

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

These curriculum maps are designed to address CCSS Mathematics and Literacy outcomes. The overarching focus for all curriculum maps is building student’s content knowledge and literacy skills as they develop knowledge about the world.

Each unit provides several weeks of instruction. Each unit also includes various formative and summative assessments.

Taken as a whole, this curriculum map is designed to give teachers recommendations and some concrete strategies to address the shifts required by CCSS.

Focus strongly where the Standards focus	<p><i>SAUSD’s approach emphasizes effective instruction framed by performance tasks that engage students and promote inquiry. The tasks are sequenced around a topic leading to the big idea and essential questions in order to provide a clear and explicit purpose for instruction.</i></p> <ul style="list-style-type: none"> • Focus requires that we significantly narrow and deepen the scope of content in each grade so that students more deeply experience concepts. Instruction will focus at least 75% on grade level content, with remediation, extension, and application centered on grade level material. • Instruction engages students through cross-curricular concepts and application. • Each unit focuses on implementation of the Math Practices in conjunction with math content.
Coherence: Think across grades, and link to major topics within grades	<p><i>SAUSD recognizes that coherence promotes mathematical sense making. It is critical to think across grades and examine the progressions in the standards to ensure the development of major topics over time. The emphasis on problem solving, reasoning and proof, communication, representation, and connections require students to build comprehension of mathematical concepts, procedural fluency, and productive disposition.</i></p> <ul style="list-style-type: none"> • Teachers make coherent connections within and across grade levels through the art of questioning. Problems and activities connect clusters and domains. • A purposeful sequence of lessons build meaning by moving from concrete to abstract, with new learning built upon prior knowledge and connections made to previous learning. • Opportunities are provided for remediation of unfinished learning and extensions for deeper learning within grade level work.
Rigor: In major topics, pursue conceptual understanding, procedural	<p><i>SAUSD’s approach emphasizes increased rigor: Conceptual understanding, procedural skills & fluency, and real-world applications will be taught with equal intensity. These elements may be explicitly addressed separately or at other times combined. Students demonstrate deep conceptual understanding of core math concepts by applying them in new situations, as well as writing and speaking about their understanding. Students will make meaning of content outside of math by</i></p>

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

skills and fluency, and application	<i>applying math concepts to real-world situations.</i> <ul style="list-style-type: none">• Conceptual understanding underpins fluency; fluency is practiced in contextual applications; and applications build conceptual understanding.• Each unit contains a balance of challenging, multiple-step problems to teach new mathematics, and exercises to practice mathematical skills.
--	---

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy). **The Standards for Mathematical Practice are interwoven into every Unit of Study. Individual lessons may focus on one or more of the Math Practices, but every unit must include all eight:**

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision in computation, vocabulary and argument.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

How to Read this Document

- The purpose of this document is to provide an overview of the progression of units of study within a particular grade level describing what students will achieve by the end of the year. The work of **Big Ideas and Essential Questions** is to provide an overarching understanding of the mathematics structure that builds a foundation to support the rigor of subsequent grade levels. The standards listed include not only the Mathematics Content Standards, but also the Literacy and ELD Standards by which the students express their learning. The **Final Performance Task** will assess student learning via modeling of complex mathematical situations. Each unit incorporates components of the **SAUSD Theoretical Framework** and the philosophy of **Quality Teaching for English Learners (QTEL)**. Each of the math units of study highlights the Common Core instructional shifts for mathematics of focus, coherence, and rigor.
- First, read each module overview paragraph. This describes the purpose for the unit and the connections with previous and subsequent units. The content standards that are central to each unit are also listed here.
- On the map, note the titles across the year: These show the progression of units drawn from various domains.
- The timeline tells the length of each unit and when each unit should begin and end.

FIFTH GRADE UNITS OF STUDY	
Unit 1	<p style="text-align: center;">Whole Numbers and Decimals</p> <p>In this unit, students order and compare whole numbers and decimals to thousandths. They recognize patterns in numbers, and are able to place numbers on a line plot. Students can explain the use of zeroes and decimal points when multiplying or dividing by powers of ten. They can round decimals to any place.</p> <p>This unit centers on Math Content Standards 5.NBT.1, 5.NBT.2, 5.NBT.3, 5.NBT.4</p>
Unit 2	<p style="text-align: center;">Addition and Subtraction of Decimals</p> <p>Concrete models and drawings assist students in representing addition and subtraction of decimals. Students understand the relationship between addition and subtraction and can explain their reasoning in writing. Students begin the use of parentheses in writing numerical expressions. Line plots are used to display data.</p> <p>This unit centers on Math Content Standards 5.OA.1, 5.OA.2, 5.NBT.7, 5.MD.2</p>
Unit 3	<p style="text-align: center;">Addition and Subtraction of Fractions</p> <p>Students add and subtract fractions by using equivalent fractions to replace unlike denominators. They use visual fraction models to assist in problem solving. Benchmark fractions are used for estimation. Students recognize that fractions represent division of the numerator by the denominator. Fractions are displayed on a number plot.</p> <p>This unit centers on Math Content Standards 5.NF.1, 5.NF.2, 5.NF.3, 5.MD.2</p>

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

Unit 4	<p style="text-align: center;">Multiplication and Division of Whole Numbers</p> <p>In this unit, students multiply multi-digit numbers fluently, and divide whole numbers to four digits by two-digit divisors. Students can explain patterns of zeroes when multiplying by powers of ten, and understand that the size of the product depends upon the size of the factors. Students make measurement conversions within given systems. This unit centers on Math Content Standards 5.OA.1, 5.OA.2, 5.NBT.2, 5.NBT.5, 5.NBT.6, 5.NF.5, 5.MD.1</p>
Unit 5	<p style="text-align: center;">Volume</p> <p>In this unit, students will recognize volume as an attribute of solid figures. They understand that volume is measured in cubic units. They relate volume to addition and multiplication, while solving real world problems. They apply the volume formula for rectangular prisms. This unit centers on Math Content Standards 5.MD.3, 5.MD.4, 5.MD.5</p>
Unit 6	<p style="text-align: center;">Multiplication and Division of Decimals</p> <p>Students will make visual models to represent the multiplication and division of decimals. They will explain patterns in the placement of the decimal point and use exponents to denote powers of ten. They will understand that the size of the product depends upon the size of the factors. Students make measurement conversions within given systems. This unit centers on Math Content Standards 5.NBT.2, 5.NBT.7, 5.NF.5, 5.MD.1</p>
Unit 7	<p style="text-align: center;">Multiplication and Division of Fractions</p> <p>Students will extend their understanding of multiplication and division to fractions. They will solve real world problems, including finding the area of rectangles with fractional side lengths. They will understand that the size of the product depends upon the size of the factors. This unit centers on Math Content Standards 5.NF.4, 5.NF.5, 5.NF.6, 5.NF.7</p>
Unit 8	<p style="text-align: center;">Graphing on the Coordinate Grid</p> <p>In this unit, students are given two rules and generate two numerical patterns, identify ordered pairs, and graph them on a coordinate grid. Students will explain the use of the x-axis and y-axis. Students will solve real world problems by representing information in the first quadrant of the coordinate plane. This unit centers on Math Content Standards 5.OA.3, 5.G.1, 5.G.2</p>
Unit 9	<p style="text-align: center;">2-Dimensional Geometry</p> <p>Students will classify two-dimensional figures in a hierarchy based upon their attributes. They will understand that all figures in one category also belong to all subcategories of that category. This unit centers on Math Content Standards 5.G.3, 5.G.4</p>

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

TIMELINE	1 Week Early September	3 Weeks September	5 Weeks October to Early November
TRIMESTER 1	UNIT 1	UNIT 2	UNIT 3
TITLE	Whole Numbers & Decimals	Addition & Subtraction of Decimals	Addition & Subtraction of Fractions
END OF UNIT PERFORMANCE TASK	Compare populations of state capitals by converting them to millions with decimal notation.	Plan a trip for your family, adding the mileage between cities, using decimal notation.	Choose the items you would take with you as an immigrant from Europe where each person is allotted a certain weight for all their belongings.
BIG IDEAS AND ESSENTIAL QUESTION	<p>Big Idea: Different values can be represented in many ways.</p> <ul style="list-style-type: none"> • What patterns can we identify in the base ten system? • How does the position of a number determine its value? • How can we simplify the problem solving process? • What kinds of models can be used to represent decimals? 	<p>Big Idea: Real-world problems can be solved by combining or separating groups.</p> <ul style="list-style-type: none"> • How can addition and subtraction of decimals be represented by objects, pictures, words, and numbers? • What are some ways that decimals can be combined or separated? • How are decimals used to represent numbers in real world situations? 	<p>Big Idea: Real-world problems can be solved by combining or separating groups.</p> <ul style="list-style-type: none"> • How are fractions related to decimals? • How are common denominators used to compare fractions? • What are some ways that fractions can be combined or separated? • How are fractions used to represent numbers in real world situations?
COMPLEX TEXTS / RESOURCES	HM chapter 3	HM chapters 5, 12	HM chapters 2, 4, 7, 8, 9
MATH CONTENT STANDARDS CENTRAL TO THIS UNIT	<p>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.</p> <p>5 NBT 2 Explain patterns in the number of zeroes 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.</p> <p>5 NBT 3 Read, write, and compare decimals to thousandths.</p>	<p>5 OA 1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5 OA 2 Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them.</p> <p>5 NBT 7 Add and subtract 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.</p>	<p>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.</p> <p>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.</p>

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

	<p>a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.</p> <p>b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of the comparisons.</p> <p>5 NBT 4 Use place value understanding to round decimals to any place.</p>	<p>5 MD 2 Make a line plot to display a data set of measurements in fractions of a unit.</p>	<p>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.</p> <p>5 MD 2 Make a line plot to display a data set of measurements in fractions of a unit.</p>
<p>STANDARDS OF MATHEMATICAL PRACTICE CENTRAL TO THIS UNIT</p>	<p>MP2 Students recognize that a number represents a specific quantity. They connect quantities to written symbols, consider appropriate units and the meaning of quantities. They represent or round numbers using place value concepts.</p> <p>MP4 Students experiment with representing problem situations in multiple ways such as using numbers, mathematical language, drawings, pictures, objects, charts, lists, graphs, and equations.</p> <p>MP7 Students look closely to discover a pattern or structure. They examine numerical patterns and relate them to a rule or graphical representation.</p>	<p>MP1 Students solve problems by applying their understanding of operations with whole numbers and decimals.</p> <p>MP2 Students extend their understanding of quantities from whole numbers to their work with decimals.</p> <p>MP3 Students may construct arguments using concrete referents, such as objects, pictures, and drawings.</p> <p>MP5 Students consider available tools, including estimation, and decide which tools might help them solve mathematical problems.</p> <p>MP6 Students continue to refine their mathematical communication skills by using clear and precise language.</p>	<p>MP1 Students solve problems by applying their understanding of operations with whole numbers and fractions including mixed numbers.</p> <p>MP2 Students extend their understanding of quantities from whole numbers to their work with fractions.</p> <p>MP3 Students use various strategies to solve problems and they defend and justify their work with others.</p> <p>MP4 Students need opportunities to represent problems in various ways and explain the connections.</p> <p>MP6 Students use appropriate terminology when they refer to fractions.</p> <p>MP7 Students use properties of operations as strategies to add and subtract with fractions.</p>
<p>READING INFORMATIONAL STANDARDS</p>	<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>c. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).</p> <p>6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.</p>		
<p>WRITING STANDARDS</p>			
<p>LISTENING AND SPEAKING STANDARDS</p>	<p>1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.</p> <p>a. Come to discussions prepared having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.</p> <p>b. Follow agreed-upon rules for discussions and carry out assigned roles.</p> <p>c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p>		

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

	4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.		
ELD STANDARDS			
CROSS-CONTENT/ REAL WORLD CONNECTIONS	Populations of US capital cities	Mileage for a road trip	Immigrants coming into America

SAUSD Common Core Aligned Curriculum Map:
Grade 5 Mathematics

TIMELINE	4 Weeks Mid-November to December	3 Weeks January	4 Weeks Late-January to February
TRIMESTER 2	UNIT 4	UNIT 5	UNIT 6
TITLE	Multiplication and Division of Whole Numbers	Volume	Multiplication and Division of Decimals
END OF UNIT PERFORMANCE TASK	Compare the areas of various states in square miles.	Estimate the number of linking cubes that will fill a classroom.	Analyze monthly plans for a museum to determine the best value for your family.
BIG IDEAS AND ESSENTIAL QUESTION	<p>Big Idea: Real-world problems can be solved by combining or separating groups.</p> <ul style="list-style-type: none"> • What patterns do you notice when multiplying or dividing by the powers of ten? • How does using the algorithm help you to multiply efficiently? • Compare and explain how the size of factors is related to the size of products. • How can you apply the conversion of measurement units to real-life problems? 	<p>Big Idea: Objects can be measured and compared by their attributes.</p> <ul style="list-style-type: none"> • What is volume? • How are area and volume alike and different? • How do you measure volume? • Why is volume represented with cubic units? • Does volume change when you change the measurement material? Why or why not? • How can you find the volume of cubes and rectangular prisms? • Why is it important to know how to measure volume? 	<p>Big Idea: Real-world problems can be solved by combining or separating groups.</p> <ul style="list-style-type: none"> • What patterns do you notice in the placement of the decimal when multiplying or dividing by the powers of ten? • How is repeated addition related to multiplication and how is repeated subtraction related to division? • How can you apply the conversion of measurement units to real-life problems?
COMPLEX TEXTS / RESOURCES	HM chapters 1, 6, 21	Getting to the Core: Volume Unit	Getting to the Core: Multiplication & Division of Decimals Unit
MATH CONTENT STANDARDS CENTRAL TO THIS UNIT	<p>5 OA 1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5 NBT 2 Explain patterns in the number of zeroes of the product when multiplying a number by powers of 10. Use whole number exponents to denote powers of 10.</p> <p>5 NBT 5 Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p>5 NBT 6 Find whole-number quotients of whole</p>	<p>5 MD 3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p> <p>a. 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.</p> <p>b. 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.</p> <p>5 MD 4 Measure volumes by counting unit cubes,</p>	<p>5 NBT 2 Explain patterns in the number of zeroes 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.</p> <p>5 NBT 7 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</p>

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

	<p>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.</p> <p>5 NF 5 Interpret multiplication as scaling (resizing) by: a. 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 given multiplication.</p> <p>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.</p>	<p>using cubic cm, cubic in, cubic ft, and improvised units.</p> <p>5 MD 5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</p> <p>a. 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.</p> <p>b. Apply the formulas $V = l w x h$ and $V = b x h$ 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.</p> <p>c. 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.</p>	<p>written method and explain the reasoning used.</p> <p>5 NF 5 Interpret multiplication as scaling (resizing) by: a. 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 given multiplication.</p> <p>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.</p>
<p>STANDARDS OF MATHEMATICAL PRACTICE CENTRAL TO THIS UNIT</p>	<p>MP1 Students solve problems by applying their understanding of operations with whole numbers. They solve problems related to measurement conversions.</p> <p>MP4 Students experiment with representing problem situations in multiple ways such as using numbers, mathematical language, drawings, pictures, objects, charts, lists, graphs, and equations.</p> <p>MP5 Students consider available tools, including estimation, and decide which tools might help them solve mathematical problems.</p> <p>MP8 Students connect place value and their prior work with operations to understand and use algorithms to fluently multiply multi-digit whole numbers.</p>	<p>MP1 Students solve problems related to volume.</p> <p>MP3 Students demonstrate and explain the relationship between volume and multiplication.</p> <p>MP5 Students use unit cubes to fill a rectangular prism and then use a ruler to measure the dimensions.</p> <p>MP6 Students are careful to specify units of measure and state the meaning of the symbols they choose. To determine the volume of a rectangular prism, students record their answers in cubic units.</p>	<p>MP3 Students explain calculations based upon models, properties of operations and rules that generate patterns.</p> <p>MP4 Students need opportunities to represent problems in various ways and explain the connections.</p> <p>MP5 Students use graph paper to accurately create graphs and solve problems or make predictions from real world data.</p> <p>MP6 Students use clear and precise language in their discussions with others and in their own reasoning.</p> <p>MP7 Students use properties of operations as strategies to multiply and divide with decimals.</p>
<p>READING INFORMATIONAL STANDARDS</p>	<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>c. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).</p> <p>6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.</p>		
<p>WRITING STANDARDS</p>			

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

LISTENING AND SPEAKING STANDARDS	<p>1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.</p> <p>a. Come to discussions prepared having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.</p> <p>b. Follow agreed-upon rules for discussions and carry out assigned roles.</p> <p>c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p> <p>4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p>		
ELD STANDARDS			
CROSS-CONTENT/ REAL WORLD CONNECTIONS	Area of states in square miles	Space available in a suitcase, trunk or box when traveling	Dilution of solutions Relationship between liters/milliliters, meters/centimeters, and grams/kilograms

SAUSD Common Core Aligned Curriculum Map:
Grade 5 Mathematics

TIMELINE	4 Weeks March	3 Weeks April	3 Weeks May
TRIMESTER 3	UNIT 7	UNIT 8	UNIT 9
TITLE	Multiplication and Division of Fractions	Graphing on Coordinate Plane	2-Dimensional Shapes
END OF UNIT PERFORMANCE TASK	Convert the measurement of a recipe to multiple servings.	Graph an equation on the coordinate grid to represent a real life situation.	Create a Venn Diagram showing placement of two-dimensional shapes by category.
BIG IDEAS AND ESSENTIAL QUESTION	<p>Big Idea: Parts build up to wholes, while wholes break down to parts.</p> <ul style="list-style-type: none"> • What is the whole? What is the unit fraction? • What is the relationship between the whole and the fraction? • How can you apply the multiplication and division of fractions to real life situations? 	<p>Big Idea: The relationship between values can be represented visually.</p> <ul style="list-style-type: none"> • How is the coordinate system used? • How can you identify relationships between pairs of numbers in a table? • How are lists, tables, charts, and diagrams used to illustrate mathematical relationships? 	<p>Big Idea: Objects can be described, classified, and analyzed by their characteristics.</p> <ul style="list-style-type: none"> • How do parallel, perpendicular, and congruent lines relate and help identify two-dimensional shapes? • How do characteristics help identify geometric figures? • How can you classify two-dimensional shapes in a hierarchy based on their properties?
COMPLEX TEXTS / RESOURCES	Getting to the Core: Multiplication & Division of Fractions Unit	HM chapters 17, 27, 28	HM chapters 18, 19, 20
MATH CONTENT STANDARDS CENTRAL TO THIS UNIT	<p>5 NF 4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p>a. 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 series of a sequence of operations $a \times q \div b$.</p> <p>b. 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</p>	<p>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.</p> <p>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</p>	<p>5 G 3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.</p> <p>5 G 4 Classify two-dimensional figures in a hierarchy based on properties.</p>

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

	<p>lengths to find areas of rectangles, and represent fraction products as rectangular areas.</p> <p>5 NF 5 Interpret multiplication as scaling (resizing) by: a. 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 given multiplication.</p> <p>b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number; 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 $a/b = (n \times a)/(n \times b)$ to the effect of multiplying $a/b \times 1$.</p> <p>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.</p> <p>5 NF 7 Apply and extend previous understandings of division to divide fractions by whole numbers and whole numbers by unit fractions.</p>	<p>the origin in one 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).</p> <p>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.</p>	
<p>STANDARDS OF MATHEMATICAL PRACTICE CENTRAL TO THIS UNIT</p>	<p>MP1 Students solve problems by applying their understanding of operations with whole numbers and fractions including mixed numbers.</p> <p>MP3 Students may construct arguments using concrete referents, such as objects, pictures, and drawings.</p> <p>MP5 Students decide which tools might help them solve mathematical problems.</p> <p>MP7 Students examine numerical patterns and relate them to a rule or graphical representation to multiply and divide with fractions.</p> <p>MP8 Students explore operations with fractions with visual models and begin to formulate generalizations.</p>	<p>MP5 Students use graph paper to accurately create graphs and solve problems or make predictions from real world data.</p> <p>MP6 Students use appropriate terminology when they refer to coordinate grids.</p>	<p>MP6 Students continue to refine their mathematical communication skills by using clear and precise language in their discussions with others and in their own reasoning. They use appropriate terminology when they refer to geometric figures.</p>
<p>READING INFORMATIONAL STANDARDS</p>	<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>c. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).</p> <p>6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases.</p>		
<p>WRITING STANDARDS</p>			

SAUSD Common Core Aligned Curriculum Map: Grade 5 Mathematics

LISTENING AND SPEAKING STANDARDS	<p>1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.</p> <p>a. Come to discussions prepared having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.</p> <p>b. Follow agreed-upon rules for discussions and carry out assigned roles.</p> <p>c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p> <p>4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p>		
ELD STANDARDS			
CROSS-CONTENT/ REAL WORLD CONNECTIONS	Recipes from home/culture	Graphing data gathered from real life situations	Classification of plants and animals

Revised 6/18/14