Unit 10: Chapter 12 Two Dimensional Shapes and Their Attributes

Content Area: **Mathematics**
Course(s): **Math 3**
Time Period: **June**
Length: **4 weeks**
Status: **Published**

Unit Summary

Students will learn about the relationships among lines. They will identify the names of polygons, prisms, pyramids, cylinders, cones, and spheres. Students will explain the difference between angles and explain what makes shapes congruent or symmetric.

Standards

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.3.G.A	Reason with shapes and their attributes.
MA.3.G.A.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
MA.3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Student Learning Objectives

Students will learn how to identify relationships among lines, angles, and polygons, and determine congruent and symmetric shapes.

Essential Questions

How can objects be represented and compared using geometric attributes?
How can you identify and describe shapes?
How do you divide a shape into equal parts and name the parts as a fraction?

Enduring Understandings

Students will understand that:

- polygons can be described by their specific properties and named based on the number of sides and corners.
- shapes can be divided into equal parts.
- equal parts can be named as a fraction.

Application

Students will be able to independently use their learning to:

- descibe angles and sides of a polygon.
- use sides and angles to describe quadrilaterlas and triangles.
- use properties of shapes to classify them.

Skills

Students will be skilled at:

- identifying, defining, and drawing line segments, rays, and angles.
- categorizing and recognizing shapes.
- classifying plane figures.
- classifying triangles.
- classifying quadrilaterals.
- classifying solid figures.
- identifying congruency, symmetry, transformations.
- estimating and finding perimeter, area, and volume.
- identifying and draw symmetric shapes.
- identifying and draw translations and reflections.