

## Supplies

A variety of differently shaped objects such as balls, coins, square blocks, rectangular blocks, flat squares, triangles, rectangles, and circles. A cloth bag or a closed box with a hole cut in it for the student to put their hand in to retrieve an object.

## The Activity

Show the different shapes to the student and discuss their names. If the student is unfamiliar with many shapes, start by naming only one or two, and repeat this activity another time to introduce more shapes. Next, "hide" the shapes in the bag or box, and have the student put their hand in. Ask the student to feel the shape and tell you which one it is. Then the student will pull out the shape and see if they guessed correctly.

## Variations

- Instead of shapes, objects with different textures, such as hard, soft, or fuzzy, can be used to hide in the bag.
- Different sizes of the same shape can also be used, such as a large square and a small square. The student will describe both attributes when "guessing."

## Focus:

Encourage the student to focus their attention on the task at hand. Allow the student to get acquainted with the supplies by touching, holding, and talking about them. Then explain what you will do. Formulate a plan with the student.

**Questions:** What is the plan? What do you need to do first? Next?

## Act:

The student will identify the shapes by feeling them in the bag or box and then pulling them out to check if they were right.

**Questions:** How many sides does a square have? A triangle? What can you tell me about the sides of this rectangle and the sides of this square? How many corners does the square have? The triangle? Does the circle have any corners?

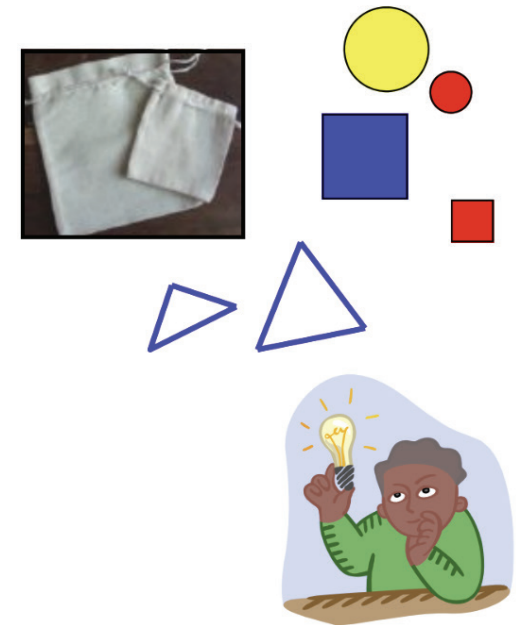
## Reflect:

During and after the activity reflect on what the student is doing/has done.

**Questions:** What did you do? How did you know what it was when you had your hand in the bag? What is easier, to use your eyes or your hands to tell what shape it is?

## Math Observation Checklist:

This activity will give insight into the student's understanding of shape, size, focused perception, systematic exploration, attention to multiple pieces of information, attention to relevant information, and inhibition of impulsivity.



## Supplies

Multicolored pieces of construction paper cut into different shapes, such as circles, squares, triangles, and rectangles. Stickers in these shapes may also be used. Whole sheets of construction paper and a glue stick are also needed.

## The Activity

The student will create a collage of shapes by gluing them onto a sheet of construction paper, identifying each shape used. The paper can be divided into four areas, with each area decorated with a different shape.

## Variations

- Instead of construction paper, the student can glue the shapes onto two-dimensional objects, such as a small cardboard box or a paper towel roll.
- After making the collage, ask the student to go around the room and identify objects that have the shapes they used for the collage.

## Focus:

Encourage the student to focus their attention on the task at hand. Allow the student to get acquainted with the supplies by touching, holding, and talking about them. Then explain what you will do. Formulate a plan with the student.

**Questions:** What is the plan? What do you need to do first? Next?

## Act:

The student will make a collage using different shapes.

**Questions:** What shapes did you use for your collage? Where did you glue them? How many squares did you use? How many circles? Which shapes have curves? Which shapes have straight lines?

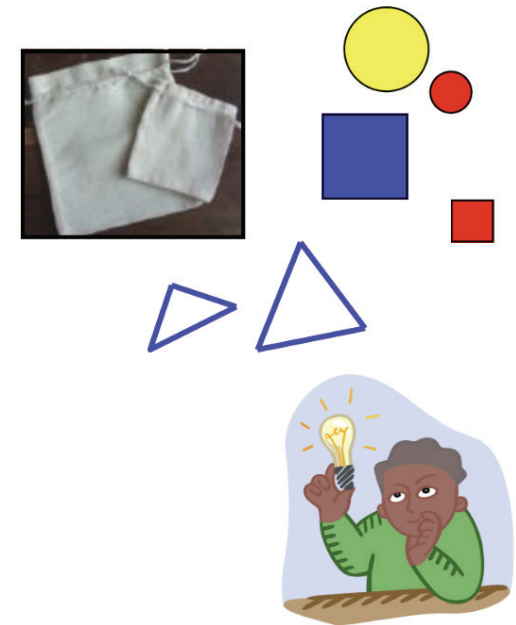
## Reflect:

During and after the activity reflect on what the student is doing/has done.

**Questions:** What did you do? How did you know what the shape was? Did all the shapes fit on your paper?

## Math Observation Checklist:

This activity will give insight into the student's understanding of shape, size, focused perception, systematic exploration, attention to multiple pieces of information, attention to relevant information, and inhibition of impulsivity.



## Supplies

Multicolored pieces of construction paper cut into different shapes, such as squares, diamonds, triangles, rectangles, and hexagons, or attribute blocks. Geoboard<sup>1</sup> and rubber bands.

## The Activity

The student will pick a shape and construct it with rubber bands on the geoboard. Then they will record the number of sides and corners of each shape, noting the similarities and differences between the shapes.

## Variations

- After constructing the shape, the student will draw it on a sheet of paper, trying to match the size as closely as possible to the one on the geoboard. The student can then cut out the shape and compare the sizes to see how close they are.

## Focus:

Encourage the student to focus their attention on the task at hand. Allow the student to get acquainted with the supplies by touching, holding, and talking about them. Then explain what you will do. Formulate a plan with the student.

**Questions:** What is the plan? What do you need to do first? Next?

## Act:

The student makes the shapes on the geoboard.

**Questions:** What shapes did you make? Can you describe a square? A triangle? Can you make a square in more than one way? A triangle? What is the difference between a square and a triangle? What is the same? What is the difference between a square and a diamond?

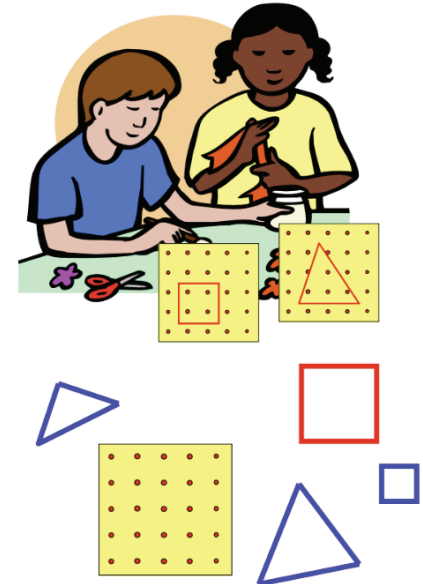
## Reflect:

During and after the activity reflect on what the student is doing/has done.

**Questions:** What did you do? How did you know what the shape was?

## Math Observation Checklist:

This activity will give insight into the student's understanding of shape, size, focused perception, systematic exploration, attention to multiple pieces of information, attention to relevant information, and inhibition of impulsivity.



## Footnote

<sup>1</sup> A geoboard is a square board with pegs that can be used to make various shapes by wrapping rubber bands or string around the pegs. See above picture.

## Supplies

Three-dimensional geometric shapes such as a cone, cylinder, cube, pyramid, rectangular prism, and/or sphere. Paper, graph paper, and markers.

## The Activity

The instructor and student will identify, name, and discuss the three-dimensional shapes. The student will then search the room for objects that resemble these shapes and create a graph of the objects found. The columns of the graph will be labeled with the names of the shapes, and the student will write the name of each object in the appropriate column.

## Variations

- For shapes that are not found in the room, the instructor and student can discuss where they might be found and what those objects could be.

## Focus:

Encourage the student to focus their attention on the task at hand. Allow the student to get acquainted with the supplies by touching, holding, and talking about them. Then explain what you will do. Formulate a plan with the student.

**Questions:** What is the plan? What do you need to do first? Next?

## Act:

The student searches for the shapes and creates the bar graph.

**Questions:** What shapes did you find the most? The least? How does that show in your graph? What shape did you not find at all? Why do you think that is?

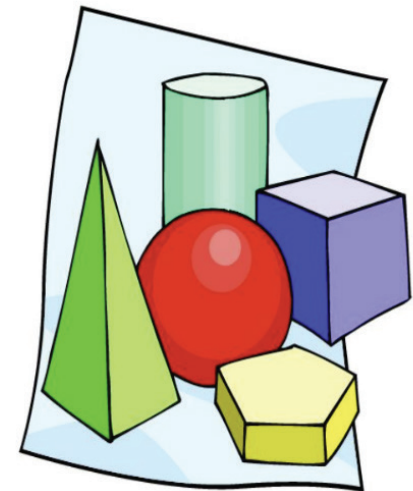
## Reflect:

During and after the activity reflect on what the student is doing/has done.

**Questions:** What did you do? When looking for the shapes, what did you need to focus on? Were the shapes exactly the same? How were they different?

## Math Observation Checklist:

This activity will give insight into the student's understanding of shape, size, focused perception, systematic exploration, attention to multiple pieces of information, attention to relevant information, and inhibition of impulsivity.



## Supplies

A small mirror, origami squares or 1-inch-square graph paper, and symmetrical pictures cut from magazines or catalogs.

## The Activity

The student will draw symmetrical designs or pictures on the origami squares or graph paper, then fold the paper in half to ensure both halves are symmetrical. The student can also fold the paper into symmetrical designs and color them, using the center fold as the division line. A small mirror can be used to check for symmetry by holding it up against one half of the design.

## Variations

- The student can look for symmetrical pictures in magazines, cut them out, and glue them on poster board.
- The instructor can prepare a picture cut in half and glued on a sheet of paper, and the student will draw the other side to complete the picture.

## Focus:

Encourage the student to focus their attention on the task at hand. Allow the student to get acquainted with the supplies by touching, holding, and talking about them. Then explain what you will do. Formulate a plan with the student.

**Questions:** What is the plan? What do you need to do first? Next?

## Act:

The student searches for the shapes and creates the bar graph.

**Questions:** What makes a design symmetrical? How can you use the mirror? Where do you need to hold it? Can you cut this picture in half any way you want to show symmetry?

## Reflect:

During and after the activity reflect on what the student is doing/has done.

**Questions:** What did you do? How did the mirror show you that the picture was symmetric?

## Math Observation Checklist:

This activity will give insight into the student's understanding of shape, size, focused perception, systematic exploration, attention to multiple pieces of information, attention to relevant information, and inhibition of impulsivity.

