

# WORKSHOP EXTENSION ACTIVITY

Built by The Home Depot Kids Workshop

## July 2021: Star String Art

Ages 5-12

### CONNECT.

The word *geometry* is made up of two parts: *geo* and *metry*. Can you guess what each word part means?

The root word *geo* means “earth” and the suffix *metry* means “to measure.” Because geometry literally means to measure the Earth, it makes sense that geometry is the study of the measurement of points, lines, and shapes!

### INVESTIGATE.

One important geometric shape is a polygon. A polygon is a closed shape with sides that are straight lines. While a polygon must have at least three sides, its maximum number of sides is limitless!

Let's experiment with polygons. See how many different polygons you can make with your Star String Art.

#### You'll need:

Your Star String Art	String or rubber bands
Notepad	Pencil
Timer	Markers

Wrap your string or rubber bands around your Star String Art's nails and see if it's possible to make a three-sided shape. What about a four-sided shape? A five-sided shape? How high can you go?

Once you have taken a few minutes to experiment, let's turn this into a competition! Grab your notepad and use the markers to label one page “3 Sides,” the next page “4 Sides,” and so on... all the way up to “10 Sides.”

Decide how you will determine your success. You could either try to make as many different shapes as possible in a set amount of time or see how long it takes you to make as many shapes as you possibly can!

Once you have selected your challenge, start the timer, and begin! Be sure to record each shape on your notepad before you take the string or rubber band off and begin again.

**Challenge:** In addition to making shapes with different numbers of sides, you can also make shapes with varying side lengths. For instance, an equilateral triangle with three equal sides is different from an isosceles triangle with two equal sides, or a scalene triangle with all different sides! You can record each of these on your notepad.

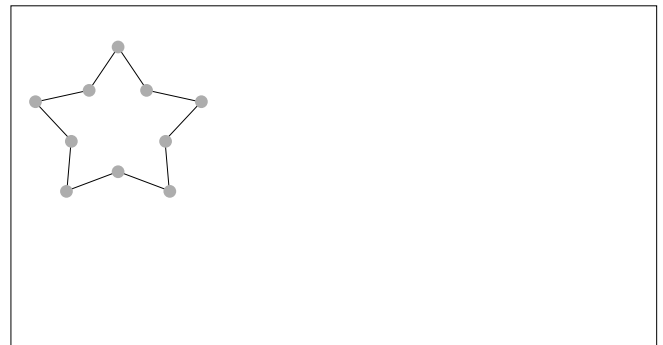
When you have completed your investigation, encourage a family member or friend to compete against you. Explain the rules that you followed, share your notepad, and let the competition begin!

### INNOVATE.

#### You'll need:

- Your Star String Art
- String or rubber bands
- Notepad (the same one that you used for the Investigate activity)
- Pencil

Now that you know all of the shapes you can make, it's time to plan an original design! In the space below, sketch a new design for your Star String Art. Try to combine many different shapes in order to make the design as unique as possible.



When you're happy with your design, recreate it using your Star String Art. Try to incorporate string or rubber bands of different colors to make your design even more interesting.

Once it is complete, find the perfect home for your artwork and put it on display. If you ever get tired of your design, don't be afraid to take it apart, consult your notepad for ideas, and then create a new one!

