

## *Middle School Mathematics at a Glance*

	<b>6<sup>th</sup> Grade</b>	<b>7<sup>th</sup> Grade</b>	<b>8<sup>th</sup> Grade</b>
<b>Numbers and Operations</b>	<ul style="list-style-type: none"> <li>• Factors and multiples</li> <li>• Fundamental Theorem of Arithmetic</li> <li>• GCF and LCM</li> <li>• Compute with fractions and mixed numbers (unlike denominators)</li> <li>• Equivalent fractions, decimals, and percents</li> </ul>	<ul style="list-style-type: none"> <li>• Absolute value</li> <li>• Compare &amp; order rational numbers</li> <li>• Compute &amp; solve problems with positive and negative rational numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Square roots of perfect squares</li> <li>• Rational vs Irrational numbers</li> <li>• Simplify expressions with integer exponents</li> <li>• Scientific Notation</li> </ul>
<b>Measurement</b>	<ul style="list-style-type: none"> <li>• Convert units using proportions</li> <li>• Volume of right rectangular prisms, right circular cylinders, pyramids and cones</li> <li>• Surface area of right rectangular prisms, right circular cylinders</li> </ul>		
<b>Geometry</b>	<ul style="list-style-type: none"> <li>• Line &amp; rotational symmetry</li> <li>• Ratio, proportion and scale factor with similar plane figures</li> <li>• Scale drawings</li> <li>• Compare/contrast right prisms/pyramids and cylinders/cones</li> <li>• Views of solid figures</li> <li>• Nets (prisms, cylinders, pyramids, and cones)</li> </ul>	<ul style="list-style-type: none"> <li>• Basic constructions</li> <li>• Transformations</li> <li>• Properties of similarity</li> <li>• 3-D figures formed by translations &amp; rotations in space</li> <li>• Cross sections of cones, cylinders, pyramids and prisms</li> </ul>	<ul style="list-style-type: none"> <li>• Properties of parallel and perpendicular lines</li> <li>• Meaning of congruence</li> <li>• Pythagorean Theorem</li> </ul>
<b>Algebra</b>	<ul style="list-style-type: none"> <li>• Ratio for quantitative relationship</li> <li>• Write &amp; solve proportions</li> <li>• Write &amp; solve simple one-step equations</li> </ul>	<ul style="list-style-type: none"> <li>• Algebraic expressions</li> <li>• Linear equations in one variable</li> <li>• Relationships between two variables</li> </ul>	<ul style="list-style-type: none"> <li>• Represent, analyze, and solve problems</li> <li>• Inequalities in one variable</li> <li>• Graphs of linear equations and inequalities</li> <li>• Systems of linear equations and inequalities</li> </ul>
<b>Data Analysis and Probability</b>	<ul style="list-style-type: none"> <li>• Question, Collect Data, Make Graphs</li> <li>• Experimental/ Theoretical Probability</li> <li>• Predictions from investigations</li> </ul>	<ul style="list-style-type: none"> <li>• Question, Collect Data, Make Graphs, Interpret results</li> </ul>	<ul style="list-style-type: none"> <li>• Set theory</li> <li>• Tree Diagrams/ Counting Principles</li> <li>• Basic laws of probability</li> <li>• Organize, interpret, make inferences form data</li> </ul>
<b>Process Skills</b>	Problem Solving, Arguments, Communicate, Connections, Multiple Representations	Problem Solving, Arguments, Communicate, Connections, Multiple Representations	Problem Solving, Arguments, Communicate, Connections, Multiple Representations