

# Calendar-Based Curriculum Map: Math

## 5<sup>th</sup> Grade

	<b>August/September</b>	<b>October</b>	<b>November</b>
<b>Essential Question</b>	Numbers and Operations 1A, 1B, 1C, 2B <ul style="list-style-type: none"> <li>• How will students understand numbers, ways of representing numbers, relationships among numbers and number systems?</li> <li>• How will students understand meanings of operations and how they relate to one another?</li> </ul>	Numbers and Operations 1D, 3D Algebraic Relationships 2B <ul style="list-style-type: none"> <li>• How will students understand numbers, ways of representing numbers, relationships among numbers and number systems?</li> <li>• How will students compute fluently and make reasonable estimates?</li> <li>• How will students represent and analyze mathematical situation and structures using algebraic symbols.</li> </ul>	Numbers and Operations 2A, 3A, 3C, 3D Algebraic Relationships 2A, 3A <ul style="list-style-type: none"> <li>• How will understand meanings of operations and how they relate to one another?</li> <li>• How will students compute fluently and make reasonable estimates?</li> <li>• How will students represent and analyze mathematical situations and structures using algebraic symbols?</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>• Students will read, write, and comprehend numbers.</li> <li>• Represent and use rational numbers.</li> <li>• Compose and decompose numbers.</li> <li>• Describe effects of operations.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will classify and describe numeric relationships.</li> <li>• Estimate and justify solutions.</li> <li>• Describe and use mathematical manipulation.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will represent operations.</li> <li>• Describe or represent mental strategies.</li> <li>• Compute problems.</li> <li>• Estimate and justify solutions.</li> <li>• Represent mathematical situations.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Students will read, write, and compare whole numbers less than 1,000,000, unit fractions and decimals to hundredths (including location on the number line).</li> <li>• Recognize and generate equivalent forms of commonly used fractions and decimals.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will describe numbers according to their characteristics, including whole number common factors, and multiples, prime or composite, and square numbers.</li> <li>• Estimate and justify products, and quotients of whole numbers and sums</li> </ul>	<ul style="list-style-type: none"> <li>• Students will represent and recognize division using various models, including quotative and partitive.</li> <li>• Describe a mental strategy used to compute a given division problem, where the quotient is a multiple of 10 and the divisor is a 1-digit number.</li> </ul>

	<ul style="list-style-type: none"> <li>Recognize equivalent representations for the same number and generate them by decomposing and composing numbers.</li> <li>Describe the effects of addition and subtraction on fractions and decimals.</li> </ul>	<p>differences of decimals and fractions.</p> <ul style="list-style-type: none"> <li>Use the commutative, distributive and associative properties for fractions and decimals.</li> </ul>	<ul style="list-style-type: none"> <li>Apply and describe the strategy used to compute a division problem up to 3-digit b 2-digit and addition and subtraction of fractions and decimals.</li> <li>Estimate and justify products, and quotients of whole numbers and sums differences of decimals and fractions.</li> <li>Using all operations, represent a mathematical situation as an expression or number sentence using a letter or symbol.</li> </ul>
<b>Assessments</b>	Homework assignments, chapter tests, class participation, daily math checks and drills.	Homework assignments, chapter tests, class participation, daily math checks and drills.	Homework assignments, chapter tests, class participation, daily math checks and drills.
<b>Activities/Resources</b>	<i>Math Connects 5</i> book <i>Math Connects 5</i> teacher resources Math-drill.com	<i>Math Connects 5</i> book <i>Math Connects 5</i> teacher resources Math-drill.com	<i>Math Connects 5</i> book <i>Math Connects 5</i> teacher resources Math-drill.com

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	<b>December</b>	<b>January</b>	<b>February</b>
<b>Essential Question</b>	Numbers and Operations 3B Algebraic Relationships 1A, 1B Geometric and Spatial Relationships 2A <ul style="list-style-type: none"> <li>• How will students use mathematical models to represent and understand quantitative relationships?</li> <li>• How will students represent and analyze mathematical situations and structures using algebraic symbols?</li> <li>• How will students compute fluently and make reasonable estimates?</li> <li>• How will students understand patterns, relations, and functions?</li> <li>• How will students specify locations and describe spatial relationships using coordinate geometry and other representational systems?</li> </ul>	Algebraic Relationships 1A, 1B 4A Data and Probability 1A, 1C, 2A, 3A Geometric and Spatial Relationship 2A Numbers and Operations 3B <ul style="list-style-type: none"> <li>• How will students understand patterns, relations and function?</li> <li>• How will students use mathematical models to represent and understand quantitative relationships?</li> <li>• How will students specify locations and describe spatial relationships using coordinate geometry and other representational systems?</li> <li>• How will students formulate questions that can be addressed with data and collect, organize and display relevant data to answer them?</li> <li>• How will students select and use appropriate statistical methods to analyze data?</li> <li>• How will students develop and evaluate inferences and predictions that are based on data?</li> <li>• How will students compute fluently and make reasonable estimates?</li> <li>• How will students analyze change in various contexts?</li> </ul>	Numbers and Operations 1C, 1D, 3D, 3B, 2B, 1B Algebraic Relationship 2B <ul style="list-style-type: none"> <li>• How will students understand numbers, ways of representing numbers, relationships among numbers and number system?</li> <li>• How will students understand meanings of operations and how they relate to one another?</li> <li>• How will students compute fluently and make reasonable estimates?</li> <li>• How will students represent and analyze mathematical situations and structures using algebraic symbols?</li> <li>• How will students understand numbers, ways of representing numbers, relationships among numbers and number systems?</li> <li>• How will students compute fluently and make reasonable estimates?</li> </ul>

<p><b>Content</b></p>	<ul style="list-style-type: none"> <li>• Students will use mathematical models.</li> <li>• Represent mathematical situations.</li> <li>• Develop and demonstrate fluency.</li> <li>• Recognize and extend patterns.</li> <li>• Create and analyze patterns.</li> <li>• Use coordinate systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will create and analyze patterns.</li> <li>• Recognize and extend patterns.</li> <li>• Use mathematical models.</li> <li>• Use coordinate systems.</li> <li>• Formulate questions.</li> <li>• Represent and interpret data.</li> <li>• Describe and analyze data.</li> <li>• Develop and evaluate interferences.</li> <li>• Develop and demonstrate fluency.</li> <li>• Analyze change.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will represent and use rational numbers.</li> <li>• Describe effects of operations.</li> <li>• Develop and demonstrate fluency.</li> <li>• Describe and use mathematical manipulation.</li> <li>• Compose and decompose numbers.</li> <li>• Classify and describe numeric relationships.</li> <li>• Estimate and justify solutions.</li> </ul>
<p><b>Skills</b></p>	<ul style="list-style-type: none"> <li>• Students will model problem situations, using representations such as graphs, tables or number sentences.</li> <li>• Using all operations, represent a mathematical situation as an expression or number sentence using a letter or symbol.</li> <li>• Demonstrate fluency with efficient procedures for adding and subtracting decimals and fractions and division of whole numbers.</li> <li>• Make and describe generalizations about geometric and numeric patterns.</li> <li>• Represent and analyze patterns using words, tables and graphs.</li> <li>• Use coordinate systems to specify locations, describe paths and find the distance between points along horizontal and vertical lines.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will represent and analyze patterns using words, tables and graphs.</li> <li>• Make and describe generalizations about geometric and numeric patterns.</li> <li>• Model problem situations and draw conclusions, using representations such as graphs, tables or number sentence.</li> <li>• Use coordinate systems to specify locations, describe paths and find the distance between points along horizontal and vertical lines.</li> <li>• Evaluate data-collection methods.</li> <li>• Describe methods to collect, organize and represent categorical and numerical data.</li> <li>• Compare related data sets.</li> <li>• Given a set of data make and justify predictions.</li> <li>• Demonstrate fluency with efficient procedures for adding and subtracting decimals and fractions and</li> </ul>	<ul style="list-style-type: none"> <li>• Students will recognize and generate equivalent forms of commonly used fractions and decimals.</li> <li>• Describe the effects of addition and subtraction on fractions and decimals.</li> <li>• Demonstrate fluency with efficient procedures for adding and subtracting decimals and fractions and division of whole numbers.</li> <li>• Use the commutative distributive and associative properties for fractions and decimals.</li> <li>• Recognize equivalent representations for same number and generate them by decomposing and composing numbers.</li> <li>• Describe numbers according to their characteristics, including whole number common factors and multiples, prime or composite, and square numbers.</li> <li>• Estimate and justify products, and quotients of</li> </ul>

		division of whole numbers. <ul style="list-style-type: none"> <li>Identify, model and describe situations with constant or varying rates of change.</li> </ul>	whole numbers and sums differences of decimals and fractions.
<b>Assessments</b>	Homework assignments, chapter tests, class participation, daily math checks and drills.	Homework assignments, chapter tests, class participation, daily math checks and drills.	Homework assignments, chapter tests, class participation, daily math checks and drills.
<b>Activities/Resources</b>	<i>Math Connects 5</i> book <i>Math Connects 5</i> teacher resources Math-drill.com	<i>Math Connects 5</i> book <i>Math Connects 5</i> teacher resources Math-drill.com	<i>Math Connects 5</i> book <i>Math Connects 5</i> teacher resources Math-drill.com

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	<b>March</b>	<b>April</b>	<b>May</b>
<b>Essential Question</b>	Measurement 1A, 1B, 2C, 2E <ul style="list-style-type: none"> <li>• How will students understand measureable attributes of objects and the units, systems and processes of measurement?</li> <li>• How will students apply appropriate techniques, tools, and formulas to determine measurements?</li> </ul>	Measurement 1A, 1B Geometric and Spatial Relationships 1A, 1C, 3A, 3C, 4A <ul style="list-style-type: none"> <li>• How will students understand measureable attributes of objects and the units, systems and processes of measurement?</li> <li>• How will students analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships?</li> <li>• How will students apply transformations and use symmetry to analyze mathematical situations?</li> <li>• How will students use visualization, spatial reasoning and geometric modeling to solve problems?</li> </ul>	Data and Probability 1A, 1C, 2A, 3A, 4A Measurement 2C, 1A <ul style="list-style-type: none"> <li>• How will students understand and apply basic concepts of probability?</li> <li>• How will students formulate questions that can be addressed with data and collect, organize and display relevant data to answer them?</li> <li>• How will students select and use appropriate statistical methods to analyze data?</li> <li>• How will students develop and evaluate inferences and predictions that are based on data?</li> <li>• How will students apply appropriate techniques, tools, and formulas to determine measurements?</li> <li>• How will students understand measureable attributes of objects and the units, systems and process of measurement?</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>• Students will determine unit of measurement.</li> <li>• Identify equivalent measures.</li> <li>• Use relationships within a measurement system.</li> <li>• Apply geometric</li> </ul>	<ul style="list-style-type: none"> <li>• Students will determine unit of measurement.</li> <li>• Identify equivalent measures.</li> <li>• Describe and use geometric relationships.</li> <li>• Compose and decompose</li> </ul>	<ul style="list-style-type: none"> <li>• Students will apply basic concepts of probability.</li> <li>• Apply geometric measurements.</li> <li>• Determine unit of measurement.</li> <li>• Formulate questions.</li> </ul>

	measurements.	shapes. <ul style="list-style-type: none"> <li>• Use transformations on objects.</li> <li>• Use symmetry.</li> <li>• Recognize and draw three-dimensional representations.</li> </ul>	<ul style="list-style-type: none"> <li>• Represent and interpret data.</li> <li>• Describe and analyze data.</li> <li>• Develop and interpret inferences.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Students will identify and justify the unit of measure for area.</li> <li>• Identify the equivalent weights and equivalent capacities within a system of measurement.</li> <li>• Convert from one unit to another within a system of linear measurement (customary and metric).</li> <li>• Determine volume by finding the total number of the same size units needed to fill a space without gaps or overlaps.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will identify and justify the unit of measure for area.</li> <li>• Identify the equivalent weights and equivalent capacities within a system of measurement.</li> <li>• Analyze and classify 2- and 3- dimensional shapes by describing the attributes.</li> <li>• Predict and justify results of subdividing, combining and transforming shapes.</li> <li>• Predict, draw, and describe the results of sliding/translating, flipping/reflecting, and turning/rotating around a center point of a polygon.</li> <li>• Identify polygons and design with rotational symmetry. Linder, identify the 3 dimensional shape.</li> <li>• Given a net of a prism or cy</li> </ul>	<ul style="list-style-type: none"> <li>• Students will describe the degree of likelihood of events using such words as certain, equally likely, and impossible.</li> <li>• Determine volume by finding the total number of the same size units needed to fill a space without gaps or overlaps.</li> <li>• Identify and justify the unit of measure for area.</li> <li>• Evaluate data collection methods.</li> <li>• Describe methods to collect, organize and represent categorical and numerical data.</li> <li>• Compare related data sets.</li> <li>• Given a set of data make and justify predictions.</li> </ul>
<b>Assessments</b>	Homework assignments, chapter tests, class participation, daily math checks and drills.	Homework assignments, chapter tests, class participation, daily math checks and drills.	Homework assignments, chapter tests, class participation, daily math checks and drills.
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