

Dear Parents,

We will begin our next unit of study in math soon. The information below will serve as an overview of the unit as you work to support your child at home. If you have any questions, please feel free to contact me. I appreciate your on-going support.

Sincerely,

Your Child's Teacher

Unit Name: Shapes

Common Core State Standards:

1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.*

*First Grade Students do not need to learn formal names such as "Right Rectangular Prism."

Essential Vocabulary:

- | | | |
|-------------|---------------|---------------------|
| • Angle | • Face | • Side |
| • Attribute | • Feature | • Solid |
| • Closed | • Half | • Square |
| • Compose | • Half Circle | • Three-Dimensional |
| • Cone | • Open | • Trapezoid |
| • Cube | • Plane | • Triangle |
| • Cylinder | • Prism | • Two-Dimensional |
| • Edge | • Rectangle | • Vertices |

From previous grade: circle, rectangle, hexagon, sphere

Unit Overview:

First Grade students use their beginning knowledge of defining and non-defining attributes of shapes to identify, name, build and draw shapes (including triangles, squares, rectangles, and trapezoids). They understand that defining attributes are always-present features that classify a particular object (e.g., number of sides, angles, etc.). They also understand that non-defining attributes are features that may be present, but do not identify what the shape is called (e.g., color, size, orientation, etc.).

As first graders create composite shapes, a figure made up of two or more geometric shapes, they begin to see how shapes fit together to create different shapes. They also begin to notice shapes within an already existing shape. They may use such tools as pattern blocks, tangrams, attribute blocks, or virtual shapes to compose different shapes.

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Strategies/Skills:

- First Grade Students reason with shapes and their attributes.
- Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral)
- Build understanding of part- whole relationships as well as the properties of the original and composite shapes.
- As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

Video Support:

Video support can be found on the Khan Academy website

- www.khanacademy.org
 - [Classifying Shapes](#)

Additional Resources:

If you have limited/no internet access, please contact your child's teacher for hard copies of the resources listed in this document.

- [NCDPI Additional Resources](#)
- http://www.abcya.com/shapes_geometry_game.htm
- http://www.abcya.com/shape_match.htm
- <https://www.khanacademy.org/math/early-math/cc-early-math-geometry-topic/cc-early-math-composing-shapes/e/compose-shapes>
- <http://illuminations.nctm.org/Activity.aspx?id=3521>
- <http://illuminations.nctm.org/Activity.aspx?id=3577>
- <http://illuminations.nctm.org/Activity.aspx?id=3587>
- <http://www.mathwire.com/games/pqgamemat.pdf>

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Questions to Ask When Helping Your Child with Math Homework

Keep in mind that homework in elementary schools is designed as practice. If your child is having problems, please let the classroom teacher know. When helping your child with his/her math homework, you don't have to know all the answers! Instead, we encourage you to ask probing questions so your child can work through the challenges independently.

- What is the problem you're working on?
- What do the directions say?
- What do you already know that can help you solve the problem?
- What have you done so far and where are you stuck?
- Where can we find help in your notes?
- Are there manipulatives, pictures, or models that would help?
- Can you explain what you did in class today?
- Did your teacher work examples that you could use?
- Can you go onto another problem & come back to this one later?
- Can you mark this problem so you can ask the teacher for an explanation tomorrow?