

Rope Shapes

Goal: To make shapes with partners and rope

You will need:

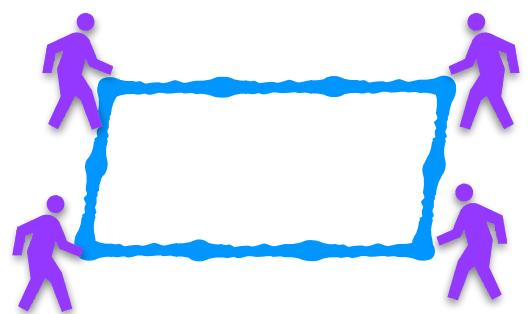
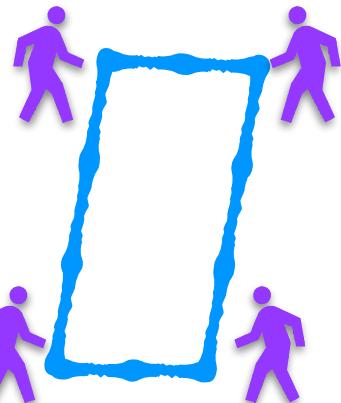
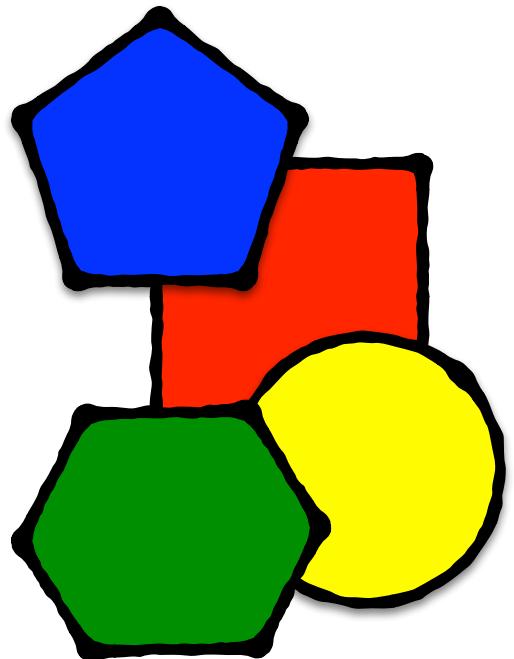
- 12 feet of rope, yarn, or clothesline with knots tied at 12 inch intervals

Instructions:

- Using all or part of the rope:
 - Make a circle
 - Make a rectangle
 - Make a different rectangle
 - Make a triangle
 - Make a different triangle
 - Make a square
 - Make a different square
 - Make a pentagon
 - Make a hexagon
 - Make a cube

To think about after each shape is formed:

- How many sides does it have?
- How many corners does it have?
- How do you know this is the shape you were trying to make?
- Where have you seen this shape?
- What else do you know about this shape?
- If you turn the shape, is it still a *rectangle*? (or a square, or circle, etc.)



Tips for Adults

- Clothesline is often sold in lengths of 50 feet; you could make four 12-foot ropes out of that length.
- When you cut the clothesline to length, the ends will tend to fray; use a flame to seal the ends.
- Tie the knots loosely at first so you can adjust their position; it is more important to make the intervals equal than for the knots to be exactly 12 inches apart.
- You could buy different colored rope (or dye it different colors) in order to reference each shape by color if you have more than one group at a time.
- Ask the children to rotate the shape from a horizontal position to a vertical position. Ask if it is the same shape.
- You could have two groups make different shapes and ask the children to compare them. For example a rectangle and a square - how are they similar, how are they different?
- Older children should be encouraged to find the area and perimeter of a rectangle and compare areas and perimeters of different rectangles made with the same rope. Have the children build all of the rectangles they can create with the rope: 1x12, 2x6, 3x4, 4x3, 6x2, 12x1. Have them record the dimensions, area, and perimeter of each rectangle. Ask them what they notice.