

## 6<sup>th</sup> grade eLearning Math Resources for South Carolina School Districts

The Office of Standards and Learning has compiled the resources in this document for middle level Math learners in light of school closures due to the community impact of COVID-19.

The South Carolina College- and Career-Ready Standards for Mathematics informed the selection and organization of these resources.

The resources listed below are tasks to get your students exploring the mathematical content in the world around them. Teachers, choose among the resources listed below based on knowledge of your students and the work that has already been completed in your classroom. Each of the following tasks can be given to students as they are stated below. The tasks can be copied and pasted into a document to be copied and sent to students, or they can be copied and pasted into your district's learning management system. However, feel free to modify as needed for your students.

<i><b>Mathematics Content Standard(s) Addressed</b></i>	<i><b>Mathematics Process Standard(s) Addressed</b></i>	<i><b>Math Task</b></i>
<p><i>The Number System</i> 6.NS.9 Investigate and translate among <b>multiple representations</b> of rational numbers (fractions, decimal numbers, percentages).</p>	<p>2. Reason both contextually and abstractly. 3. Use critical thinking skills to justify mathematical reasoning. 4. Connect mathematical ideas and real-world situations through modeling. 6. Communicate mathematically and with precision. 7. Identify and utilize structure and patterns.</p>	<p>How many different ways can you represent <math>\frac{3}{4}</math>? (You are not limited to numbers or fractions.)</p>
<p><i>Data Analysis and Statistics</i> 6.DS.2 <b>Use center</b> (mean, median, mode), <b>spread</b> (range, interquartile range, mean absolute value), and shape (symmetrical, skewed left, skewed right) <b>to describe the distribution of a set of data</b> collected to answer a statistical question. 6.DS.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation</p>	<p>1. Make sense of problems and persevere in solving them. 2. Reason both contextually and abstractly. 3. Use critical thinking skills to justify mathematical reasoning. 4. Connect mathematical ideas and real-world situations through modeling. 6. Communicate mathematically and with precision. 7. Identify and utilize structure and patterns.</p>	<p>Record the daily high temperatures for two weeks. Calculate the measures of center and measures of variability, and make a graph of the data. Which measure do you think best describes the data? Why? Randomly delete one of the pieces of data and describe how the measures of center change. Show your work and explain your thinking.</p>

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describes how its values vary with a single number. 6.DS.4 Select and <b>create an appropriate display</b> for numerical data, including dot plots, histograms, and box plots. 6.DS.5 Describe numerical data sets in relation to their <b>real-world context</b> .		
<i>Ratios and Proportional Relationships</i> 6.RP.3 Apply the concepts of <b>ratios and rates</b> to solve real-world and mathematical problems.	1. Make sense of problems and persevere in solving them. 2. Reason both contextually and abstractly. 3. Use critical thinking skills to justify mathematical reasoning. 4. Connect mathematical ideas and real-world situations through modeling. 6. Communicate mathematically and with precision. 7. Identify and utilize structure and patterns.	Choose a location that you want to visit this summer, and calculate the cost of fuel for your family's trip. What information do you need to know? Show your thinking as you determine the cost for the fuel for your trip.
<i>Geometry and Measurement</i> 6.GM.2 Use visual models (e.g., model by packing) to discover that the formulas for the volume of a right rectangular prism ( $V=lwh, V=Bh$ ) are the same for whole or fractional edge lengths. <b>Apply these formulas to solve real-world and mathematical problems.</b> 6.GM.4 Unfold three-dimensional figures into two-dimensional rectangles and triangles (nets) to find the <b>surface area</b> and to	1. Make sense of problems and persevere in solving them. 2. Reason both contextually and abstractly. 3. Use critical thinking skills to justify mathematical reasoning. 4. Connect mathematical ideas and real-world situations through modeling. 6. Communicate mathematically and with precision. 7. Identify and utilize structure and patterns.	Find a box. Measure the dimensions of the box. Determine the volume of the box. Do your calculations match those on the box? Why or why not? Does it make sense that your calculations may be different? Why or why not? Unfold the box and calculate the surface area of the box. Show your thinking as you determine the volume and surface area of the box.

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solve real-world and mathematical problems.		
<i><b>Ratios and Proportional Relationships</b></i> 6.RP.1 Interpret the concept of a <b>ratio</b> as the relationship between two quantities, including part to part and part to whole. 6.RP.2 Investigate relationships between ratios and rates. a. Translate between <b>multiple representations</b> of ratios (i.e., $a/b$ , $a:b$ , $a$ to $b$ , visual models).	2. Reason both contextually and abstractly. 3. Use critical thinking skills to justify mathematical reasoning. 4. Connect mathematical ideas and real-world situations through modeling. 6. Communicate mathematically and with precision. 7. Identify and utilize structure and patterns.	Find three quantities in your house (example: books, DVDs, balls, cups, etc.) and write as many ratios as you can. Be sure to include units.

Ammons, Sandra. (2020). *6<sup>th</sup> grade eLearning Math Resources for South Carolina School Districts*. South Carolina Department of Education.

### ***Games that reinforce Math Content***

1. Play the game Battleship to reinforce coordinate graphing.

## References

Ammons, Sandra. (2020). *6<sup>th</sup> grade eLearning Math Resources for South Carolina School Districts*. South Carolina Department of Education.

South Carolina College- and Career-Ready Standards for Mathematics. (2015). Retrieved March 17, 2020, from <https://ed.sc.gov/instruction/standards-learning/mathematics/standards/scccr-standards-for-mathematics-final-print-on-one-side/>