

## Math Activities

The Heads In, Hearts In family enrichment program encourages families to use their minds (putting their “heads in”) as a tool to expand their knowledge around a variety of topic areas. By creating a shared educational experience, the family unit will work, grow and learn together, putting their “hearts in” to the process.

**This unit contains the following:**

- ▶ 3D Shapes
- ▶ Eggs-cellent Counting
- ▶ Guess Which Shape
- ▶ Gumball Equations
- ▶ Hungry Hedgehogs
- ▶ Marshmallow Structures
- ▶ Measure a Room
- ▶ Measurement Equivalents
- ▶ Measuring Liquids
- ▶ Photo-Graph
- ▶ Pie Die
- ▶ Skippy Clippy
- ▶ Spinner Math
- ▶ Stories Math
- ▶ Time: Before and After
- ▶ Twisting Place Values



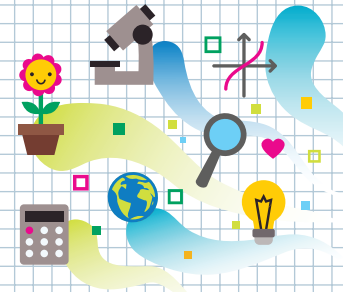
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# HEADS IN, HEARTS IN

## Marshmallow Structures

### Instructions for Set-Up

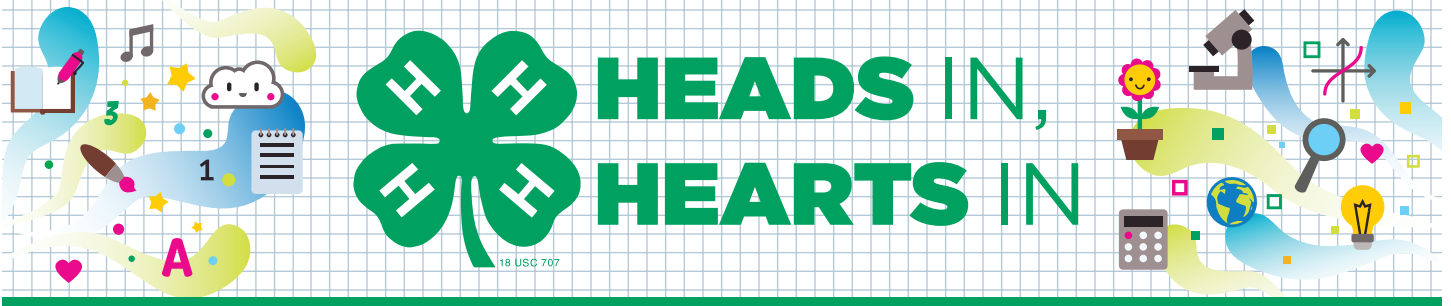


### Supplies

- “Guide for Families” handout
- Clear plastic standup display (optional)
- Miniature marshmallows
- Toothpicks
- “2D and 3D Shapes” handout (2 to 3 copies)
- Display table

### Activity Preparation

- ▶ Purchase or locate items on supply list.
- ▶ Print one copy of the “Guide for Families” handout. Laminate or place in a clear plastic standup display to allow participants to see it more readily.
- ▶ Print two to three “2D and 3D Shapes” handouts. Optionally, laminate these handouts.
- ▶ Set up the display table and arrange needed supplies.



# Marshmallow Structures

## Guide for Families

### Learning Objectives

#### What you need to know:

Each shape has **attributes**, or characteristics, that describe the shape. Each shape is made up of **sides**. Some sides are straight, and some sides are curved. Some shapes also have corners, or **angles**, where two sides meet to close a shape. When you draw a square on a piece of paper, that's a two-dimensional or **2-D** shape. It has 1) length and 2) height (two dimensions). It is flat. Three-dimensional, or **3-D** shapes, are solid shapes. They have 1) length, 2) height and 3) width (three dimensions). A tissue box is a **3D** shape. It is solid.

#### What you will do and learn:

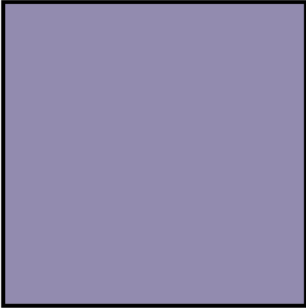
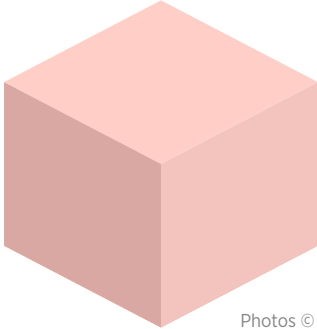
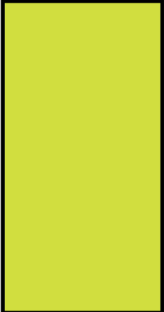
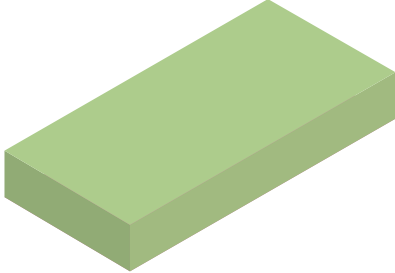
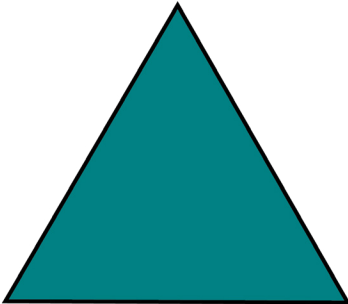
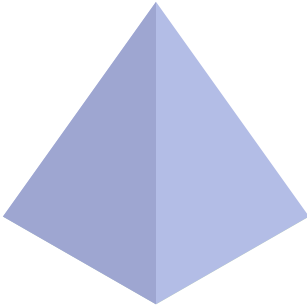
You will practice building models of 2D and 3D shapes using marshmallows and toothpicks.

### Instructions

1. Choose a 2D shape from the "2D and 3D Shapes" handout that you want to build a model of.
2. Using marshmallows as corners or angles and toothpicks for sides, work to construct or build a model of that shape.
3. Now, look at the 3D version of the shape that you built. Think about how you can make that 2D shape into a 3D shape.
4. Use additional marshmallows and toothpicks to make your shape 3D.
5. Repeat this activity with the other shapes.

# Marshmallow Structures

## 2D and 3D Shapes Handout

2D or Flat Shapes	3D or Solid Shapes
<p style="text-align: center;"><b>square</b></p> 	<p style="text-align: center;"><b>cube</b></p>  <p style="text-align: right; font-size: small;">Photos © iStock.com/MicrovOne</p>
<p style="text-align: center;"><b>rectangle</b></p> 	<p style="text-align: center;"><b>rectangular prism</b></p>  <p style="text-align: right; font-size: small;">Photos © iStock.com/MicrovOne</p>
<p style="text-align: center;"><b>triangle</b></p> 	<p style="text-align: center;"><b>triangular prism</b></p>  <p style="text-align: right; font-size: small;">Photos © iStock.com/MicrovOne</p>