

Unit 10 - Chapter 10: Two-Dimensional Figures

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

Unit Summary

In this unit, students will understand that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, angle measures and symmetry. Students will draw and identify lines and angles as well as generate patterns.

Standards

MA.4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
MA.4.G.A.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
MA.4.G.A.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.
MA.4.OA.C.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
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 to:

- identify and draw points, lines, line segments, rays, and angles.
- classify triangles by the size of their angles.
- identify and draw parallel lines and perpendicular lines.
- sort and classify quadrilaterals.
- determine whether a figure has a line of symmetry.
- identify and draw lines of symmetry in two-dimensional figures.
- use the strategy *act it out* to solve pattern problems.

Essential Questions

- How can you identify and draw points, lines, line segments, rays, and angles?
- How can you classify triangles by the size of their angles?
- How can you identify and draw parallel lines and perpendicular lines?

- How can you sort and classify quadrilaterals?
- How can you check if a shape has line symmetry?
- How do you find lines of symmetry?
- How can you use the strategy *act it out* to solve pattern problems?

Enduring Understanding

Students understand that:

- we can draw and identify lines and angles.
- we can classify shapes by properties of their lines and angles.
- we can generate and analyze patterns.

Application

Students will be able to independently use their learning to:

- Identify and draw points, lines, line segments, rays, and angles.
- Classify triangles by the size of their angles.
- Identify and draw parallel lines and perpendicular lines.
- Sort and classify quadrilaterals.
- Determine whether a figure has a line of symmetry.
- Identify and draw lines of symmetry in two-dimensional figures.
- Use the strategy *act it out* to solve pattern problems.

Skills

Students will be skilled at:

- identifying and draw points, lines, line segments, rays, and angles.
- classifying triangles by the size of their angles.
- identifying and draw parallel lines and perpendicular lines.
- sorting and classify quadrilaterals.
- determining whether a figure has a line of symmetry.
- identifying and draw lines of symmetry in two-dimensional figures.
- using the strategy *act it out* to solve pattern problems.