

**NJCCCS Standards:**

**STANDARD 5.3 (MATHEMATICAL APPLICATIONS) ALL STUDENTS WILL INTEGRATE MATHEMATICS AS A TOOL FOR PROBLEM-SOLVING IN SCIENCE, AND AS A MEANS OF EXPRESSING AND/OR MODELING SCIENTIFIC THEORIES.**

By the end of **Grade 8**, students will:

<p><b>A</b></p> <p><b>Numerical Operations</b></p>	<p>1. Express quantities using appropriate number formats, such as:</p> <ul style="list-style-type: none"><li>• decimals.</li><li>• percents.</li><li>• scientific notation.</li></ul>
<p><b>B</b></p> <p><b>Geometry and Measurement</b></p>	<p>1. Perform mathematical computations using labeled quantities and express answers in correctly derived units.</p>
<p><b>C</b></p> <p><b>Patterns and Algebra</b></p>	<p>1. Express physical relationships in terms of mathematical equations derived from collected data.</p>
<p><b>D</b></p> <p><b>Data Analysis and Probability</b></p>	<p>1. Represent and describe mathematical relationships among variables using:</p> <ul style="list-style-type: none"><li>• graphs.</li><li>• tables.</li></ul> <p>2. Analyze experimental data sets using measures of central tendency:</p> <ul style="list-style-type: none"><li>• mean.</li><li>• mode.</li><li>• median.</li></ul> <p>3. Construct and use a graph of experimental data to draw a line of best fit and identify a linear relationship between variables when appropriate.</p> <p>4. Use computer spreadsheets, graphing and database applications to assist in quantitative analysis of data.</p>