

In Unit 1, we will be starting with an understanding of geometrical terms. The basic geometrical concepts are dependent on three basic concepts: points, lines, planes and angles. We will then learn theorem postulates and apply them to prove in order to solve problems.

# Unit Priority Standards

- HSG.CO.D.12: Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
- SMP4: Model with Mathematics

# Unit Transfer Goals

- Extend knowledge based on the fact that the absolute value of a number is the distance from 0 on a number line
- Apply mathematical knowledge to analyze and model mathematical relationships in the context of a situation in order to make decisions, draw conclusions, and solve problems.

Unit Essential questions	
<ol style="list-style-type: none"><li>1. If the measures of two congruent segments are represented by algebraic expressions, what strategy could you use to solve for the variable?</li><li>2. What is the relationship between the method for finding the midpoint of a segment and the method for finding other partitions of the segment?</li></ol>	
Acquisition of Knowledge Skill	
<i>Students will know...</i> <ol style="list-style-type: none"><li>1. Logic, in combination with facts, theorems and formulas can be used to draw conclusions about geometric figures</li><li>2. Geometric figures are rules by known relationships of measures, often expressed as theorems and/or algebraic functions</li></ol>	<i>Students will be skilled at...I can...</i> <ol style="list-style-type: none"><li>1. Identifying key terms</li><li>2. Using properties of segments and angles to find their measure</li><li>3. Using a straightedge and compass to construct basic figures</li><li>4. Identifying, constructing and using angle pairs to solve problems</li><li>5. Using the midpoint and distance formulas to solve problems</li></ol>

	6. Identifying and constructing angles according to their individual criteria
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# Unit Plan

The schedule is tentative and subject to changes. Students will be notified of anticipated changes ahead of time.

<b>Week 1:</b> Aug 24 - Aug 27	<b>Focus: Introduction / Points, Lines and Planes</b> <b>What is the relationship between the method for finding the midpoint of a segment and the method for finding other partitions of the segment?</b>
<b>Learning Target(s):</b>	<ul style="list-style-type: none"> <li>- 1.1: Points, Lines and Planes</li> <li>- 1.2: Segments and Congruence</li> </ul>
<b>Acquired Knowledge and Skills:</b>	<ul style="list-style-type: none"> <li>- Identifying key terms</li> <li>- Using properties of segments and angles to find their measure</li> </ul>
<b>Activities:</b>	Notes/ Khan Academy/ Workbook/ Kahoot
<b>Due Dates:</b>	1.1 Worksheet due: Aug 27 1.2 Worksheet due: Aug 30/31

<b>Week 2:</b> Aug 30 - Sep 3	<b>Focus: Angles / Distance / Unit 1 Quiz (1.1~1.3)</b> <b>What is the relationship between the method for finding the midpoint of a segment and the method for finding other partitions of the segment?</b>
<b>Learning Target(s):</b>	<ul style="list-style-type: none"> <li>- 1.3: Constructing and Measuring Angles</li> <li>- 1.4: Exploring Angle Pairs</li> <li>- 1.5: Midpoint and Distance Formula</li> </ul>
<b>Acquired Knowledge and Skills:</b>	<ul style="list-style-type: none"> <li>- Using a straightedge and compass to construct basic figures</li> <li>- Identifying, constructing and using angle pairs to solve problems</li> </ul>

<b>Activities:</b>	Notes/ Khan Academy/ Workbook/ Kahoot Unit 1 Quiz
<b>Due Dates:</b>	1.3 Worksheet due: Aug 31 1.4 Worksheet due: Sep 3 Unit 1 Quiz: Sep 3

<b>Week 3: Sep 6 - Sep 10</b>	<b>Focus: Types of Angles / Unit 1 Review / Unit 1 Test</b> <b>What is the relationship between the method for finding the midpoint of a segment and the method for finding other partitions of the segment?</b>
<b>Learning Target(s):</b>	- 1.6: Classifying Angles
<b>Acquired Knowledge and Skills:</b>	- Using the midpoint and distance formulas to solve problems - Identifying and constructing angles according to their individual criteria
<b>Activities:</b>	Notes/ Khan Academy/ Workbook/ Kahoot Unit 1 Test
<b>Due Dates:</b>	1.5 Worksheet due: Sep 6 1.6 Worksheet due: Sep 8/9 Unit 1 Test: Sep 10

## Assessment Details

Evidence	
I will check students' understanding throughout the unit by...	
<b>Summative Test</b> <ul style="list-style-type: none"> <li>Unit Test will be given at the end of the unit to test students' understanding of the entire unit.</li> </ul>	<b>Formative Warm-up</b> <ul style="list-style-type: none"> <li>A review of previous learning (warm-up activities) at the start of each lesson will be provided to strengthen students' retention of</li> </ul>

<p>Quiz</p> <ul style="list-style-type: none"> <li>• Quiz will be provided to assess students' understanding of the content throughout the unit.</li> </ul>	<p>knowledge.</p> <p>Check-In</p> <ul style="list-style-type: none"> <li>• Gives students focused feedback on their progress in acquiring skills and knowledge.</li> </ul> <p>Discussion</p> <ul style="list-style-type: none"> <li>• Challenging math problems will be provided throughout the unit to help students build critical / creative thinking.</li> </ul> <p>Kahoot</p> <ul style="list-style-type: none"> <li>• Kahoot activity will be provided throughout the class to check for understanding.</li> </ul> <p>Exit Ticket</p> <ul style="list-style-type: none"> <li>• Exit tickets will be provided at the end of the unit to check for understanding.</li> </ul>
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## Extended Learning

Website Description	Website
Visual simulations and worksheets	<a href="https://www.geogebra.org/m/kewpjrue">https://www.geogebra.org/m/kewpjrue</a>
Assists with steps to solving problems	<a href="https://www.webmath.com/index5.html">https://www.webmath.com/index5.html</a>
Helps to try many geometry problems	<a href="https://www.mathwarehouse.com/geometry/">https://www.mathwarehouse.com/geometry/</a>