# 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

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| 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-dimensonal shapes
- Circling angles in two dimensional shapes
- Sorting two dimensional shapes
- Partioning rectangles
- Showing equal parts

- Describing equal parts
- Problem solving equal shares