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### Chapter 1 – Tools of Geometry

(Approximately (7) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.K.12.MP.1.1: Make sense of problems and persevere in solving them. Click here for video examples from Inside Mathematics</td>
<td>MAFS.912.G-CO.1.1 Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc. (Level 1)</td>
<td>- Know the definitions of angle, point, line, segment  - Represent perpendicular line and parallel lines graphically and as equations  - Name and identify angles with a proper notation</td>
<td>- Definition of Parallel Lines  - Definition of a Circle  - Definition of Line Segment  - Definition of an Angle  - Definition of Perpendicular Lines</td>
<td>- Building Blocks of Geometry</td>
</tr>
<tr>
<td>MAFS.K.12.MP.2.1: Reason abstractly and quantitatively. Click here for video examples from Inside Mathematics</td>
<td>MAFS.912.G-GPE.2.6 Find the point on a directed line segment between two given points that partitions the segment in a given ratio. (Level 1)</td>
<td>- Find the midpoint of a line  - Split the line up into ratios like $\frac{1}{4}$ and $\frac{2}{3}$</td>
<td>- Centroid Coordinates  - Partitioning a Segment</td>
<td>- Partition Me  - Concept Byte: Partitioning a Line Segment (p. 57, new teacher’s edition)</td>
</tr>
<tr>
<td>MAFS.K.12.MP.4.1: Model with mathematics. Click here for video examples from Inside Mathematics</td>
<td>MAFS.912.G-GPE.2.7 Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula. (Level 1)</td>
<td>- Calculate the perimeter of polygons on the coordinate grid  - Calculate the area of polygons on the coordinate grid</td>
<td>- Pentagon’s Perimeter  - Perimeter and Area of a Rectangle  - Perimeter and Area of a Right Triangle  - Perimeter and Area of an Obtuse Triangle</td>
<td>- Going the Distance</td>
</tr>
<tr>
<td>MAFS.K.12.MP.6.1: Attend to precision. Click here for video examples from Inside Mathematics</td>
<td>(Prepares for) MAFS.912.G-CO.3.9 Prove theorems about lines and angles; use theorems about lines and angles to solve problems. (Level 3)</td>
<td>- Identify vertical angles and find the missing value using vertical angles  - Identify and use supplementary and complementary angles</td>
<td>- Proving the Vertical Angles Theorem  - Proving the Alternate Interior Angles Theorem  - Finding Angle Measures – 2  - Name That Triangle</td>
<td></td>
</tr>
<tr>
<td>MAFS.K.12.MP.7.1: Look and make use of structure. Click here for video examples from Inside Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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**MAFS.K.12.MP.8.1:** Look for and express regularity in repeated reasoning. [Click here](#) for video examples from Inside Mathematics

<table>
<thead>
<tr>
<th>MAFS.912.G-MG.1.1</th>
<th>Finding Angle Measures - 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use geometric shapes, their measures, and their properties to describe objects. (Level 1)</td>
<td>Finding Angle Measures - 2</td>
</tr>
<tr>
<td><strong>MAFS.912.G-MG.1.3</strong></td>
<td><strong>Finding Angle Measures - 3</strong></td>
</tr>
<tr>
<td>Apply geometric methods to solve design problems. (Level 3)</td>
<td><strong>Equidistant Points</strong></td>
</tr>
<tr>
<td><strong>MAFS.912.G-CO.4.12</strong></td>
<td><strong>Review:</strong> Classifying Polygons p. 65 (p. 58 in new text)</td>
</tr>
<tr>
<td>Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). (Level 2)</td>
<td>Concept Byte: Comparing Perimeters and Area, p. 78 (p. 68 in new text)</td>
</tr>
</tbody>
</table>

**Module 1 - Key Vocabulary**

Partition  Bisector  Regular Polygon  Ratio  Midpoint  Compass  Perpendicular  Parallel  Point  Line  Plane  Segment  Ray  Collinear  Adjacent
Vertex  Perimeter  Postulate  Theorem  Axiom  Supplementary  Complementary  Congruent  Vertical Angle  Linear Pair  Polygon  Convex  Concave
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## Chapter 2 – Reasoning and Proof

(Approximately (6) days)  **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| MAFS.K.12.MP.1.1: Make sense of problems and persevere in solving them. [Click here](#) for video examples from Inside Mathematics | MAFS.912.G-CO.3.9 Prove theorems about lines and angles; use theorems about lines and angles to solve problems. (Level 3) | • Understand If-then statements  
• Know the difference between a conjecture and proof  
• Prove vertical angles congruent and other angle pair theorems  
• Construct 2-Column Proofs | • [Proving the Vertical Angles Theorem](#)  
• [Proving the Alternate Interior Angles Theorem](#)  
• [Finding Angle Measures – 2](#)  
• [Name That Triangle](#)  
• [Finding Angle Measures - 1](#)  
• [Finding Angle Measures - 3](#)  
• [Equidistant Points](#) | • All of Chapter 2 |
| MAFS.K.12.MP.2.1: Reason abstractly and quantitatively. [Click here](#) for video examples from Inside Mathematics | | | | |

### Module 2 - Key Vocabulary

<table>
<thead>
<tr>
<th>If-Then Statements</th>
<th>2-Column Proof</th>
<th>Hypothesis</th>
<th>Converse</th>
<th>Conclusion</th>
<th>Deductive</th>
<th>Theorems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biconditional</td>
<td>Inverse</td>
<td>Contrapositive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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### Chapter 3 - Parallel and Perpendicular Lines

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<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| **MAFS.K.12.MP.1.1:** Make sense of problems and persevere in solving them. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.3.9** Prove theorems about lines and angles; use theorems about lines and angles to solve problems. (Level 3) | - Identify and use angle pairs formed by parallel lines and transversals  
- Prove the following theorems and their converse: Alternate interior, alternate exterior, and consecutive interior  
- Solve problems with parallel lines  
- Use perpendicular transversal theorem to prove lines are parallel | - Proving the Vertical Angles Theorem  
- Proving the Alternate Interior Angles Theorem  
- Finding Angle Measures – 2  
- Name That Triangle  
- Finding Angle Measures - 1  
- Finding Angle Measures - 3  
- Equidistant Points | - Parallel Lines  
- Parallel Lines and Transversal Lines |
| **MAFS.K.12.MP.2.1:** Reason abstractly and quantitatively. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.4.12** Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). (Level 2) | - Construct 2 or more lines that are not parallel in a transversal.  
- Construct 2 or more parallel lines in a transversal  
- Construct perpendicular postulate  
- Construct special quadrilaterals | - Constructions for Parallel Lines  
- Constructions for Perpendicular Lines  
- Constructing a Congruent Segment  
- Bisecting A Segment and Angle Worksheet  
- Constructing a Congruent Angle | - Concept Byte: Parallel Lines and Related Angles p. 155 (p. 147 in new edition) |
| **MAFS.K.12.MP.5.1:** Use appropriate tools strategically. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.3.10** Prove theorems about triangles; use theorems about triangles to solve problems. (Level 3) | - Prove the triangle-sum theorem  
- Use the triangle exterior angle theorem | - Median Concurrence Proof  
- Proving the Triangle Inequality Theorem  
- Triangle Sum Proof  
- The Third Side of a Triangle  
- Triangle Midsegment Proof  
- An Isosceles Trapezoid Problem  
- The Measure of an Angle of a Triangle  
- Interior Angles of a Polygon  
- Triangles and Midpoints | - Concept Byte: Perpendicular Lines and Planes p. 179 (p. 170 in new edition)  
- Discovering Triangle Sum  
- Triangles: Finding Interior Angle Measures |
Geometry HS Curriculum Map
Course Number: 1206310

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[Click here for video examples from Inside Mathematics]

| MAFS.912.G-GPE.2.5 | • Preview: Write and graph linear equations
• Create the equations for perpendicular and parallel lines
• Determine if lines are parallel and perpendicular graphically and with equations |
|-------------------|--------------------------------------------------------------------------------|
| Module 3 - Key Vocabulary                                      | • Writing Equations for Parallel Lines
• Writing Equations for Perpendicular Lines
• Proving Slope Criterion for Perpendicular Lines - 2
• Proving Slope Criterion for Parallel Lines - Two
• Proving Slope Criterion for Parallel Lines - One
• Proving Slope Criterion for Perpendicular Lines - 1 |
| Parallel | Perpendicular | Linear Equation | Alternate Interior | Alternate Exterior | Consecutive Int. | Converse |
| Corresponding | Transversal | Slope | Y-Intercept | y=mx+b |
# Geometry HS Curriculum Map

## Course Number: 1206310

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## Chapter 4 - Congruent Triangles

(Approximately (6) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| **MAFS.K.12.MP.1.1**: Make sense of problems and persevere in solving them. [Click here](#) for video examples from Inside Mathematics | **MAFS.912.G-CO.3.10** Prove theorems about triangles; use theorems about triangles to solve problems. (Level 3) | • Classify triangle by sides and angles  
• Prove triangles are congruent  
• Prove the base angle theorem and equilateral angle theorem | • Median Concurrence Proof  
• Proving the Triangle Inequality Theorem  
• Triangle Sum Proof  
• The Third Side of a Triangle  
• Triangle Midsegment Proof  
• An Isosceles Trapezoid Problem  
• The Measure of an Angle of a Triangle  
• Interior Angles of a Polygon  
• Triangles and Midpoints  
• Locating the Missing Midpoint  
• Isosceles Triangle Proof | • Concept Byte: Building Congruent Triangles p. 237 (p. 225 in new text)  
• Joining Two Midpoints of sides of a triangle |
| **MAFS.K.12.MP.2.1**: Reason abstractly and quantitatively. [Click here](#) for video examples from Inside Mathematics | **MAFS.912.G-CO.2.7** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent. (Level 1) | • Prove corresponding parts of triangles of congruent. | | |
| **MAFS.K.12.MP.4.1**: Model with mathematics. [Click here](#) for video examples from Inside Mathematics | | | | |
| **MAFS.K.12.MP.6.1**: Attend to precision. [Click here](#) for video examples from Inside Mathematics | | | | |
| **MAFS.K.12.MP.8.1**: Look for and express regularity in repeated reasoning. [Click here](#) for video examples from Inside Mathematics | | | | |

---

**Notes:**

- **MAFS.K.12.MP.1.1**: [Click here](#) for video examples from Inside Mathematics
- **MAFS.K.12.MP.2.1**: [Click here](#) for video examples from Inside Mathematics
- **MAFS.K.12.MP.4.1**: [Click here](#) for video examples from Inside Mathematics
- **MAFS.K.12.MP.6.1**: [Click here](#) for video examples from Inside Mathematics
- **MAFS.K.12.MP.8.1**: [Click here](#) for video examples from Inside Mathematics
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<table>
<thead>
<tr>
<th>MAFS.912.G-CO.2.8</th>
<th>Explain how triangles are congruent by ASA, SAS, SSS and HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.912.G-CO.4.12</td>
<td>Use construction to prove sides and base angles are congruent in isosceles triangles.</td>
</tr>
</tbody>
</table>

MAFS.K12.MP.5.1: Use appropriate tools strategically. [Click here](#) for video examples Inside Mathematics

<table>
<thead>
<tr>
<th>MAFS.912.G-CO.2.8</th>
<th>Explain how the criteria for triangle congruence (ASA, SAS, SSS, and Hypotenuse-Leg) follow from the definition of congruence in terms of rigid motions. (Level 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.912.G-CO.4.12</td>
<td>Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). (Level 2)</td>
</tr>
</tbody>
</table>

Module 4 - Key Vocabulary

<table>
<thead>
<tr>
<th>SAS</th>
<th>AAS</th>
<th>CPCTC</th>
<th>Isosceles</th>
<th>Base Angles</th>
<th>Equilateral</th>
<th>Equiangular</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Justifying HL Congruence**
- **Justifying SSS Congruence**
- **Justifying SAS Congruence**
- **Justifying ASA Congruence**
- **Concept Byte: Exploring AAA and SSA p. 256 (p. 242 in new text)**
- **Are the Triangles Congruent?**
- **Triangles on a Lattice**
- **Congruent Triangles and SSS**
- **When Does SSA Work to Determine Triangle Congruence?**
- **Concept Byte: Paper Folding Conjectures p. 265 (p. 249 in new text)**
- **Constructions for Parallel Lines**
- **Constructions for Perpendicular Lines**
- **Constructing a Congruent Segment**
- **Bisecting A Segment and Angle Worksheet**
- **Constructing a Congruent Angle**
# Geometry HS Curriculum Map

**Course Number:** 1206310

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## Chapter 5 - Relationships within Triangles

(Arroundly (6) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| MAFS.K.12.MP.1.1: Make sense of problems and persevere in solving them. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.3.10** Prove theorems about triangles; use theorems about triangles to solve problems. (Level 3) | • Draw the midsegment and know it is parallel and half the length of the side of the triangle | • Median Concurrence Proof  
• Proving the Triangle Inequality Theorem  
• Triangle Sum Proof  
• The Third Side of a Triangle  
• Triangle Midsegment Proof  
• An Isosceles Trapezoid Problem  
• The Measure of an Angle of a Triangle  
• Interior Angles of a Polygon  
• Triangles and Midpoints  
• Locating the Missing Midpoint  
• Isosceles Triangle Proof | • Concept Byte: Investigating Midsegments p. 300 (p. 284 new) |
| MAFS.K.12.MP.2.1: Reason abstractly and quantitatively. Click here for video examples from Inside Mathematics | MAFS.912.G-GPE.2.4 Use coordinates to prove simple geometric theorems algebraically. (Level 2) | • Prove properties of shapes on the coordinate grid given variable coordinates  
• Determine the location of the Point of Concurrency. | • Describe the Quadrilateral  
• Type of Triangle  
• Diagonals of a Rectangle  
• Midpoints of Sides of a Quadrilateral | |
| MAFS.K.12.MP.4.1: Model with mathematics. Click here for video examples from Inside Mathematics | | | | |
| MAFS.K.12.MP.5.1: Use appropriate tools strategically. Click here for video examples Inside Mathematics | | | | |
| MAFS.K.12.MP.6.1: Attend to precision. Click here for video examples from Inside Mathematics | | | | |
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<table>
<thead>
<tr>
<th><strong>MAFS.K.12.MP.8.1</strong></th>
<th>Look for and express regularity in repeated reasoning. <a href="#">Click here</a> for video examples from Inside Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.912.G-CO.3.9</strong></td>
<td>Prove theorems about lines and angles; use theorems about lines and angles to solve problems. (Level 3)</td>
</tr>
<tr>
<td><strong>Prove any point on the perpendicular bisector is equidistant from the endpoints</strong></td>
<td><strong>Proving the Vertical Angles Theorem</strong></td>
</tr>
<tr>
<td><strong>Prove any point on the angle bisector is equidistant to the sides at a right angle</strong></td>
<td><strong>Proving the Alternate Interior Angles Theorem</strong></td>
</tr>
<tr>
<td><strong>Finding Angle Measures – 2</strong></td>
<td><strong>Name That Triangle</strong></td>
</tr>
<tr>
<td><strong>Finding Angle Measures - 1</strong></td>
<td><strong>Finding Angle Measures - 3</strong></td>
</tr>
<tr>
<td><strong>Equidistant Points</strong></td>
<td><strong>Inscribed Quadrilaterals</strong></td>
</tr>
<tr>
<td><strong>Inscribed Circle Construction</strong></td>
<td><strong>Circumscribed Circle Construction</strong></td>
</tr>
<tr>
<td><strong>Concept Byte: Special Segments in Triangles</strong> (p. 324)</td>
<td><strong>Concept Byte: Paper Folding Bisectors</strong> (p. 308 new)</td>
</tr>
<tr>
<td><strong>All of : Altitudes - orthocenter</strong></td>
<td><strong>5.4</strong></td>
</tr>
<tr>
<td><strong>My children: Medians - centroid</strong></td>
<td><strong>Circumcenter of a triangle</strong></td>
</tr>
<tr>
<td><strong>Are bringing in: Angle bisectors - incenter</strong></td>
<td><a href="#">Click below</a> for a video of each construction:</td>
</tr>
<tr>
<td><strong>Peanut butter cookies: perpendicular bisectors - circumcenter</strong></td>
<td><strong>Equilateral Triangle</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Square</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Regular Hexagon</strong></td>
</tr>
</tbody>
</table>

### Module 5 - Key Vocabulary

<table>
<thead>
<tr>
<th>Altitude</th>
<th>Perpendicular Bisector</th>
<th>Angle Bisector</th>
<th>Incenter</th>
<th>Circumcenter</th>
<th>Orthocenter</th>
<th>Centroid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>Mid-segments</td>
<td></td>
<td></td>
<td>Point of concurrency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Geometry HS Curriculum Map

**Course Number:** 1206310

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## Chapter 6 - Polygons and Quadrilaterals

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<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
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<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| **MAFS.K.12.MP.1.1:** Make sense of problems and persevere in solving them. [Click here](#) for video examples from Inside Mathematics | **MAFS.912.G-SRT.2.5** Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. (Level 3) | • Find the sum of the measures of the interior and exterior angles of a polygon  
• Verify and use properties of trapezoids and kites | • [Basketball Goal](#)  
• [Prove Rhombus Diagonals Bisect Angles](#)  
• [County Fair](#)  
• [Similar Triangles - 1](#)  
• [Similar Triangles - 2](#) | • Concept Byte: Exterior Angles of a Polygon p. 370 (p. 352 new) |
| **MAFS.K.12.MP.2.1:** Reason abstractly and quantitatively. [Click here](#) for video examples from Inside Mathematics | **MAFS.912.G-CO.3.11** Prove theorems about parallelograms; use theorems about parallelograms to solve problems. (Level 3) | • Use the relationships among sides, angles, and diagonals of a parallelogram  
• Determine whether a quadrilateral is a parallelogram  
• Define/classify special types of parallelograms  
• Use the properties of diagonals of rhombi and rectangles  
• Determine whether a parallelogram is a rhombus or rectangle | • [Finding Angle C](#)  
• [Comparing Lengths in a Parallelogram](#)  
• [Angles of a Parallelogram](#)  
• [Two Congruent Triangles](#)  
• [Frame It Up](#)  
• [Proving Parallelogram Side Congruence](#)  
• [Proving Parallelogram Angle Congruence](#)  
• [Proving Parallelogram Diagonals Bisect](#)  
• [Proving a Rectangle Is a Parallelogram](#)  
• [Proving Congruent Diagonals](#) | |
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<table>
<thead>
<tr>
<th>Standard</th>
<th>Classify polygons in the coordinate plane.</th>
<th>Pentagons Perimeter</th>
<th>Going the Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.912.G-GPE.2.7</td>
<td>Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula. (Level 1)</td>
<td>Perimeter and Area of a Rectangle</td>
<td></td>
</tr>
<tr>
<td>MAFS.912.G-GPE.2.4</td>
<td>Name and use coordinates of special figures by using their properties.</td>
<td>Describe the Quadrilateral</td>
<td>A Midpoint Miracle</td>
</tr>
<tr>
<td>MAFS.912.G-GPE.2.4</td>
<td>Prove quadrilaterals by a coordinate proof.</td>
<td>Type of Triangle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagonals of a Rectangle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midpoints of Sides of a Quadrilateral</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use geometry software to construct quadrilaterals.</td>
<td>Constructions for Parallel Lines</td>
<td>Concept Byte: Quadrilaterals in Quadrilaterals p. 438 (p. 413 new)</td>
</tr>
<tr>
<td>MAFS.912.G-CO.4.12</td>
<td>Use different resources to construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle. (Level 2)</td>
<td>Constructions for Perpendicular Lines</td>
<td></td>
</tr>
<tr>
<td>MAFS.912.G-CO.4.13</td>
<td>Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle. (Level 2)</td>
<td>Constructing a Congruent Segment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bisecting A Segment and Angle Worksheet</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Constructing a Congruent Angle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct the Center of a Circle</td>
<td>Page 633 #36d in new text only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equilateral Triangle in a Circle</td>
<td>YouTube videos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regular Hexagon in a Circle</td>
<td>Khan Academy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Square in a Circle</td>
<td></td>
</tr>
</tbody>
</table>

**Module 6 - Key Vocabulary**

<table>
<thead>
<tr>
<th>Diagonal</th>
<th>Parallelogram</th>
<th>Rhombus</th>
<th>Rectangle</th>
<th>Square</th>
<th>Trapezoid</th>
<th>Isosceles Trapezoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midsegment</td>
<td>Kite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Geometry HS Curriculum Map

**Course Number:** 1206310

The intention of the Curriculum Map is to provide a consistent scope and sequence for the course across the district. While the instruction and resources will be based on the needs of the students, the expectation is that every student enrolled in the course will learn the standards in each module.

## Chapter 7 - Similarity

(Approximately (5) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| **MAFS.K.12.MP.1.1:** Make sense of problems and persevere in solving them. [Click here](#) for video examples from Inside Mathematics | **MAFS.912.G-SRT.2.5** Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. (Level 3) | • Write ratios and solve proportions  
• Identify and apply similar polygons  
• Find and use relationships in similar right triangles  
• Find missing side lengths, altitude, and medians of similar triangles  
• Prove triangles similar using AA, SSS and SAS  
• Use similar triangles for indirect measurements | • [Basketball Goal](#)  
• [Prove Rhombus Diagonals Bisect Angles](#)  
• [County Fair: Similar Triangles - 1](#)  
• [Similar Triangles - 2](#) | • Concept Byte: Fractals p. 472 (p. 448 new)  
• Concept Byte: The Golden Ratio p. 493 (p. 468 new) |
| **MAFS.K.12.MP.2.1:** Reason abstractly and quantitatively. [Click here](#) for video examples from Inside Mathematics | **MAFS.912.G-SRT.2.4** Prove theorems about triangles. (Level 3) | • Use a line parallel to one side of a triangle divides the other two proportionally, and conversely (Side-Splitter Theorem) | • [Converse of the Triangle Proportionality Theorem](#)  
• [Pythagorean Theorem Proof](#)  
• [Geometric Mean Proof](#)  
• [Triangle Proportionality Theorem](#) | • Concept Byte: Exploring Proportions in Triangles p. 495 (p. 470 new) |

## Module 7 - Key Vocabulary

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Proportion</th>
<th>Similar</th>
<th>AA</th>
<th>SAS</th>
<th>SSS</th>
<th>Indirect Measurement</th>
</tr>
</thead>
</table>

Side-Splitter Theorem
The intention of the Curriculum Map is to provide a consistent scope and sequence for the course across the district. While the instruction and resources will be based on the needs of the students, the expectation is that every student enrolled in the course will learn the standards in each module.

### Chapter 8 - Right Triangles and Trigonometry
(Approximately (7) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.K.12.MP.1.1:</strong> Make sense of problems and persevere in solving them. Click here for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-SRT.2.4</strong></td>
<td>- Prove Pythagorean Theorem using triangle similarity</td>
<td>- Converse of the Triangle Proportionality Theorem&lt;br&gt;- Pythagorean Theorem Proof&lt;br&gt;- Geometric Mean Proof&lt;br&gt;- Triangle Proportionality Theorem</td>
<td>Let’s Prove the Pythagorean Theorem&lt;br&gt;Let’s Prove the Pythagorean Theorem (p. 490 new)</td>
</tr>
<tr>
<td><strong>MAFS.K.12.MP.2.1:</strong> Reason abstractly and quantitatively. Click here for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-SRT.3.8</strong></td>
<td>- Be able to apply the Pythagorean theorem&lt;br&gt;- Use the properties of 45-45-90 and 30-60-90 triangles.&lt;br&gt;- Use the sine, cosine and tangent ratios to determine side lengths and angle measures in right triangles.&lt;br&gt;- Use angles of elevation and depression to solve problems.</td>
<td>- Lighthouse Keeper&lt;br&gt;- Will It Fit?&lt;br&gt;- TV Size&lt;br&gt;- River Width&lt;br&gt;- Washington Monument&lt;br&gt;- Holiday Lights&lt;br&gt;- Step Up&lt;br&gt;- Perilous Plunge</td>
<td>Concept Byte: Pythagorean Theorem p. 514 (p. 506 new)&lt;br&gt;Concept Byte: Exploring Trigonometric Ratios p. 531 (p. 506 new)&lt;br&gt;Concept Byte: Measuring from Afar p. 542 old text only</td>
</tr>
<tr>
<td><strong>MAFS.K.12.MP.6.1:</strong> Attend to precision. Click here for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-SRT.3.7</strong></td>
<td>- Know and use the relationship between sine and cosine of complementary angles</td>
<td>- Finding Sine&lt;br&gt;- Right Triangle Relationships&lt;br&gt;- Sine and Cosine&lt;br&gt;- Patterns in the 30-60-90 Table</td>
<td>Concept Byte: Complementary Angles and Trigonometric Ratios p. 514 new book only</td>
</tr>
<tr>
<td><strong>MAFS.K.12.MP.8.1:</strong> Look for and express regularity in repeated reasoning. Click here for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-SRT.3.6</strong></td>
<td>- Investigate and discover trigonometric ratios by drawing and measuring side lengths.&lt;br&gt;- Collect, analyze, and discuss data to draw conclusions.&lt;br&gt;- Solve application problems by finding an unknown angle based on length measurements</td>
<td>- The Sine of 57&lt;br&gt;- The Cosine Ratio</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Module 8 - Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sine</td>
</tr>
<tr>
<td>Angle of Depression</td>
</tr>
</tbody>
</table>
## Geometry HS Curriculum Map

**Course Number:** 1206310

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### Chapter 9 - Transformations

(Approximately (6) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| **MAFS.K.12.MP.1.1:** Make sense of problems and persevere in solving them. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.1.2** Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformation as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not. (e.g. translation vs. horizontal stretch) (Level 2) | • Identify rigid motions  
• Find translation images of figures | • Demonstrating Rotations  
• Demonstrating Reflections  
• Transformations And Functions  
• Comparing Transformations  
• Demonstrating Translations | • Concept Byte: Tracing Paper Transformations p. 544, new text ONLY |
| **MAFS.K.12.MP.2.1:** Reason abstractly and quantitatively. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.1.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another. (Level 2) | • Find reflection images of figures | • Indicate the Transformations  
• Rotation of a Quadrilateral  
• Two Triangles  
• Reflect a Semicircle | • Concept Byte: Paper Folding and Reflections p. 568 (p. 553 new) |
| **MAFS.K.12.MP.4.1:** Model with mathematics. Click here for video examples from Inside Mathematics | **MAFS.912.G-CO.1.4** Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments. (Level 3) | • Draw and identify rotation images of figures | • Define a Rotation  
• Define a Reflection  
• Define a Translation | • Refer to Ls. 9-3 in new textbook.  
• Concept Byte: Tracing Paper Transformations p. 584 in old book ONLY |
# Geometry HS Curriculum Map

**Course Number:** 1206310

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<table>
<thead>
<tr>
<th>Standard</th>
<th>Domain</th>
<th>Subdomain</th>
<th>Expectations</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.912.G.CO.1.3</td>
<td>Geometry</td>
<td>Transformations</td>
<td>Identify the type of symmetry in a figure</td>
<td>Concept Byte: Symmetry p. 568 in new book ONLY</td>
</tr>
</tbody>
</table>

*MAFS.912.G.CO.1.3* Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself (Level 2)

*MAFS.912.G.CO.2.6* Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent. (Level 2)

*MAFS.912.G-SRT.1.1* Verify experimentally the properties of dilations given by a center and a scale factor:

a. A dilation takes a line not passing through the center of the dilation to a parallel lines, and leaves a line passing through the center unchanged.

b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor. (Level 2)
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### Module 9 - Key Vocabulary

<table>
<thead>
<tr>
<th>Congruence transformation</th>
<th>Dilation</th>
<th>Image</th>
<th>Isometry</th>
<th>Preimage</th>
<th>Reflection</th>
<th>Rigid motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotation</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
# Geometry HS Curriculum Map

## Course Number: 1206310

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## Chapter 10 - Area

(Approximately (6) days) **REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.K.12.MP.1.1:</strong> Make sense of problems and persevere in solving them. <a href="#">Click here</a> for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-GPE.2.7</strong> Use coordinates to compute perimeters of polygons and areas of triangles and rectangles. (Level 1)</td>
<td>• Use coordinate geometry to find the perimeter of a polygon and find the area of triangles and rectangles.</td>
<td>• Pentagon’s Perimeter • Perimeter and Area of a Rectangle • Perimeter and Area of a Right Triangle • Perimeter and Area of an Obtuse Triangle</td>
<td>• Concept Byte: Transforming to Find Area p. 632 (p. 614 new text)</td>
</tr>
<tr>
<td><strong>MAFS.K.12.MP.2.1:</strong> Reason abstractly and quantitatively. <a href="#">Click here</a> for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-MG.1.1</strong> Use geometric shapes, their measures, and their properties to describe objects. (Level 1)</td>
<td>• Use geometric shapes to describe objects that are found in the real world. • Use measures of geometric shapes to the find the area, perimeter, or circumference of a shape found the real world. • Find the area of regular polygons</td>
<td>• Size It Up • Camping Calculations • Estimating Volume • Estimating Area</td>
<td>• Learnzillion Lesson</td>
</tr>
<tr>
<td><strong>MAFS.K.12.MP.6.1:</strong> Attend to precision. <a href="#">Click here</a> for video examples from Inside Mathematics</td>
<td><strong>MAFS.912.G-CO.1.1</strong> Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc. (Level 1)</td>
<td>• Find the measures of central angles and arcs. • Find the circumference and arc length.</td>
<td>• Arc Length • Arc Length and Radians • Sector Area • Deriving the Sector Area Formula</td>
<td>• Concept Byte: Exploring Area and Circumference p. 695 in old text ONLY • Concept Byte: Inscribed and Circumscribed Figures p. 667 in new text ONLY</td>
</tr>
</tbody>
</table>
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MAFS.912.G-C.2.5
Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector. (Level 3)

- Use similarity to derive the length of the arc intercepted by an angle is proportional to the radius
- Define the radian measure as the constant of proportionality
- Derive the formula for the area of a sector
- Use the formula of the area of a sector to solve problems

- Arc Length
- Arc Length and Radians
- Sector Area
- Deriving the Sector Area Formula

- Concept Byte: Radian Measure p. 658 in new text ONLY
- Concept Byte: Exploring the Area of a Circle p. 688 (p. 659 in new text)
- Investigate and calculate arc length by using circumference and ratios
- Khan Academy Radians video
- Understand radians as the relationship between the radius and circumference in a circle by deriving a formula for radian from a circle
- Convert between radians and degrees by deriving a formula from the definition of radian
- Derive and calculate the area of a sector by applying the area of a circle

<table>
<thead>
<tr>
<th>Module 10 - Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apothem</td>
</tr>
<tr>
<td>Major arc</td>
</tr>
</tbody>
</table>
Geometry HS Curriculum Map
Course Number: 1206310

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Chapter 11 - Surface Area and Volume
(Approximately (9) days)  REFER TO PACING GUIDE

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
<th>Florida Math Standard</th>
<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| MAFS.K.12.MP.1.1: Make sense of problems and persevere in solving them. [Click here](#) for video examples from Inside Mathematics | MAFS.912.G-GMD.2.4 Identify the shapes of 2-dimensional cross sections of 3-dimensional objects, and identify 3-dimensional objects generated by rotations of 2-dimensional objects. (Level 2) | • Identify the shape of 2-dimensional cross sections of a 3-dimensional objects  
• Identify a 3-dimensional object generated by a rotation of a 2-dimensional object  
• Use Euler’s Formula | • Slice It  
• 2D Rotations of Triangles  
• 2D Rotations of Rectangles  
• Slice of a Cone  
• Working Backwards – 2D Rotations  
• Inside the Box | • [Virtually Possible](#)  
• Concept Byte: Perspective Drawing p. 723 (p. 696 in new text)  
• Rotating 2-D shapes [video and lesson](#) |
| MAFS.K.12.MP.2.1: Reason abstractly and quantitatively. [Click here](#) for video examples from Inside Mathematics | MAFS.912.G-MG.1.1 Use geometric shapes, their measures, and their properties to describe objects. (Level 1) | • Identify the lateral and surface area of a prism, pyramid, cylinder and cone. | • Size It Up  
• Camping Calculations  
• Estimating Volume  
• Estimating Area | |
| MAFS.K.12.MP.6.1: Attend to precision. [Click here](#) for video examples from Inside Mathematics | MAFS.912.G-GMD.1.1 Give an informal argument for the formulas for the circumference of a circle, area of circle, volume of a cylinder, pyramid and cone. (Level 3) | • Use the dissection arguments  
• Use Cavalieri’s principal  
• Give an informal limit argument | • Area and Circumference – 1  
• Area and Circumference - 2  
• Volume of a Cylinder  
• Volume of a Cone  
• Area and Circumference - 3  
• Volume of a Pyramid | • Derivation of Volume [Videos](#) |
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<table>
<thead>
<tr>
<th>Module</th>
<th>Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 11</td>
<td>Cone Cross section Cylinder Base Polyhedron Prism Pyramid</td>
</tr>
<tr>
<td>Similar solids</td>
<td>Sphere Surface area Volume Cavalieri’s Principal</td>
</tr>
</tbody>
</table>

**MAFS.912.G-GMD.1.3**
Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. (Level 2)

- Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
- **The Great Pyramid**
- **Sports Drinks**
- **Snow Cones**
- **Do Not Spill the Water!**
- Concept Byte: Finding Volume p. 758 (p. 725 in new text)

**MAFS.912.G-MG.1.2**
Apply concepts of density based on area and volume in modeling situations.

- Apply concepts of density based on area and volume in modeling situations.
- Compare and find the areas and volumes of similar solids
- **Population of Utah**
- **How Many Trees?**
- **Mudslide**
- Concept Byte: Exploring Similar Solids p. 772 (p. 741 in new text)
The intention of the Curriculum Map is to provide a consistent scope and sequence for the course across the district. While the instruction and resources will be based on the needs of the students, the expectation is that every student enrolled in the course will learn the standards in each module.

### Chapter 12 - Circles

**(Approximately (7) days) REFER TO PACING GUIDE**

<table>
<thead>
<tr>
<th>Highlighted Math Practice</th>
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<th>Students should be able to:</th>
<th>MFAS Tasks</th>
<th>Suggested Instructional Resources</th>
</tr>
</thead>
</table>
| MAFS.K.12.MP.1.1: Make sense of problems and persevere in solving them. Click here for video examples from Inside Mathematics | MAFS.912.G-C.1.2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle. (Level 2) | • Solve problems related to circles using the properties of central angles, inscribed angles, radii, chords, and tangents. | • **Tangent Line and Radius**  
• **Central and Inscribed Angles**  
• **Circles with Angles**  
• **Inscribed Angle on Diameter** | • Concept Byte: Paper Folding with Circles p. 802 (p. 770 in new text)  
• Concept Byte: Exploring chords and Secants p. 822 (789 in new text) |
| MAFS.K.12.MP.2.1: Reason abstractly and quantitatively. Click here for video examples from Inside Mathematics | MAFS.912.G-GPE.1.1 Derive the equation of a circle with a given center and radius using the Pythagorean theorem; complete the square to find the center and radius of a circle given by an equation. (Level 2) | • Derive the equation of a circle with a given center and radius using the Pythagorean theorem;  
• Complete the square to find the center and radius of a circle given by an equation.  
• Determine the center and radius of a circle given its equation in general form. | • **Derive the Circle – Specific Points**  
• **Complete the Square for Center-Radius 2**  
• **Complete the Square for Center-Radius**  
• **Derive the Circle – General Points** | • Khan Academy Video of Circle Equation Proof  
• Learnzillion Video  
• Write the equation of a circle by completing the square |

### Module 12 - Key Vocabulary

<table>
<thead>
<tr>
<th>Chord</th>
<th>Inscribed angle</th>
<th>Intercepted arc</th>
<th>Locus</th>
<th>Point of tangency</th>
<th>Secant</th>
<th>Standard form of an equation of a circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangent to a circle</td>
<td></td>
<td></td>
<td></td>
<td></td>
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Geometry HS Curriculum Map
Course Number: 1206310

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**Levels are Content Complexity Rating:**

- **Level 1:** Recall
- **Level 2:** Basic Application of Skills and Concepts
- **Level 3:** Strategic Thinking and Complex Reasoning
- **Level 4:** Extended Thinking and Complex Reasoning