

Unit 5: Shape Playgrounds

4th Grade Math

35 Class Meetings

Revised June 2026

Essential Questions

- How can lines and angles help us describe, compare, and classify shapes?
- How can the properties of two-dimensional figures be used to organize shapes into categories?
- How does symmetry help us understand the structure and design of geometric figures?

Enduring Understandings with Unit Goals

EU 1: Geometric figures can be described and analyzed using points, lines, line segments, rays, and angles.

- Draw and identify points, lines, line segments, and rays.
- Identify and classify angles as right, acute, or obtuse.
- Recognize and draw parallel and perpendicular lines.
- Locate and describe geometric attributes in two-dimensional figures.
- Use precise mathematical vocabulary to communicate geometric ideas.

EU 2: Shapes can be classified based on their geometric properties.

- Classify two-dimensional figures according to the presence or absence of parallel and perpendicular lines.
- Classify shapes according to the presence or absence of specific angle types.
- Compare and contrast categories of polygons.
- Recognize right triangles as a distinct category of triangles.
- Justify classifications using geometric evidence.

EU 3: Symmetry is a property that can be used to describe and analyze shapes.

- Recognize lines of symmetry in two-dimensional figures.
- Determine whether a figure is line symmetric.
- Draw lines of symmetry for various polygons and other shapes.
- Explain how symmetry creates matching parts in a figure.
- Connect symmetry to real-world objects, designs, and patterns.

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Standards

Common Core State Standards:

- **CCSS.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.
- **CCSS.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.
- **CCSS.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.

ISAAC Vision of the Graduate Competencies

Competency 1: Write effectively for a variety of purposes.

Competency 2: Speak to diverse audiences in an accountable manner.

Competency 3: Develop the behaviors needed to interact and contribute with others on a team.

Competency 4: Analyze and solve problems independently and collaboratively.

Competency 5: Be responsible, creative, and empathetic members of the community.

Unit Content Overview

1. Lines and Angles

- Identify and draw points, lines, line segments, and rays.
- Distinguish between parallel and perpendicular lines.
- Classify angles as right, acute, or obtuse.
- Locate geometric elements within two-dimensional figures.
- Use geometric vocabulary to describe shapes and figures.

2. Classifying Two-Dimensional Figures

- Analyze shapes based on their attributes.
- Compare figures using line and angle properties.
- Identify shapes that contain parallel or perpendicular lines.
- Recognize and classify right triangles.
- Organize polygons into categories based on shared characteristics.

3. Classifying Two-Dimensional Figures

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Vocabulary and Key Terms: point, line, line segment, ray, angle, right angle, acute angle, obtuse angle, parallel lines, perpendicular lines, intersecting lines, polygon, quadrilateral, triangle, right triangle, attribute, classify, compare, geometry, two-dimensional figure, symmetry, line of symmetry, congruent, reflection, regular polygon, vertex, side

Interdisciplinary Connection:

- ELA

Daily Learning Objectives with *TWPS*

Students will be able to...

- Draw and label points, lines, line segments, and rays.
 - How is a ray different from a line segment?
- Identify examples of lines, line segments, and rays in figures.
 - Which geometric figure best represents a flashlight beam? Explain.
- Identify right, acute, and obtuse angles.
 - Sort these angles into categories and explain your reasoning.
- Compare angle sizes using geometric vocabulary.
 - How do you know an angle is acute without measuring it?
- Recognize and draw parallel lines.
 - Find examples of parallel lines in the classroom.
- Recognize and draw perpendicular lines.
 - Where might you see perpendicular lines in real life?
- Identify lines and angles within two-dimensional figures.
 - Describe the attributes of a rectangle using geometric vocabulary.
- Classify shapes based on parallel and perpendicular lines.
 - Which shapes belong in the same category? Why?
- Classify shapes based on angle types.
 - Which figures contain right angles? How do you know?
- Recognize and identify right triangles.
 - What makes a right triangle different from other triangles?
- Justify why a triangle belongs in the right-triangle category.
 - Convince a partner that this triangle is a right triangle.
- Identify whether a figure has a line of symmetry.
 - Fold or imagine folding the shape. What do you notice?
- Draw lines of symmetry in figures.
 - How many lines of symmetry does this figure have?
- Compare symmetric and non-symmetric figures.
 - Why does one figure have symmetry while another does not?
- Identify examples of symmetry and geometric attributes in everyday objects.
 - Find an example of symmetry in nature or architecture and explain it.

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Instructional Strategies/Differentiated Instruction

- Whole group instruction
- Teacher modeling
- Think-write-pair-share and small-group discussions
- Accountable talk
- Homework
- Word walls with visuals
- Small group instruction
- Visual exemplars with teacher and student critiques
- Spiraling back to guiding questions

EL Differentiation Strategies

- Word Banks and Word Walls with visuals
- TWPS (Think, write, pair, share)
- Pre-reading strategies
- Culturally responsive teaching
- Explicit teacher modeling
- Key vocabulary
- Graphic organizers
- Strategic Grouping
- Non-verbal assessments

Assessments

FORMATIVE ASSESSMENTS:

- Do Now
- Academic Discourse
- Exit Slips
- Accountable Talk Discussions
- Completed notes
- Homework
- Performance Task -- “School Garden” Performance Task
 - Teacher’s rubric/scoring guide

SUMMATIVE ASSESSMENTS:

- Quiz: Points, Lines, and Segments, Geometric Properties, Analyzing Shapes (EU1, EU2, and EU3)
- IAB
- Unit Task: “School Playground” Performance Task (EU1, EU2 and EU3)

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Unit Task

Unit Task Name: “School Playground” Performance Task

Description: Each student is responsible for designing a new school playground. Students will act as playground designers and will research playground equipment and safety considerations. They will then survey classmates and analyze data to determine which playground features should be included. Using measurement, geometry, multiplication, fractions, and money concepts to justify their decisions students will create scale drawings and models of a playground.

Evaluation: Teacher’s Scoring Guide

Unit Resources

- Google Classroom
- Pear Assessment
- Math In Focus
- Math Antics
- State Common Core Standards Transition Tasks
- Match Fishtank
- Worksheets
- Individual White boards
- Interactive notebook
- Laptops
- SBAC Prep Online