

Kindergarten Unit 2 Mathematics

Dear Parents,

The Mathematics Georgia Standards of Excellence (MGSE), present a balanced approach to mathematics that stresses understanding, fluency, and real world application equally. Know that your child is not learning math the way many of us did in school, so hopefully being more informed about this curriculum will assist you when you help your child at home.

Below you will find the standards from Unit Two in bold print and underlined. Following each standard is an explanation with student examples. Please contact your child’s teacher if you have any questions.

G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.

This standard expects students to use positional words (such as those italicized above) to describe objects in the environment. Kindergarten students need to focus first on location and position of two-and-three-dimensional objects in the real world prior to describing location and position of two-and-three-dimension representations on paper.

G.2 Correctly name shapes regardless of their orientations or overall size.

This standard expects kindergarten students to correctly name shapes regardless of their orientation or size. Students at this level do not yet recognize triangles that are turned upside down as triangles, since they don’t “look like” triangles. Students need ample experiences looking at and manipulating shapes with various typical and atypical orientations. Through these experiences, students will begin to move beyond what a shape “looks like” to identifying particular geometric attributes (e.g., number of sides or corners) that define a shape.

Example:

- All of the shapes below are triangles because they all have three straight sides.



G.3 Identify shapes as two-dimensional (lying in a plane, “flat”) or three dimensional (“solid”).

Students will identify whether a shape is a flat object (2-dimensional) or a solid object (3-dimensional). This standard can be done by having students sort flat and solid objects, or by having students describe the appearance or thickness of shapes. The “flat” shapes that kindergarten students should be able to identify include: squares, circles, triangles, rectangles, and hexagons. The “solid” shapes that kindergarten students should be able to identify include: cubes, cones, cylinders, and spheres.

G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).

Students should note similarities and differences between and among “flat” (2-D) and “solid” (3-D) shapes using informal language. These experiences help young students begin to understand how 3-dimensional shapes are composed of 2-dimensional shapes (e.g., the base and the top of a cylinder are circles; a cube has sides that are all squares of the same size).

G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

Students begin to apply their understanding of geometric attributes of shapes in order to create given shapes. For example, a student may roll a clump of play-doh into a sphere or use their finger to draw a triangle in the sand table, recalling various attributes in order to create that particular shape.

G.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

This standard moves beyond identifying and classifying simple shapes to manipulating two or more shapes to create a new shape. This concept begins to develop as students move, rotate, flip, and arrange puzzle pieces. Next, students use their experiences with puzzles to move given shapes to make a design (e.g., “Use the 7 tangram pieces to make a fox.”).

Example:

- Students should be able to manipulate simple flat shapes to make a new flat shape (e.g., putting two triangles together to make a square or putting two squares together to make a rectangle).

Fayette County G.7 Identify, create, and extend patterns using actions, objects, or geometric shapes.

Pattern is the underlying theme of mathematics. Kindergarten students will be able to recognize patterns according to different attributes (color, size, shape, etc). Then they will create and extend their own patterns, as well as determine missing elements within a pattern.

Example:

- When shown a pattern, the student should be able to identify it as AB, ABB, AAB, or ABC (AB: green, red, green, red, etc; ABB: square, circle, circle, square, circle, circle, etc; AAB: large, large, small, large, large, small, etc; and ABC: blue, red, yellow, blue, red, yellow, etc).
- Given a pattern, the student should be able to create or extend the pattern.
- When shown a pattern with a missing element, the student should be able to identify what is missing (square, circle, square, _____, square).

Fayette County MD.5 Identify coins by name and value (penny, nickel, dime, and quarter).

Although this standard calls for students to identify the above coins by name and value, in this second unit students will identify a dime (as well as recall the penny and nickel from Unit 1).

Example:

- When shown a dime, the student should call the coin by name.
- Given several coins, the student should be able to choose which coin is the dime.
- The student should be able to tell the value of a dime and write that value using a cent symbol—10¢.