Imagination Station Family Fun Activity Guide

Title: Building Shapes

Ages: Kindergarten

Standards: Common Core State Standards

[CCSS.MATH.CONTENT.K.G.A.2](http://www.corestandards.org/Math/Content/K/G/A/2/)

Correctly name shapes regardless of their orientations or overall size.

[CCSS.MATH.CONTENT.K.G.B.5](http://www.corestandards.org/Math/Content/K/G/B/5/)

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

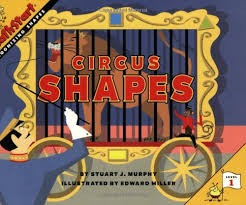
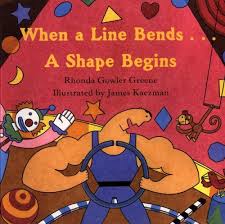
[CCSS.MATH.CONTENT.K.G.B.6](http://www.corestandards.org/Math/Content/K/G/B/6/)

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

***When a Line Bends . . . A Shape Begins* by Rhonda Gowler Greene (2001)**

In this book, readers will learn how all shapes begin with a simple line. The reader will first, be introduced to a line. Then, the reader will be introduced to squares, triangles, circles, and many more shapes in a very vibrant way.

***Circus Shapes* by Stuart J. Murphy (1997)**

In this book, readers will take a trip to the circus, and watch animals get in different formations to make shapes. Readers will see horses make a triangle, elephants make a circle, and many more.

*\*Special Note:* All these activities do not have to be completed all at once. If your child starts to get bored or tired, take a break, and come back to the activities later in the day.

**String Shape Building:** Communication, Fine motor skills, and Problem solving

*When a Line Bends . . . A Shape Begins* Yarn Scissors Paper Crayon

Show your child the cover of the book *When a Line Bends . . . A Shape Begins*, and ask them to describe what they think a line and a shape is. Then, ask your child to name all the shapes they can think of, while you write the list down. As you read aloud, ask the following questions:

* + - What other things are in the shape of a line? (Answers may vary)
    - If you were building a triangle out of sticks, how many sticks would you need? (3)
    - How many sides does a square have? (4)
    - What is the difference between a square and a rectangle?(A square has all equal sides)
    - What is your favorite shape?
    - How would you build your favorite shape out of a piece of yarn?

Cut your child a piece of string that is 2ft long, and ask them what shape the piece of string is (a line). Then, tell your child that he or she is going to see, if shapes really do begin with a bending line. Next, tell you child that you are going to call out a shape, and they are going to have to bend their line (yarn) to make that shape. Use the shapes that were in the book to call out to your child: circle, heart, square, rectangle, triangle, crescent, etc. If your child gets frustrated with the string because he or she cannot seem to make the shapes, have your child first draw the shape on a piece of paper. After your child has drawn the shape on a piece of paper, encourage them to now, outline the shape with their string to make the shape. After your child has built all the shapes, ask them if a shape really does begin with a bending line. Then, pull out the list of shapes that your child named before you read the book, and ask them to name anymore shapes they have learned, while you add them to the list.

**Popsicle Build:** Communication, Fine motor skills, and Problem solving

Circus Shapes Colored Popsicle Sticks Shape Cut-Outs

Show your child the cover of *Circus Shapes*, and ask them what they think the book is going to be about. Then, ask your child what shapes they might see if they went to a circus. As you read aloud, ask these questions:

* + - Do you think elephants could really make a circle? Why or Why not?
    - If one side of a square was 3 sticks long, how many sticks would another side of the square be? (3)
    - If the horses made a shape with five sides, would it still be a triangle? Why or Why not? (No, because triangles only have 3 sides.)

Explain to your child that they are going to be like the circus animals, and that they now get to build shapes. Lay down one of the shape cut-outs, and give your child the set of colored popsicle sticks that goes with the shape. Have your child build the shape of the cut-out with the popsicle sticks, and place the cut-out inside the builded shape. Placing the cut-out inside the builded shape will allow you and your child to see, if they were able to build the shape. After you and your child checks the shape, ask your to child name the shape, and to explain what the number written on the popsicle sticks mean (the number is the number of sides each shapes has). Once your child has built all the shapes, have them break down their shapes, and ask them to tell you how many sides each of the shapes on your list have (The list will be the list you wrote when your child was naming the shapes they knew during the string shape build activity).

**Building With Pattern Blocks:** Communication, Fine motor skills, and Problem solving

Plastic Pattern Blocks

Ask your child if they think it is possible to make shapes out of other shapes. For example, is it possible to make a square out of triangles? Why or Why not? Then, explain to your child that they are going to see, if shapes can be built from other shapes. Give your child the plastic pattern blocks, review with them the names of each shape that is the container, and have them count the sides of each shape aloud while you point to the shapes and sides. Next, call out a shape, and have your child build that shape out of another shape you call out For example, call out hexagon, and see, if your child can build a hexagon out of triangles. Then call out a shape, and let your child decide which shapes he or she is going to use. After your child has built some shapes, pull out your list again, have your child name any new shapes they have learned, and tell you the number of sides the new shapes have.

**Extension Activity:**

Plastic Pattern Blocks

As an extension activity, you can leave out the plastic pattern blocks, and let your child do a free build. Let them be creative to build their on shapes. After they have built their own unique shape, ask your child these questions:

* + - What is the name of your shape?
    - Why did you give your shape that name?
    - How many sides does it have?