



**Benefits of Play:** Cognitive, Creative,  
Physical, Communication, Social

Explore the characteristics of 2-dimensional shapes to learn about the similarities and differences of a variety of geometric shapes, angles and lines.

## STEAM Skills: Math

Grades: 1 - 5

### Materials:

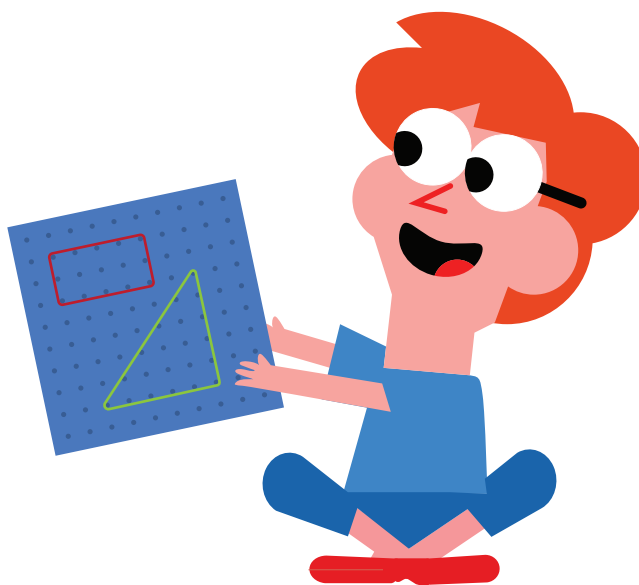
- Geoboards
- Ruler
- Pencils
- Paper Worksheets
- Rubber Bands
- Geoboard Challenge Activity Cards  
(can be created by the teacher or are available for free download online)

**Step 1:** Distribute the geoboard challenge activity cards evenly among the students in the class.

**Step 2:** Students are to create the first geoboard challenge activity picture with rubber bands.

**Step 3:** Students will use their ruler to draw the design they created with the rubber bands on their worksheet. Continue building and drawing until they have completed their given challenges.

**Step 4:** Place children in groups of two. Without showing their design, have Student 1 choose one of his/her designs and describe it to Student 2 by counting pegs and using positional words like "on top", "to the right", "underneath", etc. When Student 2 builds a matching picture on his/her geoboard, have the students swap roles and play again.



**Step 5:** Classroom discussion should include:

1. What are the differences between triangles, quadrilaterals, pentagons, hexagons, and cubes?
2. What are the differences between acute, obtuse, and right angles?
3. What are parallel and perpendicular lines?

**Advanced Questions for Discussion:**

- How many sets of parallel lines are there in the design?
- Are there any perpendicular sides?
- How many right angles are there?
- Does the shape have any symmetrical lines?
- How many equal sides are there?