

## **\*\* 6th Grade Math \*\***

In Grade 6, instructional time is focused on five content areas, all of which have equal importance:

1. Proportional reasoning - understand ratios to solve real world problems.
2. Number Systems and Operations - Using prior knowledge of multiplication and division to divide fractions. Comparing multi digit numbers FLUENTLY and determining common factors and multiples. Applying knowledge of the number system to represent and use rational numbers in a variety of forms.
3. Algebra and Functions - Apply knowledge of arithmetic to read, write, and evaluate algebraic expressions. Use equations and inequalities to represent and solve real world or mathematical problems. Identify and analyze relationships between independent and dependent variables.
4. Data analysis, Statistics, and Probability - Use real world and mathematical problems to analyze data and demonstrate an understanding of statistical variability and measures of center.
5. Geometry and Measurement - Graph polygons in the coordinate plane to solve real world and mathematical problems. Solve real world problems to determine area, surface area, and volume.

Based on the 2019 Alabama Course of Study: Mathematics

<u>Timeline</u>	<u>Unit/theme</u>	<u>Standard Student Focused Objective</u>	<u>Resources/Suggested Activities</u>
<p>July 31- August 29, 2024</p>	<p>Unit 1 - Number operations adding/subtracting/multiplying/dividing decimals and whole numbers.</p>	<ol style="list-style-type: none"> <li>1. Welcome Back to School</li> <li>2. Establish base line data and routines and procedures</li> <li>3. Establish how to access Powerschool, Math Nation, Class Dojo, AMSTI, and Email accounts.</li> <li>4. 7 Lessons specifically with Decimal operations- students will add, subtract, multiply, and divide decimals fluently.</li> <li>5. Alabama Course of Study Standards covered - 5,6</li> </ol>	<p>AMSTI resources math  <a href="https://www.amsti.org/68-math-student-family">https://www.amsti.org/68-math-student-family</a>  <a href="https://www.amsti.org/math-6-8-cl assroom">https://www.amsti.org/math-6-8-cl assroom</a></p> <p>Math Nation (Illustrative Math) (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  <a href="https://illustrativemathematics.org/">https://illustrativemathematics.org/</a>  IXL online math (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  Delta Math  <a href="https://www.deltamath.com/">https://www.deltamath.com/</a>  Maneuvering the Middle math resources  <a href="https://www.maneuveringthemiddle.com/">https://www.maneuveringthemiddle.com/</a></p> <p>Math Worksheets for Kids  <a href="https://www.mathworksheets4kids.com/">https://www.mathworksheets4kids.com/</a></p>



<u>Timeline</u>	<u>Unit</u>	<u>Standard Student Focused Objective</u>	<u>Resources/Suggested Activities</u>
<p><u>Sept. 9- October 1, 2024</u></p>	<p>Unit 2 - Fractional Operation</p> <p>Unit 3- The Number System</p>	<ol style="list-style-type: none"> <li>1. Using factors and multiples</li> <li>2. Adding and subtracting Fractions</li> <li>3. Multiplying Fractions</li> <li>4. Learning about Patterns and Reciprocals</li> <li>5. Dividing Fractions using real world problems</li> <li>6. Use the distributive property to express the sum of two whole numbers with a common factor as a multiple of a sum of two whole numbers with no common factor</li> <li>7. Find the greatest common factor (GCF) and the least common multiple (LCM) of two or more whole numbers.</li> <li>8. Use factors and multiples to determine prime factorization.</li> <li>9. Use quotients of fractions to analyze and solve problems.</li> <li><b>10. Alabama Course of Study Standards covered - 4,7,8</b></li> <li>11. Using integers on the number line</li> <li>12. Comparing and ordering Decimals and Fractions using a number line</li> <li>13. Ordering Rational NUmbers</li> <li>14. Understanding and using rational numbers and absolute value.</li> <li>15. Practice using statements of inequalities.</li> <li>16. Locate integers and other rational numbers on s horizontal, vertical, and coordinate plane.</li> <li>17. Find the position of pairs of integers and other rational numbers on the coordinate plane..</li> <li>18. Identify quadrants (a,b) (a,-b), (-a,b) on the x and y axis.</li> <li>19. Solve real world problems by graphing points in all four quadrants of the coordinate plane as well as finding distance between the points.</li> <li><b>20. Alabama Course of Study Standards covered - 9,10,11</b></li> </ol>	<p>AMSTI resources math  <a href="https://www.amsti.org/68-math-student-family">https://www.amsti.org/68-math-student-family</a>  <a href="https://www.amsti.org/maths-6-8-classroom">https://www.amsti.org/maths-6-8-classroom</a>  Math Nation (Illustrative Math) (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  <a href="https://illustrativemathematics.org/">https://illustrativemathematics.org/</a>  IXL online math (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  Delta Math  <a href="https://www.deltamath.com/">https://www.deltamath.com/</a>  Maneuvering the Middle math resources  <a href="https://www.maneuveringthemiddle.com/">https://www.maneuveringthemiddle.com/</a>  Math Worksheets for Kids  <a href="https://www.mathworksheets4kids.com/">https://www.mathworksheets4kids.com/</a></p>

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<p><b><u>October 1-December 19, 2024</u></b></p>	<p>Unit 4 - Ratios Unit 5- Rates and Percents Unit 6 - Coordinate Plane</p>	<ol style="list-style-type: none"> <li>1. Introduce ratios and their equivalents</li> <li>2. Use ratios tables</li> <li>3. Compare ratios and use them in real world applications</li> <li>4. Represent ratios with equations and plotting them on a coordinate plane</li> <li>5. Graph in quadrants and on the coordinate plane</li> <li>6. Graph rational numbers and distance between points</li> <li>7. Create figures on the coordinate plane</li> <li>8. Introduce rates and comparisons</li> <li>9. Measure conversions and representing them with models</li> <li>10. Fractions/decimals and percents. Solve percents with proportions</li> <li>11. Finding the part, percent and the whole.</li> <li>12. Use ratio and rate reasoning to solve real world problems. Be sure to use models of equivalent ratios, diagrams, double number lines, and equations.</li> <li>13. Compare and order rational numbers and absolute value with and without a number line.</li> <li>14. <b><i>Alabama Course of Study Standards covered - 1,2,3,12,13</i></b></li> </ol>	<p>AMSTI resources math  <a href="https://www.amsti.org/68-math-student-family">https://www.amsti.org/68-math-student-family</a>  <a href="https://www.amsti.org/math-6-8-cl-assroom">https://www.amsti.org/math-6-8-cl-assroom</a>  Math Nation (Illustrative Math) (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  <a href="https://illustrativemathematics.org/">https://illustrativemathematics.org/</a>  IXL online math (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  Delta Math  <a href="https://www.deltamath.com/">https://www.deltamath.com/</a>  Maneuvering the Middle math resources  <a href="https://www.maneuveringthemiddle.com/">https://www.maneuveringthemiddle.com/</a>    Math Worksheets for Kids  <a href="https://www.mathworksheets4kids.com/">https://www.mathworksheets4kids.com/</a></p>

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January 9 - March 21, 2025	Unit 7 - Expressions Unit 8 - Equations and inequalities	<ol style="list-style-type: none"> <li>1. Write and compare Exponents</li> <li>2. Order of operations</li> <li>3. Evaluating expressions</li> <li>4. Properties of Operations</li> <li>5. Combining Like terms</li> <li>6. Distributive,inverse, associative, commutative, identity properties</li> <li>7. Writing expressions and application in real world setting</li> <li>8. Adding and subtracting 1 step equations</li> <li>9. Multiplying and dividing 1 step equations</li> <li>10. Independent and dependent Variables</li> <li>11. Introducing inequalities</li> <li>12. Solving inequalities</li> <li>13. Identify and represent 2 quantities that change in relationship and situations - Use tables, graphs, and equations to represent independent and dependent variables.</li> <li>14. <b>Alabama Course of Study Standards covered - 13,14,15,16,17,18,19,20,21</b></li> </ol>	<p style="text-align: center;"><b><u>Resources/Suggested Activities</u></b></p> <p>AMSTI resources math  <a href="https://www.amsti.org/68-math-stu_dent-family">https://www.amsti.org/68-math-stu_dent-family</a>  <a href="https://www.amsti.org/math-6-8-cl_assroom">https://www.amsti.org/math-6-8-cl_assroom</a>  Math Nation (Illustrative Math) (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  <a href="https://illustrativemathematics.org/">https://illustrativemathematics.org/</a>  IXL online math (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  Delta Math  <a href="https://www.deltamath.com/">https://www.deltamath.com/</a>  Maneuvering the Middle math resources  <a href="https://www.maneuveringthemiddle.com/">https://www.maneuveringthemiddle.com/</a>  Math Worksheets for Kids  <a href="https://www.mathworksheets4kids.com/">https://www.mathworksheets4kids.com/</a></p>

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<p>March 31- May 29, 2025</p>	<p>Unit 9 - Geometry Unit 10 - Data and Statistics, Unit 11- Test Prep Unit 12 - Real world situations</p>	<ol style="list-style-type: none"> <li>1. Graph polygons in the coordinate plane</li> <li>2. Determine missing vertices . Use coordinate to find the length of a side between points having the same x or y coordinate.</li> <li>3. Calculate perimeter and area of a polygon</li> <li>4. Calculate the area of triangle, special quadrilaterals, and other polygons by composing and decomposing the known shapes.</li> <li>5. Determining the surface area of 3 dimensional figures by using nets composed of rectangle and triangles to solve real world problems</li> <li>6. Compare, Calculate, and determine volume using cubes or drawings or right rectangular prisms.</li> <li>7. Problem solve with composite figures.</li> <li>8. Write examples of statistical questions , explaining variability in the data related to the question.</li> <li>9. Calculate, interpret, and compare measures of center (mean, median, and mode) and the variability (range and interquartile range) in real world data</li> <li>10. Represent numerical data graphically using dot plots, line plots, histograms, stem and leaf plots, and box plots.</li> <li>11. <b>Alabama Course of Study Standards covered - 22,23,24,25,26,27,28</b></li> </ol>	<p><b><u>Resources/Suggested Activities</u></b></p> <p><b><u>Resources/Suggested Activities</u></b></p> <p>AMSTI resources math  <a href="https://www.amsti.org/68-math-stu_dent-family">https://www.amsti.org/68-math-stu_dent-family</a>  <a href="https://www.amsti.org/math-6-8-cl_assroom">https://www.amsti.org/math-6-8-cl_assroom</a>  Math Nation (Illustrative Math) (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  <a href="https://illustrativemathematics.org/">https://illustrativemathematics.org/</a>  IXL online math (access thru  <a href="https://www.clever.com/">https://www.clever.com/</a> with school email account)  Delta Math  <a href="https://www.deltamath.com/">https://www.deltamath.com/</a>  Maneuvering the Middle math resources  <a href="https://www.maneuveringthemiddle.com/">https://www.maneuveringthemiddle.com/</a>  Math Worksheets for Kids  <a href="https://www.mathworksheets4kids.com/">https://www.mathworksheets4kids.com/</a></p>