Marietta City Schools

District Unit Planner

Grade Level 3

Unit Name	***Unit 8:*** *Two- Dimensional Shapes*	**Unit duration (Days)**	*2-3 weeks*

GA K-12 Standards

In this unit, students will reason about attributes (features) of shapes including parallel segments, perpendicular segments, right angles, and symmetry.

3.GSR.6 Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry

- **3.GSR.6.1** Identify perpendicular line segments, parallel line segments, and right angles, identify these in polygons, and solve problems involving parallel line segments, perpendicular line segments, and right angles.
- **3.GSR.6.2** Classify, compare, and contrast polygons, with a focus on quadrilaterals, based on properties. Analyze specific 3-dimensional figures to identify and describe quadrilaterals as faces of these figures.
- **3.GSR.6.3** Identify lines of symmetry in polygons.

3. MP: Display perseverance and patience in problem solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.

- **MP.1** Make sense of problems and persevere in solving them.
- **MP.2** Reason abstractly and quantitatively.
- **MP.3** Construct viable arguments and critique the reasoning of others.
- **MP.4** Model with mathematics.
- **MP.5** Use appropriate tools strategically.
- **MP.6** Attend to precision.
- **MP.7** Look for and make use of structure.
- **MP.8** Look for and express regularity in repeated reasoning.

The Framework for Statistical Reasoning and the Mathematical Modeling Framework should be taught throughout the units. The K-12 Mathematical Practices should be evidenced at some point throughout each unit depending on the tasks that are explored. It is important to note that MPs 1, 3 and 6 should support the learning in every lesson.

Essential Questions	
• (3.GSR.6.1) How can the understanding of different types of lines help classify polygons? • (3.GSR.6.2) How do shape attributes help us identify the different quadrilaterals/shapes? • (3.GSR.6.2) How is it possible to have a shape that fits into more than one category? • (3.GSR.6.3) Why is identifying lines of symmetry in polygons important?	
Tier II Vocabulary Words- High Frequency Multiple Meaning	**Tier III Vocabulary Words-** Subject/ Content Related Words
congruent, segment, polygon, kite, rectangle, vertices	acute angle, parallel, rectangular prism, angle, parallelogram, rhombus, pentagon, right angle, cube, perpendicular, hexagon, square, pyramid, symmetry, obtuse angle, quadrilateral, trapezoid, octagon K-12 Mathematics Glossary
Assessments	
Formative Assessment(s): • 3.GSR.6.2 Savvas Topic 15 Assessment • 3.GSR.6.2 MCS Mini	**Summative Assessment(s):**

It is the responsibility of each schools' grade level PLC to identify appropriate instructional lessons and resources, based on data and student needs, using the suggested pacing duration*. The following learning tasks have been vetted to align to the standards included in this unit. The GA Dept. of Education strongly recommends that any additional tasks, resources, and/or assessments used for instruction should be vetted using the Quality Assurance Rubric, to ensure alignment to the state standards.*

Objective or Content	Learning Experiences		Differentiation Considerations
3.GSR.6 Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry.	**GA DOE Learning Plans** **The Class Mascot:** *In this learning plan, students will focus on using two dimensional shapes to create a geometric design. (Suggested TImeframe Integrated throughout the unit).* • Teacher Guidance • Student Reproducibles	**MCS Curriculum Resources** **SAVVAS enVision Topic 15: Attributes of Two-Dimensional Shapes** *In Topic 15, students analyze and classify two-dimensional shapes, focusing on quadrilaterals. They use attributes to classify quadrilaterals into more specific groups.* • Lesson 15-1: Describe Quadrilaterals	Angles, Parallel Lines, and Polygons: Determine the angle properties of intersecting and parallel lines and the angle properties of polygons and apply these properties. Fold and Cut: Explore line or

	Angles and Lines: *In this learning plan, students will explore lines and angles in shapes and real-world objects. (suggested Timeframe 2-3 days).* ● Teacher Guidance ● Student Reproducibles **Investing Quadrilaterals:** *In this learning plan, students will investigate and explain the properties of quadrilaterals. (suggested Timeframe 2-3 days).* ● Teacher Guidance ● Student Reproducibles **Geometry City:** *In this learning plan, students will investigate the properties of 2D and 3D shapes. Students will apply their knowledge of shape attributes to build a small model of a city. (Suggested Timeframe 3-4 days).* ● Teacher Guidance ● Student Reproducibles **Quadrilateral Scavenger Hunt:** ***Also includes 3.MDR.5*** *In this learning plan, students will investigate and explain the properties of quadrilaterals. Students will also do a scavenger hunt looking for each of the 5 types of quadrilaterals, keep a tally of them and make a graph of the results. (Suggested Timeframe 2-3 days).* ● Teacher Guidance ● Student Reproducibles **Symmetry in Shapes:** *In this learning plan, students will investigate reflective symmetry in polygons. (Suggested Timeframe 2-3 days).* ● Teacher Guidance ● Student Reproducibles	● Lesson 15-2: Classify Shapes ● Lesson 15-3: Analyze and Compare Quadrilaterals ● Lesson 15-4: Problem Solving: Precision **SAVVAS enVision Topic 17: Step Up to Grade 4:** *In Topic 17, students are introduced to skills in grade 4.* ● Lesson 17-8: Lines, Rays, and Angles ● Lesson 17-10: Lines **MIP Module 16: Understanding and Describing Shapes** *The key topics addressed in this module include identifying the attributes of different shapes, comparing the attributes of different shapes, and identifying and describing quadrilaterals.* ● Finding Right Angles, p. 324-325 ● Rectangles and Not Rectangles, p. 327 ● Quadrilateral Family, p. 328-330 ● Tangram Challenge, p. 334 ● Quadrilateral Riddles, p. 335 ● Shape Robots, p. 336 ● Marshmallow and Coffee Stirrer Shapes, p .336	reflective symmetry and the names and attributes of two dimensional mathematical shapes.

Content Resources	
MCS Links: ● MCS Math Curriculum Map ● MCS Math Instructional Framework **GA DOE Links:** *Access all GADOE Curriculum Resources at the following site: GaDOE Inspire.*	**Additional Resources:** ● Geoboard Shape (Toy Theater) ● Plain Geoboard (Toy Theater) ● Mathigon ● Interactive Quadrilaterals ● K5 Math Learning (Geometry) ● Greg Tang Math **Possible Number Sense and Strategy-Development Routine** ● Estimation 180 ● Which one Doesn't belong ● Splat - Instant multiple splats, ● Same or Different (multiplication & division) ● Same or Different (area) **Mathematical Discourse:** ● ESOL Math Talk Starters ● Sentence Stems