

**Unit Title:** "Going Camping: 3D and Circles"

**Course:** Geometry

**Subject Area:** Mathematics

**Time Frame:** 10 days

**Standards**

<b>DCPS Geometry Standards</b>	<b>Sunshine State Standards Benchmarks</b>	<b>NCEE New Standards</b>
<p>The student will:</p> <p>8.3 Solve problems related to properties of chords.</p> <p>8.4 Solve problems related to properties of arcs and angles.</p> <p>Algebra I</p> <p>The student will:</p> <p>9.1 Simplify algebraic fractions.</p> <p>9.2 Multiply and divide algebraic fractions.</p> <p>9.3 Add and subtract algebraic fractions.</p>	<p>MA.C.1.4.1 The student will use properties and relationships of geometric shapes to construct formal and informal proofs.</p> <p>MA.A.2.4.1 The student will understand and use the basic concepts of limits and infinity.</p> <p>MA.B.1.4.1 The student will use concrete and graphic models to derive formulas for finding perimeter, area, surface area, circumference, and volume of two- and three-dimensional shapes, including rectangular solids, cylinders, cones, and pyramids.</p> <p>MA.B.1.4.2 The student will use concrete and graphic models to derive formulas for finding rate, distance, time, angle measures, and arc</p>	<p>The student:</p> <p>M2a Model situations geometrically to formulate and solve problems.</p> <p>M2b Works with two- and three-dimensional figures and their properties, including polygons and circles, cubes and pyramids, and cylinders, cones, and spheres.</p> <p>M2c Uses congruence and similarity in describing relationships between figures.</p> <p>M2p Analyzes geometric figures and proves simple things about them using deductive methods.</p> <p>M2k Works with geometric measure of length, area, volume, and angles; and non-geometric measures such as weight and time.</p> <p>M3d Finds solutions for unknown quantities in linear equations and in simple equations and inequalities.</p>

DCPS Geometry Standards	Sunshine State Standards Benchmarks	NCEE New Standards
	<p>lengths.</p> <p>MA.D.2.4.2 The student will use systems of equations and inequalities to solve real-world problems graphically, algebraically, <i>and with matrices</i>.</p>	

### Desired Results

Enduring Understanding	Essential Questions	Knowledge and Skills
<p>Students will understand:</p> <ul style="list-style-type: none"> <li>Expressing the relations of circles and line, spheres and planes help us visualize how circles are used in the world around us.</li> <li>Pi is the ratio between the circumference and the diameter of a circle.</li> </ul>	<ul style="list-style-type: none"> <li>Why do things have the shapes that they do?</li> <li>Is the ratio between the circumference and the diameter of a circle always the same?</li> <li>What is the difference between rational and irrational numbers?</li> </ul>	<p>Students will know</p> <ul style="list-style-type: none"> <li>Key terms (e.g., circle, center, radius, diameter, circumference, arc, central angle, major arc, minor arc, sector, inscribed angles, intercepted arc, semi-circle, secant, tangent, chord, pyramid, cone).</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>Solve problems related to properties of chords.</li> <li>Solve problems related to properties of arcs and angles.</li> <li>Simplify algebraic fractions.</li> <li>Multiply and divide algebraic fractions.</li> <li>Add and subtract algebraic fractions.</li> </ul>

### Acceptable Evidence

Performance Tasks	Quizzes, Test, and Work Samples	Observations and Dialogues
<ul style="list-style-type: none"> <li><b>Surface Area and Volume</b> Students continue from previous work on finding surface area and volume.</li> <li><b>The Soda Can</b> Using actual soda cans, students complete project in answering the question why is a soda can the shape (or size) it is?</li> <li><b>The Equation of A Circle</b> Extending the graphing thread, students express the definition</li> </ul>	<p>Check-Up 1 Quiz A Check-Up 2 Quiz B Unit Test Unit Project – The Soda Can: Geometry in Industry</p>	<p>Teacher observations of students during work on performance tasks. Accountable talk during work on performance tasks.</p>

Performance Tasks	Quizzes, Test, and Work Samples	Observations and Dialogues
<p>for circles as algebraic equations.</p> <ul style="list-style-type: none"> <li>• <b>Adding and Subtracting Rational Expressions</b> Students review LCM and continue to work on rational expressions.</li> </ul>		