7th Grade Accelerated - Unit 8: Math - Geometry

Content Area: **Mathematics**
Course(s): **Math 6, Generic Course**
Time Period: **Generic Time Period**
Length: **36 days**
Status: **Published**

Established Goals/Standards

Please choose the appropriate Goals/Standards from the Standards tab above.

MA.8.G	Geometry
MA.8.G.A	Understand congruence and similarity using physical models, transparencies, or geometry software.
MA.8.G.A.1	Verify experimentally the properties of rotations, reflections, and translations:
MA.8.G.A.1a	Lines are transformed to lines, and line segments to line segments of the same length.
MA.8.G.A.1b	Angles are transformed to angles of the same measure.
MA.8.G.A.1c	Parallel lines are transformed to parallel lines.
MA.8.G.A.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
MA.8.G.A.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
MA.8.G.A.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
MA.8.G.A.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- How can you show that figures are congruent?
- How can you show that figures are similar?
- What are the possible relationships between pairs of angles?

Enduring Understanding

Please add your Enduring Understandings by clicking on the Lists tab above.

- Angle relationships are dependent upon their position in a geometric figure or diagram.
- You can show figures are congruent by proving their angles and sides are the same measure.

- You can show figures are similar by proving their angles are congruent and their sides are proportional.

Content

Students will be able to:

- Identify types of angles.
- Find angle measures by using their relationship.
- Identify parallel lines.
- Identify angles formed by parallel lines and transversals.
- Identify congruent figures and use them to solve problems.
- Identify similar figures and use proportions to find missing measurements.
- Prove that triangles are similar.
- Find the measures of angles in a polygon
- Graph and descirbe translations, reflections, rotations.
- Identify lines of symmetry
- Identify lines of rotational symmetry.
- Describe a sequence of transformations that map one figure onto another.
- Graph dilations.
- Determine the scale factor of a dilation.

Vocabulary:

- Adjacent angles
- Vertical angles
- Complimentary angles
- Supplemtary angles
- Interior and exterior angles
- Parallel
- Perpendicular
- Corresponding angles
- Similar figures
- Transversal
- Translation
- Reflection
- Rotation
- Dilation
- Angle of rotation
- Center of rotation
- Line of reflection
- Line of symmetry
- Reflectional symmetry
- Rotational symmetry
- Scale Factor

Assessment

Resources

- Pearson textbook and online resources
- Teacher made flip-charts
- Web-based activities (mathplayground.com) (coolmath.com)
- Teacher made worksheets/assessments
- mad minutes
- NJCTL.org (PMI math)
- Pizzazz series of worksheets