

Chapter 11 Geometry and Fraction Concepts

Content Area: **Mathematics**
Course(s): **Math 2**
Time Period: **June**
Length: **12 Days**
Status: **Published**

Unit Summary

In this unit students will be introduced to some two-dimensional shapes and three-dimensional shapes, and learn how you show equal parts of shapes.

Standards

MA.2.G.A	Reason with shapes and their attributes.
MA.2.G.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
MA.2.G.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
MA.2.G.A.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
TECH.8.1.2.A.CS1	Understand and use technology systems.
TECH.8.1.2.A.CS2	Select and use applications effectively and productively.

Student Learning Objectives

Students will learn to...

- Identify three-dimensional shapes.
- Identify and describe three-dimensional shapes according to the number of faces, edges, and vertices.
- Build three-dimensional shapes using cubes and other objects.
- Name 3-, 4-, 5-, and 6-sided shapes according to the number of sides and vertices.
- Identify angles in two-dimensional shapes.
- Sort two-dimensional shapes according to their attributes.
- Partition rectangles into equal-size squares and find the total number of these squares.
- Identify and name equal parts of circles and rectangles as halves, thirds, or fourths.
- Partition shapes to show halves, thirds, or fourths.
- Identify and describe one equal part as a half of, a third of, or a fourth of a whole.
- Solve problems involving wholes divided into equal shares by using the strategy draw a diagram.

Essential Questions

- What are some two-dimensional shapes and three-dimensional shapes, and how can you show equal parts of shapes?
- What objects match three-dimensional shapes?
- How would you describe the faces of a rectangular prism and the faces of a cube?
- How can you build a rectangular prism?
- What shapes can you name just by knowing the number of sides and vertices?
- How do you find and count angles in two-dimensional shapes?
- How do you use the number of sides and angles to sort two-dimensional shapes?
- How do you find the total number of same-size squares that will cover a rectangle?
- What are halves, thirds, and fourths of a whole?
- How do you know if a shape shows halves, thirds, or fourths?
- How do you find a half of, a third of, or a fourth of a whole?
- How can drawing a diagram help when solving problems about equal shares?

Enduring Understandings

Students will understand that...

- specific attributes define two-dimensional shapes and three-dimensional shapes.
- shapes can be split into equal parts.

Application

Students will be able to independently use their learning to...

- identify two-dimensional shapes and three-dimensional shapes.
- independently use their learning to show equal parts of shapes.

Skills

Students will be skilled at...

- identifying three dimensional shapes
- discussing the attributes of three dimensional shapes
- Building three dimensional shapes
- Naming two-dimensional shapes
- Circling angles in two dimensional shapes
- Sorting two dimensional shapes
- Partitioning rectangles
- Showing equal parts

- Describing equal parts
- Problem solving equal shares