G: Geometry

Content Area: **Mathematics**
Course(s): **Mathematics 1**
Time Period: **March**
Length: **N/A**
Status: **Published**

Enduring Understandings

Identifying the properties of shapes can help sort them.

By breaking apart large shapes we can make new shapes and name them as halves, fourths/quarters.

Essential Questions

Where are geometric shapes found in everday objects?

Content

Learners will:

- Reason with shapes and their attributes.

To show evidence of meeting this standard, students will be able to:

- Explain the similarities and differences in geometric shapes (plane and solids)
- Identify fractional parts of a shape divided into halves and fourths/quarters
- Divide a circle or rectangle into fractional parts and use mathematical language to describe the action (halves, quarters, fourths)
- Demonstrate with manipulatives that the more parts a shape is broken into, the smaller the parts will be.

Vocabulary

Two dimensional (2D) shapes, sides, vertices, edges, faces, flat surface, rectangular prism, three dimensional (3D) shapes, equal, shares, halves, fourths, quarters

Modifications and Accommodations:

- Once shapes and their characteristics have been discussed, create a shape hunt in the classroom.
- Find objects in the classroom and/or outdoors, that can be cut to model equal halves, thirds, fourths, etc.
- Pair share activity: understanding fractional parts will be demonstrated through construction of fraction pizzas.

Resources

Math Program

enVision2.0 First Grade Math - Topics 14 and 15

Math Literature:

Shapes

Mouse Shapes by Ellen Stoll Walsh

The Greedy Triangle by Marilyn Burns

When a Line Bends...A Shape Bends Rhonda Growler Greene

Shapes, Shapes, Shapes by Tana Hoben

The Shape of Things Dayle Ann Dodds

Equal Shares

Jump Kangaroo, Jump by Stuart J Murphy

Eating Fractions by Bruce McMillan

Give Me Half By Stuart J Murphy

Fraction Fun by David A. Adler

Whole-y Cow Fractions Are Fun by Taryn Souders

Full House: An Invitation to Fractions

The Doorbell Rang by Dale Ann Dodds

Websites

https://www.georgiastandards.org/Georgia-Standards/Pages/Math-K-5.aspx

- Using the drop down menu on the right hand side of the page; select grade one, unit three. You will find the Unit titled *Understanding Shapes and Fractions.* This unit contains standards based lessons for all of the Geometry standards in first grade.

Ten Marks

Eureka Math Grade 1 Geometry

Brain Pop Jr. Geometry First Grade

Khan Academy First Grade Geometry

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Skills

1.G.1 Skills:

Use attributes to match shapes.

Define 2-D shapes by their attributes.

Use materials to build and draw 2-D shapes.

Define 3-D shapes by their number of edges, vertices, and faces or flat surfaces.

Choose defining attributes of 3-D shapes.

Find the differences in defining attributes between various shapes.

1.G.2 Skills

Combine 2-D shapes to make another 2-D shape.

Combine 3-D shapes to make another 3-D shape.

Find the differences among various shapes.

1.G.3 Skills

Determine whether shapes are divided into equal shares.

Divide shapes into 2 and 4 equal shares and use words to describe those shares.

Understand that more equal shares of the same whole create smaller shares.

Make a drawing or diagram to show a probblem about equal shares

Standards

MA.1.OA	Operations and Algebraic Thinking
MA.1.G.A	Reason with shapes and their attributes.
MA.1.G.A.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
MA.1.G.A.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.