Marietta City Schools
District Unit Planner

Kindergarten

Unit Name	*Unit 6: Geometric & Spatial Reasoning: 3-D Shapes in My World*	**Unit duration (Days)**	*3 - 4 weeks*

GA K-12 Standards

In this unit, students will revisit shapes in their environment and identify three-dimensional shapes (cubes, cones, cylinders, and spheres) in their environment. Students will explore and compare two-dimensional shapes and three-dimensional shapes in various sizes and orientations. They will describe how shapes are similar and different. They will order common objects based on measurable attributes and sort objects by an attribute. Students will generate statistical questions about shapes in their world and collect, represent, analyze, and explain their findings. (See Framework for Statistical Reasoning.)

K.GSR.8 Identify, describe, and compare basic shapes encountered in the environment, and form two-dimensional shapes and three-dimensional figures.

- **K.GSR.8.1** Identify, sort, classify, analyze, and compare two-dimensional shapes and three-dimensional figures, in different sizes and orientations, using informal language to describe their similarities, differences, number of sides and vertices, and other attributes.
- **K.GSR.8.2** Describe the relative location of an object using positional words.
- **K.GSR.8.3** Use basic shapes to represent specific shapes found in the environment by creating models and drawings.
- **K.GSR.8.4** Use two or more basic shapes to form larger shapes.

K.MDR.7 Observe, describe, and compare the physical and measurable attributes of objects.

- **K.MDR.7.1** Directly compare, describe, and order common objects, using measurable attributes (length, height, width, or weight) and describe the difference.
- **K.MDR.7.2** Classify and sort up to ten objects into categories by an attribute; count the number of objects in each category and sort the categories by count.
- **K.MDR.7.3** Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.

K.MP.1-.8 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. *(It is important to note that MPs 1, 3 and 6 should support the learning in every lesson.)*

- **K.MP.1** Make sense of problems and persevere in solving them.
- **K.MP.2** Reason abstractly and quantitatively.
- **K.MP.3** Construct viable arguments and critique the reasoning of others.
- **K.MP.4** Model with mathematics.
- **K.MP.5** Use appropriate tools strategically.
- **K.MP.6** Attend to precision.

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/ I CAN Statements	
Tier II Vocabulary Words- High Frequency Multiple Meaning	**Tier III Vocabulary Words-** Subject/ Content Related Words
Sort, classify, data, above, behind, below, beside, compose, describe, analyze	Width, length, height, two dimensional (2D), three dimensional (3D), face, edge, cone, cube, cylinder, sphere

Assessments

Formative Assessment(s):

- Unit 6 Common Formative Assessment
- MCS K-5 Activity & Assessment Collection
- K.GSR.8 MCS Mini Assessment: Sort 2D and 3D Shapes
- MIP Moduel 13 Formative Assessment, p. 302
- MIP Module 13 Formative Assessment, p.314

***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 Menu**		**Differentiation Considerations**
K.GSR.8 Identify, describe, and compare basic shapes encountered in the environment, and form two-dimensional shapes and three-dimensional figures.	**GA DOE Learning Plans** **What 3D Shape is This?** *In this learning plan, students will describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations). Students will identify, sort and describe three-dimensional shapes (cubes, cones, cylinders, and spheres) they encounter in the environment.*	**MCS Curriculum Resources** **Savvas Envision Topic 12: Identify and Describe Shapes** *Topic 12 formally introduces many geometric ideas by asking students to: (1) identify shapes as two - dimensional (flat). (2) Name squares, circles, triangles, rectangles, hexagons regardless of orientation and size, (3) use terms such as "above," "below," "beside," "next to," "in front of," and "behind" to describe the relative position of shapes in their environments*	Odd Solids: Sort objects by their spatial features, with justification. Changing Shape: Sort objects by their spatial features, with justification.

	• Teacher Guidance • Student Reproducibles **3D Shapes and Positional Words** ***Also includes K.MDR.7** *In this learning plan, Kindergarten students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic three-dimensional shapes, such as cubes, cones, cylinders, and spheres, presented in a variety of ways (e.g., with different sizes and orientations). Students develop spatial reasoning through the exploration of relative positions of objects to one another.* • Teacher Guidance • Student Reproducibles **3D Shape Attributes** ***Also includes K.MDR.7** *In this learning plan, Kindergarten students will explore three-dimensional shapes and their attributes. Students will use attributes to classify three-dimensional shapes. Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.* • Teacher Guidance • Student Reproducibles	• Lesson 12-1:Two-Dimensional (2D) and Three-Dimensional (3D) Shapes • Lesson 12-5: 3D Shapes • Lesson 12-6: Describing Shapes in the Environment • Lesson 12-7: Problem Solving-Precision .	
K.MDR.7 Observe, describe, and compare the physical and measurable attributes of objects.	**Measurable Attributes** ***Also includes K.GSR.8** *In this learning plan, Kindergarten students will explore the measurable attributes of 3-dimensional objects. Students will describe the attributes of objects that are measurable and will directly compare two objects by the measurable attribute. They will describe the difference between the two objects based on the*	**Savvas Envision Topic 13: Analyze, Compare, and Create Shapes** *Topic 13 deepens geometric understandings of two- and three-dimensional shapes. Students analyze and compare attributes of shapes shown in different sizes and orientations. Students build shapes using concrete materials, and use them to draw other shapes. Students also compose simple shapes to form larger shapes.*	Weights:Directly compare items using length, volume and capacity, and weight. (This activity should be adapted to focus on direct comparisons

	common measurable attribute. Students will explore how to use two or more basic shapes to form larger shapes. Students will compose larger shapes by putting together smaller shapes. ● Teacher Guidance ● Student Reproducibles	● Lesson 13-2: Analyze and Compare 3D Shapes ● Lesson 13-3: Compare 2D and 3D Shapes ● Lesson 13-4: Make Sense and Persevere ● Lesson 13-7: Build 3D Shapes **SAVVAS EnVision Topic 14: Describe and Compare Measurable Attributes** ● Lesson 14-1: Describe and Compare by Length and Height ● Lesson 14-2: Describe and Compare by Capacity ● Lesson 14-3: Describe and Compare by Weight ● Lesson 14-4: Describe Objects by Measurable Attributes ● Lesson 14-5: Describe and Compare Objects by Measurable Attributes **MIP: Module 13 Exploring Geometry** *The key ideas focused on in this module include: analyzing and comparing two-dimensional and three-dimensional shapes through discussions and modeling combining simple shapes to form larger shapes through models and drawings*. ● Alike and Different, p. 301 ● Building Figures, p. 307 ● Building Castles, p. 314	of measurement). Big Teeth: Directly compare items using length, volume and capacity, and weight. (This activity should be adapted to focus on direct comparisons of measurement). Making Benchmarks: Directly compare items using length, volume and capacity, and weight. (This activity should be adapted to focus on direct comparisons of measurement). Odd Solids: Sort objects by their spatial features, with justification This activity should be adapted to focus on attributes of shapes.

Content Resources	
MCS Links: ● MCS Math GRK Curriculum Map ● MCS Math Instructional Framework **GA DOE Links:** *Access all GADOE Curriculum Resources at the following site: https://inspire.gadoe.org.*	**Additional Resources:** ● Number Corner or Calendar Time ● Number Talks ● Estimation Activities/Estimation 180 ● Which One Doesn't Belong? ● Same or Different? ● Splat!