

Activity 2: Polygon Attributes Review

To review polygons and their attributes, provide time for your child to watch the video at the following web link. Start the video at 0:20 and end it at 5:54.

Polygons
www.movingbeyondthepage.com/link/7294/

Next, draw a rectangle and a circle on the whiteboard, and ask, "Which of these shapes is not a polygon and why?" Your child should note that a circle is not a polygon because a polygon has only straight sides. Next, ask your child to look around the room and identify three things that are in the shape of a polygon. Tell him that one of the shapes he finds should be a regular polygon, meaning that all of its sides are the same length. (Answers might include window panes, rectangular desks, book covers, etc.)

Now, ask your child to identify three things in the room that are not polygons. (Answers might include a round table, fan blades, a pencil eraser, etc.) Ask him how he knows these are not polygons. (A polygon cannot have curved sides). Wrap up the discussion by asking your child to choose one of the polygons he found and tell you how many sides and vertices it has and what the name of the polygon is.

Ask your child to create a large square on the geoboard. Once it's complete, ask, "What attributes or properties does this polygon have?" As needed, remind him that an attribute is a characteristic of an object, such as size, shape, color, or important parts. He should note that the polygon on the geoboard has four straight sides that are equal in length and that the shape is closed. He might also note its other parts: four angles and four vertices. If he doesn't note these parts, point to one of each, and ask him how many there are of each.

Next, repeat this process, asking him to create a large triangle: "What attributes does this shape have?" Again, ask him to point to and count its parts (three sides, three angles, three vertices).

Now, ask your child to draw the following on the whiteboard. Provide a ruler as needed.

- a regular polygon that has 4 sides (this doesn't have to be perfectly drawn, but it should be clear that your child understands that a regular polygon has sides that are all the same length)
- an irregular polygon that has 5 vertices
- an irregular polygon that has 6 angles

As your child creates each of these shapes, tell him to point to their sides, angles, and vertices.