17, #18); Lesson 33(#19); Lesson 35(#14); Lesson 37(#20,#21,#23); Lesson 38(#19, #20); Lesson 40(#19); Lesson 41(#21); Lesson 42(#28); Lesson 44(#17); Lesson 47(#12); Lesson 48(#9, #10); Lesson 49(#23); Lesson 50(#14, #15, #21); Lesson 51(#4, #12,#24, #26, #28); Lesson 52(#1, #3, #23, #26); Lesson 53(#1, #5, ##8); Lesson 55(#1, #7, #23, #26); Lesson 57(#8, #11, #12, #30); Lesson 62(#1, #22, #30); Lesson 63(#1,#13, #20, #21, #30); Lesson 65(#2, #25, #26, #30); Lesson 66(#4, #7); Lesson 67(#3, #16, #29); Lesson 68(#4, #17); Lesson 69(#2, #30); Lesson 70(#22); Lesson 71(#2, #3, #5); Lesson 72(#29); Lesson 77(#21); Lesson 79(#3, #19); Lesson 81(#18, #19, #30); Lesson 85(#4, #24) Lesson 86(#19, #28); Lesson 90(#29); Lesson 91(#1, #2, #17, #30); Lesson 93(#2, #8, #17, #22, #27,#30); Lesson 94(#3, #12, #14, #16, #21); Lesson 95(#12, #13, #47, #30); Lesson 96(#25, #28); Lesson 97(#3, #16, #18, #29); Lesson 99(#3, #6, #14, #15, #28) Lesson102(#5,#11); Lesson 103(#8, #16, #21); Lesson 104(#2, #14, #25, #29); Lesson 108(#1, #2, #10, #15, #28, #29); Lesson 109(#12, #29); Lesson 112(#9, #14, #25); Lesson 113(#12, #29); Lesson 114(#11, #16, #26); Lesson 119(#3, #4, #19, #29, #30) **Learning Stations:** Lesson 24, 48

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5.OA Operations and Algebraic Thinking	**5.OA.2**	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	**<u>INSTRUCTION:</u>** **New Concept**: Lesson 13, pp. 81-84; Lesson 24, pp. 149-151; Lesson 49, pp. 305-308; Lesson 51, pp. 326-329 **<u>MAINTENANCE:</u>** **Written Practice:** Lesson 13(#6, #12, #17, #21, #22, #28, #29); Lesson 14(#9, #10, #13, #18, #26); Lesson 15(12, #18, #20, #28); Lesson 16(#14, #19, #28); Lesson 17(#14, 18, #19, #28); Lesson 18(#19, #26, #30); Lesson 24(#6, #7, #8, #9, #16, #18, #19, #20, #23, #28); Lesson 25(#6, #7, #8, #9, #16, #20, #27); Lesson 51(#12, #13, #14, #15, #16, #18, #24); Lesson 52(#1, #3, #12, #13, #14, #15, #17, #24, #26, #30); Lesson 53(#1, #9, #14, #15, #16, #17, #19, #26); Lesson 54(#1, #13, #14, #20, #26, #28); Lesson 56(#1, #3, #20, #26); Lesson 59(#2, #22, #26)
		Analyze patterns and relationships.	*Intermediate 5* provides gradual instruction of generating and graphing two numerical pairs on a coordinate plane so that all students will be able to have mastery. At the beginning of the year, students will understand how to find the pattern and use a function table to generate pairs of numbers. Then students will practice on continuing a function box and simple graphing. Finally, the students learn how to analyze the relationships between the pairs by graphing on a coordinate plane. Students practice in the power-up and practice set, and are assessed on this standard throughout the school year to secure mastery.
	5.OA.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.	**<u>INSTRUCTION:</u>** **Investigation(s):** *Inv 4, pp. 251-256, Inv 6, pp. 383-386; Inv 8, pp. 522-525* **Standards Success Activity:** Activity 3 **<u>MAINTENANCE:</u>** **Written Practice:** *Lesson 45(#30); Lesson 47(#30); Lesson 48(#27); Lesson 49(#24); Lesson 56(#30); Lesson 76(#28)*

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5.NBT Number and Operations in Base Ten		**Understand the place value system.**	*Intermediate 5* provides the critical transition from whole number place value to reading, writing and comparing decimal numbers to thousandths. This begins in lesson 64 by using the concrete example of money to model decimal numbers. It continues in Lesson 67 – 69 as the students are able to read, write, and compare different values of numbers. As the year progresses students work with the power of 10 to fully understand the value of each number; they are able to round decimal numbers to any place value, and can write each number out in expanded form. All of these concepts are continuously practiced and reviewed throughout the year and appear both on the practice sets and cumulative tests to ensure deep and long-lasting understanding.
	5.NBT.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. .	**INSTRUCTION:** **New Concept**: Lesson 3, pp. 17-19; Lesson 7, pp. 39-43; Lesson 52, pp. 333-336; Lesson 64, pp. 406-408; Lesson 106, pp. 696-699 **MAINTENANCE:** **Written Practice:** Lesson 3(#1, #2, #3, #4, #5, #21, #22, #23, #24); Lesson 7(#2, #4); Lesson 8(#1, #7, #10); Lesson 24(#22); Lesson 29(#15); Lesson 52(#9, #11, #26, #28); Lesson 56(#5, #7); Lesson 66(#1, #7); Lesson 69(#26); Lesson 80(#26) **Learning Stations:** Lesson 3; Lesson 52; Lesson 64
	5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**INSTRUCTION:** **New Concept**: Lesson 29, pp. 177-179, Example 2; Lesson 64, pp. 406-408; Lesson 68, pp. 432-434; Lesson 78, pp. 504-508; Lesson 111, pp. 732-733; Lesson 118, pp. 773-775 **MAINTENANCE:** **Written Practice:** Lesson 30(#13, #14); Lesson 34(#4, #5, #12, #16, #20); Lesson 35(#5, #6, #19, #21); Lesson 46(#19, #20); Lesson 64(#7, #8, #9, #30); Lesson 78(#18, #29); Lesson 79(#4, #19); Lesson 80(#16, #17, #27); Lesson 111(#12, #16, #26); Lesson 112(#4, #17, #25); Lesson 113(#14); Lesson 114(#14); Lesson 115(#10, #11); Lesson 116(#18); Lesson 117(#14); Lesson 118(#17, #19, #20, #21, #28); Lesson 119(#13, #18, #21); Lesson 120(#14) **Learning Stations:** Lesson 29; Lesson 64; Lesson 111

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5.NBT Number and Operations in Base Ten	**5.NBT.3**	Read, write, and compare decimals to thousandths.	
	5.NBT.3a	Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000).	**INSTRUCTION:** **New Concept**: Lesson 64, pp. 406-408; Lesson 66, pp. 418-420; Lesson 67, pp. 425-428; Lesson 68, pp. 432-434; Lesson 106, pp. 696-699 **Standards Success Activity:** Activity 1 **MAINTENANCE:** **Written Practice:** Lesson 64(#7, #8, #9, #30); Lesson 68(#7, #9, #10, #11, #29, #30); Lesson 74(#2, #6, #7); Lesson 81(#4); Lesson 82(#5); Lesson 85(#3, #22); Lesson 102(#8); Lesson 105(#4); Lesson 109(#5); Lesson 110(#5, #9); Lesson 111(#12); Lesson 112(#4) **Learning Stations:** Lesson 68
	5.NBT.3b	Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**INSTRUCTION:** **New Concept**: Lesson 69, pp. 438-439; Lesson 70, pp. 443-445, Example 2; Lesson 71, pp. 457-461; Lesson 100, pp. 650-651; Lesson106, pp. 696-699, Example 3, 4 **MAINTENANCE:** **Written Practice:** Lesson 70(#13, #14, #23); Lesson 71(#1, #8,#14, #18, #19, #20, #25, #28); Lesson 73(#1, #5, #11, #15); Lesson 74(#19, #21, #23, #26, #27); Lesson 75(#1, #3, #7, #19, #23); Lesson 76(#7, #9); Lesson 77(#3, #6, #21); Lesson 79(#12, #14); Lesson 83(#2, #9, #19, #22); Lesson 102(#6, #8, #29); Lesson 117(#5) **Learning Stations:** Lesson 69; Lesson 106

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5.NBT Number and Operations in Base Ten	**5.NBT.4**	Use place value understanding to round decimals to any place.	**INSTRUCTION:** **New Concept**: *Lesson 62, pp. 395-396; Lesson 64, pp. 406-408;* Lesson 88, pp. 573-576; Lesson 104, pp. 679-682; Lesson 106, pp. 696-698, Example 2; Lesson 108, pp. 710-713 **Standards Success Activity:** Activity 8 **MAINTENANCE:** **Power Up:** Lesson 105, p. 687 **Written Practice:** Lesson 104(#9, #12); Lesson 105(#9, #30); Lesson 106 (#4, #7, #8, #10); Lesson 107(#4, #23); Lesson 110(#1)
		Perform operations with multi-digit whole numbers and with decimals to hundredths.	The groundwork that *Saxon Math* lays in earlier grade levels creates a straightforward transition in working with algorithms that includes multi-digit whole numbers and decimals to hundredths. Throughout the new concepts students are taught how to model and explain each solution by using money, rectangular arrays, and area models on graph paper. In the problem solving portion of the power up, students are able to work with different strategies to solve multi-digit problems and are asked to write down an explanation on why they picked the strategy used. The standard is repeatedly practiced in the practice set and assessed in the cumulative assessment throughout the year to ensure a deep level of mathematical understanding.

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NBT Number and Operations in Base Ten	**5.NBT.5**	Fluently multiply multi-digit whole numbers using the standard algorithm.	**INSTRUCTION:** **New Concept**: Lesson 17, pp. 105, 108; Lesson 29, pp. 177-179; Lesson 51, pp. 311-313; Lesson 55, pp. 350-352; Lesson 56, pp. 354-356 **MAINTENANCE:** **Power Up:** Lesson 23, p. 145; Lesson 25, p. 154; Lesson 26, p. 159; Lesson 27, p. 165; Lesson 28, p. 171; Lesson 45, p. 282; Lesson 59, p. 371; Lesson 68, p. 431; Lesson 118, p. 773 **Written Practice:** Lesson 17(#2, #5, #6, #7, #8, #11, #12, #19, #20); Lesson 18(#9, #10, #11, #12, #14, #16, #30); Lesson 19(#10, #11, #12); Lesson 20(#4, #13, #14, #15, #17, #30); Lesson 21(#13, #14, #15); Lesson 22(#10, #11, #12,#16, #17, #18); Lesson 23(#10, #11, #12, #28); Lesson 24(#13, #14, #15, #23); Lesson 25(#3, #13, #14, #15); Lesson 26(#12, #13); Lesson 27(#2, #4, #11, #12, #13); Lesson 29(#6, #7, #8, #9, #10, #14); Lesson 30(#13, #14); Lesson 31(#10, #11); Lesson 32(#5, #11, #13); Lesson 33(#13, #14, #15); Lesson 37(#4, #14, #15, #18, #22); Lesson 40(#15, #17); Lesson 45(#17, #18); Lesson 46(#19, #20); Lesson 47(#17, #18, #19, #23); Lesson 48(#15, #16, #21, #23); Lesson 49(#16, #17, #21); Lesson 51(#19); Lesson 56(#9, #10); Lesson 57(#17, #19, #20); Lesson 58(#13); Lesson 59(#15,#21); Lesson 65(#17, #24); Lesson 70(#4, #11); Lesson 71(#17,); Lesson 74(#15); Lesson 75(#15, #16, #18); Lesson 79(#26); Lesson 86(#15); Lesson 91(#15, #16); Lesson 103(#15); Lesson 116(#28) **Learning Stations:** Lesson 29; Lesson 51; Lesson 55; Lesson 56

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NBT Number and Operations in Base Ten	**5.NBT.6**	Find whole-number quotients of whole numbers with up to four-digit dividends and two-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 54, pp. 345-347; Lesson 92, pp. 605-607; Lesson 94, pp. 616-617 **Standards Success Activity:** Activity 6 **MAINTENANCE:** **Power Up:** Lesson 56, p. 354; Lesson 58, p. 366; Lesson 60, p. 377; Lesson 61, p. 387; Lesson 62, p. 394; Lesson 64, p. 405; Lesson 72, p. 464 **Written Practice:** Lesson 54(#9, #10, #11, #18, #30); Lesson 55(#8, #9, #10, #30); Lesson 57(#13); Lesson 58(#7, #8, #9); Lesson 59(#22); Lesson 60(#18, #20); Lesson 61(#20, #21); Lesson 62(#19, #20); Lesson 63(#18, #19, #21); Lesson 64(#18); Lesson 65(#19, #20); Lesson 66; Lesson 67(#18); Lesson 68(#18, #24); Lesson 69(#21); Lesson 70(#17); Lesson 72(#18, #19); Lesson 75(#17); Lesson 79(#20); Lesson 81(#16); Lesson 82(#21); Lesson 84(#14); Lesson 86(#17); Lesson 87(#14); Lesson 89(#2, #19, #23); Lesson 91(#19); Lesson 94(#7, #15); Lesson 96(#20, #21); Lesson 98(#14); Lesson 99(#16); Lesson 101(#15, #16); Lesson 103(#17, #19); Lesson 114(#15, #16); Lesson 116(#21, #22, #23); Lesson 119(#14, #16); Lesson 120(#19) **Learning Stations:** Lesson 54; Lesson 92

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NBT Number and Operations in Base Ten	**5.NBT.7**	Add, subtract, multiply, and divide decimals to hundredths, 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 and explain the reasoning used.	**INSTRUCTION:** **New Concept:** Lesson 13, pp. 81-84, Example 2, 3, 4; *Lesson 17, pp. 105-108, Example 3, 4; Lesson 26, pp. 159-162, Example 4; Lesson 29, pp. 177-179, Example 2; Lesson 51, pp. 326-329, Example 3; Lesson 54, pp. 345-347, Example 3; Lesson 56, pp. 354-356, Example 3;* Lesson 73, pp. 473-475; Lesson 99, pp. 644-646; Lesson 102, pp. 665-666, Example 1, 2; Lesson 109, pp. 717-719; Lesson 110, pp. 723-724; Lesson 111, pp. 732-733; Lesson 117, pp. 768-769; Lesson 118, pp. 773-775; Lesson 119, pp. 778-780 **MAINTENANCE:** **Written Practice:** Lesson 73(#3, #7, #12, #14, #17, #20); Lesson 75(#3,#12, #13, #14, #17); Lesson 78(#10, #14, #15, #16, #19, #24); Lesson 80(#12, #14, #15); Lesson 85(#14) ; Lesson 99(#4, #12, #13); Lesson 100(#10, #12, #13, #15, #19); Lesson 101(#11, #12,#16, #24); Lesson 102(#11, #12, #13, #15, #16,#17, #25); Lesson 103(#12, #13, #14, #17, #19); Lesson 105(#10, #18, #19, #23); Lesson 106(#2, #14, #15, #18); Lesson 107(# 1, #14, #15, #17, #18); Lesson 108(#3, #14); Lesson 109(#1, #3,#11, #13, #14, #15, #16, #17); Lesson 110(#10, #13, #14); Lesson 111(#10, #11, #13, #14, #15, #16); Lesson 112(#3, #12,#13, #14, #15, #16, #17, #18, #19); Lesson 113(#11, #12, #13, #14, #15, #18); Lesson 114(#10, #11, #12, #13, #14); Lesson 115(#9, #10, #11, #12, #13, #16) Lesson 116(#8, #19, #20, #21); Lesson 117(#12, #13, #14, #15, #16, #17, #18, #19); Lesson 118(#13, #15, #16, #17, #18, #19, #20, #21, #28); Lesson 119(#1, #12, #13, #15, #17, #18, #19, #20, #21); Lesson 120(#1, #12, #14, #15, #17, #18, #26, #27) **Learning Stations:** Lesson 99; Lesson 102; Lesson 109; Lesson 110; Lesson 111; Lesson 117; Lesson 118; Lesson 119

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions		**Use equivalent fractions as a strategy to add and subtract fractions.**	In *Intermediate 5* students develop strategies to be able to add and subtract unlike denominators. Saxon begins by building concrete representation in Lesson 23 and 39 by using fraction models. These build on conceptual understanding of adding and subtracting fractions in Lesson 43 where students are asked to translate from the visual model to the written equation. The program gradually builds from there so that the students are able to add and subtract unlike denominators in word problems. The series gives students multiple opportunities for practice and review in the practice set and in using the learning stations. Frequent cumulative tests allow for easy progress-monitoring and ensure a long lasting understanding of adding and subtracting fractions.
	5.NF.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	**INSTRUCTION:** **New Concept:** Lesson 116, pp. 761-763, Example 2, 3, 4 **MAINTENANCE:** **Power Up:** Lesson 61, p. 387; Lesson 62, p. 394; Lesson 64, p. 405; Lesson 65, p. 412; Lesson 66, p. 418; Lesson 73, p. 472; Lesson 116, p. 760 **Written Practice:** Lesson 116(#5, #10, #11, #12, #13, #14, #15, #25, #29); Lesson 117(#1, #20, #21, #22, #23, #27); Lesson 118(#10, #11, #22, #23, #24, #25); Lesson 119(#8, #9, #10, #11); Lesson 120(#20, #21, #22, #23) **Learning Stations:** Lesson 116

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions	**5.NF.2**	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	**INSTRUCTION:** **New Concept:** Lesson 23pp. 146-147; Lesson 39, pp. 240-241; Lesson 41, pp. 258-260; Lesson 43, pp. 269-272; Lesson 59, pp. 371-374; Lesson 60, pp. 377-379; Lesson 63, pp. 401-402, Example 2; Lesson75, pp. 486-488; Lesson 91, pp. 598-600; Lesson 116, pp. 761-763 **MAINTENANCE:** **Power Up:** Lesson 63, p. 400 **Written Practice:** Lesson 26(#4); Lesson 28(#29); Lesson 31(#27); Lesson 32(#29); Lesson 66(#6, #20, #21); Lesson 67(#14, #15, #20, #21, #23); Lesson 72(#4, #7, #21, #24); Lesson 86(#8, #12, #28); Lesson 87; Lesson 94(#21, #27); Lesson 99(#30); Lesson 101(#30); Lesson 107(#13, #29); Lesson 110(#4, #6, #16, #27, #28, #30); Lesson 112(#21, #22, #29, #30); Lesson 113(#19, #21, #27); Lesson 114; Lesson 116(#5, #10, #11, #12, #13, #14, #15, #16, #25, #29); Lesson 118(#10, #11, #22, #23, #24, #25) **Learning Stations:** Lesson 41; Lesson 59; Lesson 60; Lesson 63; Lesson 75; Lesson 91

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions		**Apply and extend previous understandings of multiplication and division to multiply and divide fractions.**	The foundation of multiplication and division that was laid in previous grade levels in Saxon establishes a straightforward method to multiplying and dividing using fractions. In *Intermediate 5*, starting in Lesson 24, concrete models are used in to introduce dividing and multiplying fractions. Furthermore, this lesson uses real world examples to help the students better understand how fractions fit in their everyday life. In Lesson 76, Example 3 students are taught two different methods of finding area while working with fractions. In Lesson 96 the students are taught how to use the reciprocals to divide fractions. Throughout the year the series incorporates numerous times for the students to practice in the power up, written practice and the learning stations. Furthermore, cumulative assessments are given to observe mastery.
	5.NF.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	**<u>INSTRUCTION:</u>** **New Concept:** Lesson 20, pp. 123-125; Lesson 40, pp. 246-248; Lesson 43, pp. 269-272; Lesson 58, pp. 366-368; Lesson 91, pp. 598-600; Lesson 95, pp. 621-623 **<u>MAINTENANCE:</u>** **Power Up:** Lesson 95, p. 621; Lesson 96, p. 627; Lesson 98, p. 638; Lesson 99, p. 644; Lesson 100, p. 649; Lesson 101, p. 659; Lesson 103, p. 670; Lesson 104, p. 679 **Written Practice:** Lesson 41(#26); Lesson 42(#5); Lesson 44(#6, #9, #10, #12, #13); Lesson 46(#1, #12, #13, #14, #15, #24, #26); Lesson 47(#9, #11, #12, #13); Lesson 49(#10, #11, #12); Lesson 53(#9, #10); Lesson 57(#22, #26); Lesson 58(#19); Lesson 59(#12); Lesson 61(#2); Lesson 62(#10, #18); Lesson 66(#11, #20, #21); Lesson 67(#1, #2, #10, #14, #20); Lesson 68(#8, #12, #19, #22); Lesson 91(#6) **Learning Stations:** Lesson 40; Lesson 43

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions	**5.NF.4**	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	
	5.NF.4a	Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.	**<u>INSTRUCTION:</u>** **New Concept:** *Lesson 46, pp. 289-291;* Lesson 76, pp. 492-494; Lesson 86, pp. 559-561 **<u>MAINTENANCE:</u>** **Power Up:** Lesson 48, pp. 299-300; Lesson 49, p. 305; Lesson 50, p. 311; Lesson 63, p. 400; Lesson 64, p. 405; Lesson 66, p. 418; Lesson 68, p. 431; Lesson 69, p. 437; Lesson 71, p. 457; Lesson 73, p. 472; Lesson 75, p. 485; Lesson 77, p. 498; Lesson 79, p. 511; Lesson 81, p. 526; Lesson 90, pp. 586-587; Lesson 92, p. 604; Lesson 94, p. 616; Lesson 95, p. 621; Lesson 96, p. 627; Lesson 104, p. 679; Lesson 106, p. 696; Lesson 108, p. 710 **Written Practice:** *Lesson 48(#24); Lesson 49(#3, #4); Lesson 50(#4); Lesson 53(#3); Lesson 54(#3); Lesson 55(#2); Lesson 56(#2); Lesson 57(#5); Lesson 58(#3); Lesson 65(#4);* Lesson 76(#9, #20, #21, #22, #23, #24, #26); Lesson 88(#5, #11, #13); Lesson 89(#11); Lesson 96(#3, #10, #23); Lesson 104(#4, #20, #21); Lesson 111(#30); Lesson 115(#19, #26, #29); Lesson 117(#24, #28); Lesson 118(#8, #26) **Learning Stations:** Lesson 76
	5.NF.4b	Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	**<u>INSTRUCTION:</u>** **New Concept:** Lesson 76, pp. 492-494 **Standards Success Activity:** Activity 2 **<u>MAINTENANCE:</u>** **Written Practice:** Lesson 77(#14, #15, #16, #20, #28, #30); Lesson 115(#19, #26) **Learning Stations:** Lesson 76

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions	**5.NF.5**	Interpret multiplication as scaling (resizing), by:	
	5.NF.5a	Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	**<u>INSTRUCTION:</u>** **New Concept:** Lesson 86, pp. 559-561 **Standards Success Activity:** Activity 9
	5.NF.5a	Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n\text{x}a)/(n\text{x}b)$ to the effect of multiplying a/b by 1.	**<u>INSTRUCTION:</u>** **New Concept:** *Lesson 86, pp. 559-561; Lesson 120, p. 784* **Standards Success Activity:** Activity 9 **<u>MAINTENANCE:</u>** **Learning Stations:** *Lesson 86*
	5.NF.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	**<u>INSTRUCTION:</u>** **New Concept:** *Lesson 76, pp. 492-494; Lesson 86, pp. 559-561; Lesson 120, p. 784* **Standards Success Activity:** Activity 10 **<u>MAINTENANCE:</u>** **Written Practice:** *Lesson 78(#1, #21, #22, #23); Lesson 96(#2, #3, #10, #13, #14, #15); Lesson 111(#30); Lesson 115(#26); Lesson 117(#24, #28)* **Learning Stations:** *Lesson 120* **Performance Task(s):** 4

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions	**5.NF.7**	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] [[1]Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade.]	
	5.NF.7a	Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.	**INSTRUCTION:** **New Concept:** *Lesson 87, pp. 565-568, Example 3; Lesson 95, pp. 621-623* **Standards Success Activity:** Activity 5 **MAINTENANCE:** **Written Practice:** *Lesson 87(#12, #21, #22); Lesson 92(#6, #22); Lesson 93(#5, #14, #16); Lesson 95(#5); Lesson 96(#6, #8, #13, #14, #15); Lesson 97(#4)* **Learning Stations:** *Lesson 87; Lesson 95*
	5.NF.7b	Interpret division of a whole number by a unit fraction, and compute such quotients.	**INSTRUCTION:** **New Concept:** Lesson 87, pp. 565-568, Example 3; Lesson 96, pp. 627-629, Example 2 **Standards Success Activity:** Activity 5 **MAINTENANCE:** **Written Practice:** Lesson 90(#12, #22); Lesson 93(#5, #14, #16); Lesson 96(#6, #8, #13, #14, #15)

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.NF Number and Operations – Fractions	**5.NF.5c**	Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.	**<u>INSTRUCTION:</u>** **New Concept:** *Lesson 87, pp. 565-568, Example 3* **Standards Success Activity:** Activity 5 **<u>MAINTENANCE:</u>** **Written Practice:** *Lesson 92(#6, #22); Lesson 93(#5, #14, #16); Lesson 94(#6, #8); Lesson 95(#5)*

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.MD Measurement and Data		**Convert like measurement units within a given measurement system.**	In *Math Intermediate 5*, students have many opportunities to develop skills to convert like measurement units. This starts in the power up portion of the class in Lesson 14 where the students are asked to convert inches to feet. As the year progresses the students work on deepening their converting skills and starting in Lesson 85, during the new concept, students use multi-step, real world problems to find the correct unit of measurement. From the start of the program, students are able to comprehend converting measurements by completing problems in the power ups and written practices. Throughout the year, students take cumulative assessments on this standard to ensure a deep understanding of converting like measurements.
	5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	**<u>INSTRUCTION:</u>** **New Concept**: Lesson 44, pp. 275-279, Example 1, 4; Lesson 46, pp. 289-291; Lesson 47, pp. 294-296; Lesson 65, pp. 413-415; Lesson 66, pp. 418-420, Example 1; Lesson 74, pp. 479-481, Example 1, 2, 3; Lesson 77, pp. 498-500; Lesson 85, pp. 553-555 **<u>MAINTENANCE:</u>** **Power Up:** Lesson 14, p. 86; Lesson 18, pp. 111-112; Lesson 20, p. 123; Lesson 21, pp. 132-133; Lesson 23, p. 145; Lesson 24, p. 149; Lesson 27, p. 165; Lesson 28, p. 171; Lesson 32, p. 198; Lesson 38, p. 233; Lesson 39, p. 239; Lesson 40, pp. 244-245; Lesson 41, p. 257; Lesson 44, p. 275; Lesson 48, pp. 299-300; Lesson 50, p. 311; Lesson 52, pp. 332-333; Lesson 53, p. 339; Lesson 55, p. 350; Lesson 56, p. 354; Lesson 57, p. 359; Lesson 58, p. 366; Lesson 65, pp. 412-413; Lesson 66, p. 418; Lesson 76, p. 491; Lesson 78, p. 503; Lesson 82, p. 534; Lesson 91, p. 597; Lesson 99, p. 644; Lesson 100, p. 649; Lesson 106, p 696; Lesson 107, p. 703; Lesson 110, p. 723; Lesson 111, p. 731; Lesson 112, p. 736; Lesson 114, p. 748; Lesson 117, p. 767; Lesson 118, p. 773 **Written Practice:** Lesson 44(#4, #14); Lesson 45(#6, #7, #26); Lesson 46(#3, #6, #11, #29); Lesson 47(#4, #8, #24, #29); Lesson 50(#4, #5); Lesson 65(#4, #8, #9); Lesson 67(#8, #11, #28, #30); Lesson 74(#5, #6, #8, #26, #30); Lesson 75(#9, #26); Lesson 77(#4, #5, #7, #8, #28,#29); Lesson 85(#3, #10, #11); Lesson 86(#26); Lesson 89(#5, #10, #28); Lesson 90(#3); Lesson 97(#7, #9, #25); Lesson 47; Lesson 65; Lesson 66; Lesson 74; Lesson 77; Lesson 85

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.MD Measurement and Data		**Represent and interpret data.**	In *Intermediate 5,* Investigation 5 introduces line plots. Students are taught how to make and analyze the data given to them to find the appropriate answers. In Lesson 74 students are asked to make a line plot using measurements in fractions of a unit and are given questions to answer regarding the information provided. This concept is continuously reviewed and assessed on written assessments throughout the year and additional ancillary pieces help ensure long-term mastery.
	5.MD.2	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.	**INSTRUCTION:** **New Concept:** Lesson 74, pp. 479-481, Example 4 **Investigation(s):** *Inv 5, pp. 317-324* **Standards Success Activity:** Activity 4 **MAINTENANCE:** **Written Practice:** Lesson 52(#25)
		Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	*Intermediate 5* introduces volume in Lesson 77 using problem solving. Here, students are asked to make a model of the rectangular prism using 1 inch cubes and to add the cubes together. In Lesson 87, 98 and 103 students are again asked to count unit cubes to find the appropriate answer. Lesson 103 teaches the formula and how to estimate volume. Students are given ample practice opportunities in the problem solving problems and written practice sets. Saxon's cumulative approach to practice and assessment ensures the students to develop a deep understanding of working with volume and can demonstrate understanding in a testing situation.

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.MD Measurement and Data	**5.MD.3**	Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	
	5.MD.3a	A cube with side length 1 unit, called a "unit cube, " is said to have "one cubic unit" of volume, and can be used to measure volume.	**INSTRUCTION:** **New Concept:** Lesson 103, pp. 671-675, Example 1, 2, 3, 4, 5 **MAINTENANCE:** **Written Practice:** Lesson 103(#27); Lesson 104(#27); Lesson 105(#27); Lesson 106(#25); Lesson 107(#28); Lesson 108(#25); Lesson 109(#27); Lesson 113(#26); Lesson 117(#10); Lesson 119(#26); Lesson 120(#27) **Learning Stations:** Lesson 103
	5.MD.3b	A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	**INSTRUCTION:** **New Concept:** Lesson 103, pp. 671-675, Example 1, 2, 3, 4, 5 **MAINTENANCE:** **Written Practice:** Lesson 103(#27); Lesson 104(#27); Lesson 105(#27); Lesson 106(#25); Lesson 107(#28); Lesson 108(#25); Lesson 109(#27); Lesson 113(#26); Lesson 117(#10); Lesson 119(#26); Lesson 120(#27) **Learning Stations:** Lesson 103

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.MD Measurement and Data	**5.MD.4**	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	**INSTRUCTION:** **New Concept**: Lesson 103, pp. 671-675, Example 1, 2, 3, 4, 5 **MAINTENANCE:** **Problem Solving:** Lesson 77, p. 498B; Lesson 87,p. 565B; Lesson 98, p. 638B; Lesson 103, p. 670B; Lesson 108, p. 710B; Lesson 118, p. 773B **Written Practice:** Lesson 103(#27); Lesson 104(#27); Lesson 105(#27); Lesson 106(#25); Lesson 107(#28); Lesson 108(#25); Lesson 109(#27); Lesson 113(#26); Lesson 117(#10); Lesson 119(#26); Lesson 120(#27) **Performance Task(s):** 11
	5.MD.5	Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	
	5.MD.5a	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	**INSTRUCTION:** **New Concept:** Lesson 103, pp. 671-675, Example 1, 2, 3, 4, 5; Lesson 104, pp. 679-682, Example 5 **MAINTENANCE:** **Problem Solving:** Lesson 77, p. 498B; Lesson 87,p. 565B; Lesson 98, p. 638B; Lesson 103, p. 670B; Lesson 108, p. 710B; Lesson 118, p. 773B **Learning Stations:** Lesson 103 **Performance Task(s):** 11

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.MD Measurement and Data	**5.MD.5b**	Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.	**INSTRUCTION:** **New Concept:** Lesson 103, pp. 671-675, Example 1, 2, 3, 4, 5; Lesson 104, pp. 679-682, Example 5; Lesson 114, pp. 748-752, Example 3, 4 **Standards Success Activity:** Activity 7 **MAINTENANCE:** **Problem Solving:** Lesson 105, p. 657B; Lesson 108, p. 710B **Written Practice:** Lesson 103(#27); Lesson 104(#9, #12, #27); Lesson 105(#9, #12, #27); Lesson 106(#25); Lesson 107(#4, #28); Lesson 108(#25); Lesson 109(#8, #27); Lesson 113(#26); Lesson 117(#10); Lesson 119(#26); Lesson 120(#27) **Learning Stations:** Lesson 104
	5.MD.5c	Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.	**INSTRUCTION:** **New Concept:** *Lesson 103, pp. 671-675, Example 1, 2, 3, 4, 5; Lesson 104, pp. 679-682, Example 5; Lesson 114, pp. 748-752, Example 3, 4* **Standards Success Activity:** Activity 7 **MAINTENANCE:** **Problem Solving:** *Lesson 118, p. 773B*

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Common Core State Standards for Mathematics, Grade 5

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.G Geometry		**Graph points on the coordinate plane to solve real-world and mathematical problems.**	In *Intermediate 5* students demonstrate their ability to graph on a coordinate plane by completing Activities in Investigation 6 and 8. Students get further practice in written practice and are able to show mastery in the cumulative assessments. Naming different points and graphing skills on the coordinate planes get reinforced throughout the year in preparation for more advanced scenarios in future grades.
	5.G.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).	<u>**INSTRUCTION:**</u> **Investigation(s):** Inv 8, pp. 522-525 <u>**MAINTENANCE:**</u> **Written Practice:** Lesson 101(#26); Lesson 103(#28); Lesson 104(#26); Lesson 105(#11); Lesson 107(#26, #27); Lesson 112(#24)
	5.G.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	<u>**INSTRUCTION:**</u> **Investigation(s):** Inv 6, p. 383; Inv 8, pp. 522-525 <u>**MAINTENANCE:**</u> **Written Practice:** Lesson 84(#28); 101(#26); Lesson 103(#28); Lesson 104(#24, #26); Lesson 105(#11); Lesson 107(#26, # 27); Lesson 112(#24
		Classify two-dimensional figures into categories based on their properties.	Saxon introduces to two dimensional figures and their attributes in *Intermediate 5*, Lesson 32. In Lesson 36, students are taught how to classify triangles and in lesson 45 how to classify quadrilaterals. With Saxon's cumulative review each day, students are able to practice past concepts learned, and teachers can easily monitor student progress with Power Up, and the cumulative and extension tests included in the program, again ensuring that students develop a high level of mathematical understanding.

Domain	Standard	Text of Objective	*Saxon Math Intermediate 5* Citations/Examples ***References in italics indicate foundational.***
5.G Geometry	**5.G.3**	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	**INSTRUCTION:** **New Concept:** Lesson 32, pp. 198-202; Lesson 36, pp. 228-230; Lesson 45, pp. 282-286 **MAINTENANCE:** **Written Practice:** Lesson 44(#1); Lesson 45(#1); Lesson 46(#27) **Learning Stations:** Lesson 32
	5.G.4	Classify two-dimensional figures in a hierarchy based on properties.	**INSTRUCTION:** **New Concept:** Lesson 32, pp. 198-202; Lesson 36, pp. 228-230; Lesson 45, pp. 282-286 **MAINTENANCE:** **Power Up:** Lesson 47, p. 294; Lesson 57, p. 359; Lesson 67, p. 424 **Written Practice:** Lesson 32; Lesson 36(#6); Lesson 37(#25, #28,#29); Lesson 38(#7, #10, #21); Lesson 41(#1, #23); Lesson 42(#1, #11); Lesson 54(#29) **Learning Stations:** Lesson 32, 36, 45

