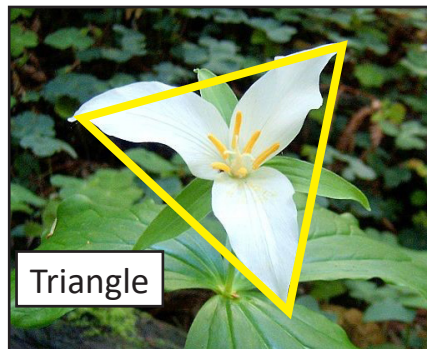
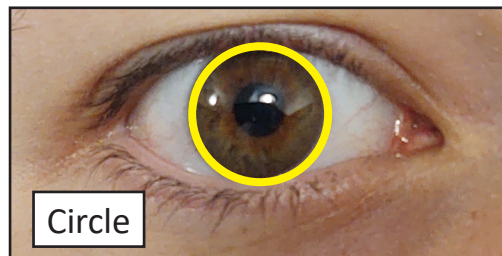
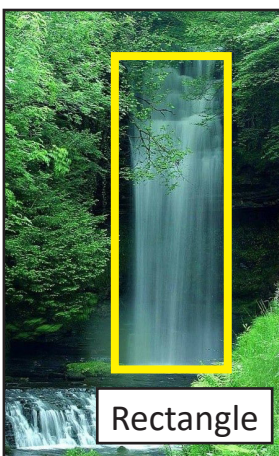


*Hanford Mills Museum is a historic site in East Meredith, NY. From its start as a seasonal sawmill in the 1840s, the Hanford family expanded the Mill to also include a gristmill, feed mill, woodworking shop, and hardware store. Today, Hanford Mills Museum shows how mills, which were once common in rural towns, operated.*

*You can watch a video version of these instructions online at: [hanfordmills.org/shapes/](http://hanfordmills.org/shapes/). We also have other Learn-at-Home activities posted on our website.*

Everything in the world is made up of shapes. Some of the shapes we see are simple, like a piece of paper or a beach ball. Others are much more complex, like a snowflake or the shapes made by a kaleidoscope. Examples of these shapes around you are framed below. When it comes down to it, even the biggest, most complicated things are made up of simple shapes.



## Materials:

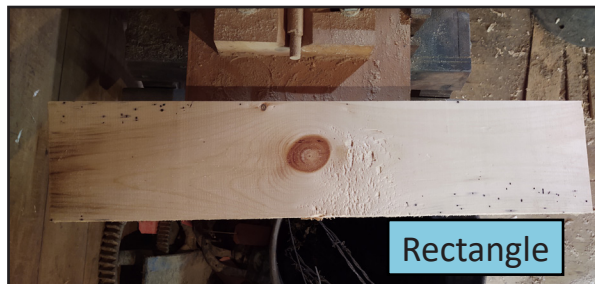
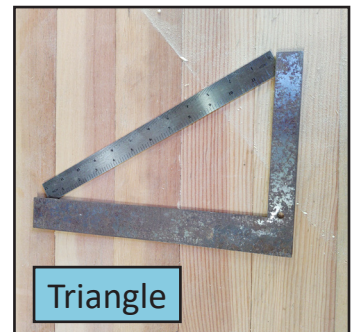
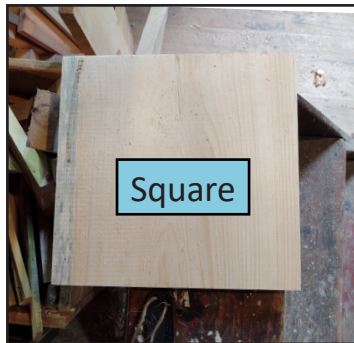
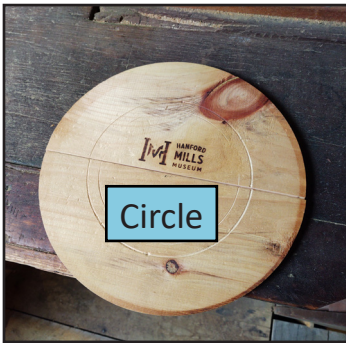
- Activity Guide
- “2D Shapes” and “3D Shapes” Worksheets
- Scissors (part of CROP-provided supplies)
- PlayDoh (same container for this and “Maps” activity)
- Toothpicks (20)
- Writing tool (pencil/pen)

## Activity 1: Flat (2D) Shapes

1. Take out the “2D Shapes” worksheet.
2. Carefully cut out all of the shapes from the “2D Shapes” worksheet.
3. Once you have cut out all of the shapes, match them with their names and put them in the correct spaces on the top of the “2D Shapes” worksheet.

You can see different shapes all around you. Can you see any of these shapes in the room where you are doing this activity?

We can also find these shapes at Hanford Mills!

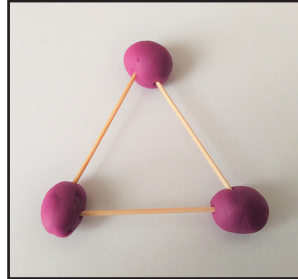


## Making 2D Shapes:

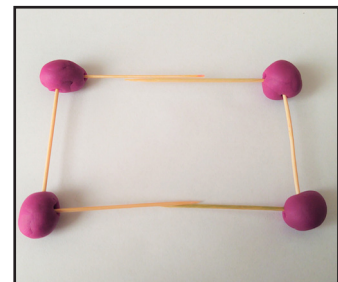
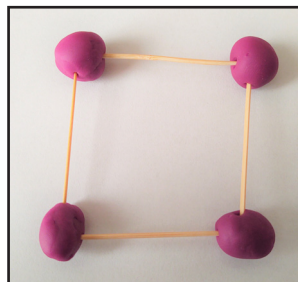
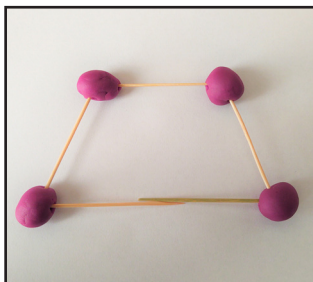
1. Take the PlayDoh and toothpicks out of your packet.
2. Use the PlayDoh and toothpicks to make your own versions of the flat shapes from your worksheet.
  - a. To make a circle, use the PlayDoh and make it flat and round (you do not need to use the toothpicks to make a circle).



- b. To create a triangle, make three small balls out of PlayDoh and connect them with toothpicks like in the picture below:

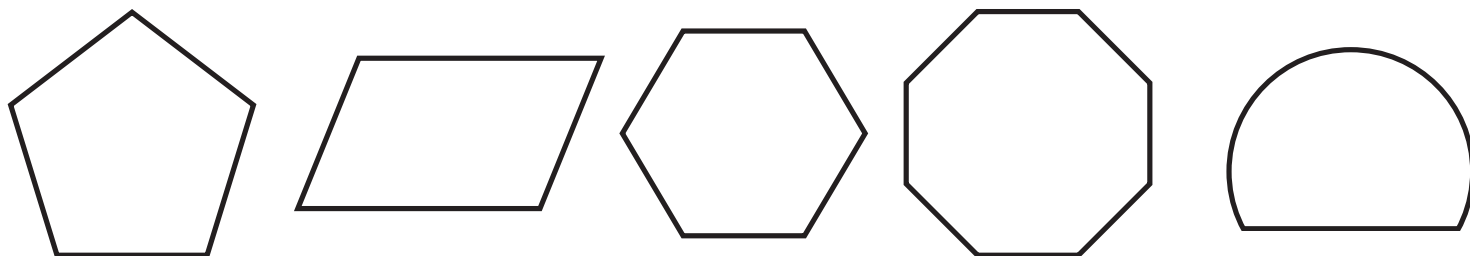


- c. To make the four-sided shapes, use small amounts of PlayDoh and toothpicks to make the following shapes.





3. What other flat shapes can you make? Try to make three of the five shapes below. You can choose whether to use just PlayDoh or add toothpicks to make your shapes.

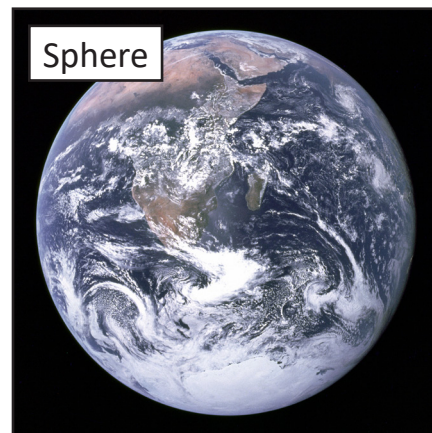
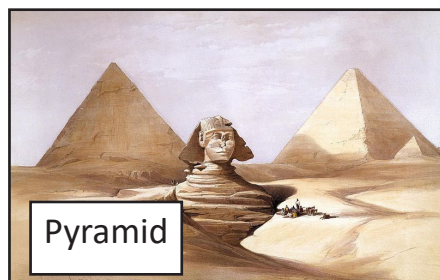
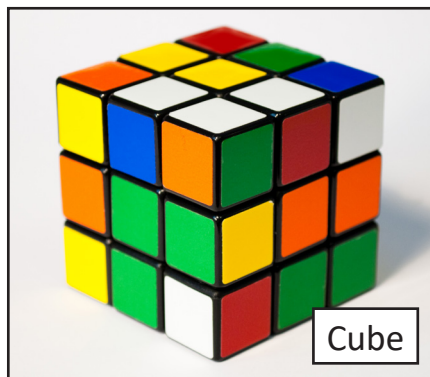


## Activity 2: Solid (3D) Shapes

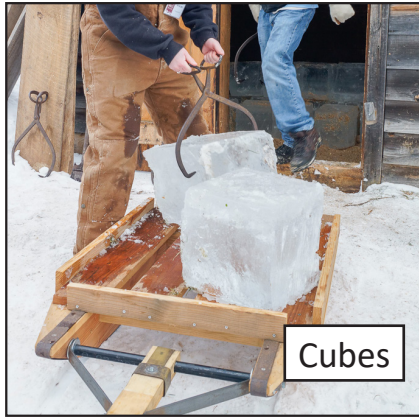
Unlike flat shapes, solid shapes, like balls or blocks, are 3D (or three-dimensional) shapes, and you can see them around you.

1. Cut out the examples of 3D shapes from the “3D Shapes” worksheet.
2. Once you have cut them out, place them where they belong in the correct spaces on the top of the worksheet, like you did with the flat shapes.

Just like flat shapes, you can see 3D shapes all around you:



Hanford Mills also has many examples of solid shapes:



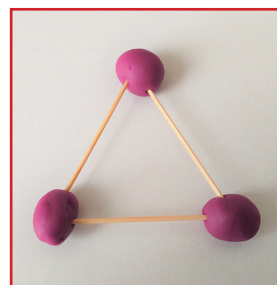
3. What solid shapes can you see around you right now? Draw three of them below!

## Making 3D Shapes:

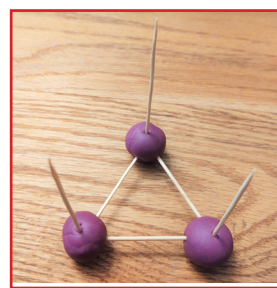
Make your own 3D shapes out of PlayDoh and toothpicks. When making solid shapes, it is easiest to start with flat shapes and then build up the rest of the shape.

### 1. Make a triangular prism.

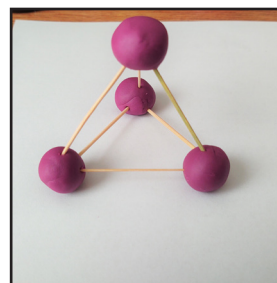
a. Start by making a triangle with your PlayDoh and toothpicks.



b. Next, add three toothpicks, one to each piece of PlayDoh in your triangle.



c. Finally, connect those three toothpicks with another ball of PlayDoh on top.



2. Make your own versions of the other 3D or solid shapes from your 3D Shapes Worksheet (cube, cylinder and sphere). You can use toothpicks and PlayDoh to make the shapes (like in the pyramid above) or just make the shape with the PlayDoh (like in the circle in Activity 1).

