# HEADS IN, HEARTS IN

18 USC 707

## 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


Produced by the MSU Extension Educational Materials Team (*http://msue.anr.msu.edu/*).1P–05:2021-WEB–PA/LG WCAG 2.0

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4H1749MA MATH ACTIVITY

# 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.

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# 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.

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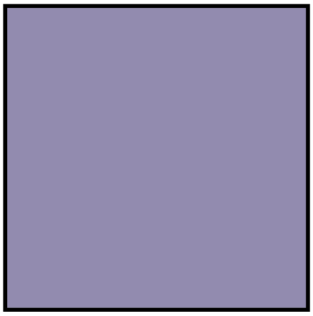
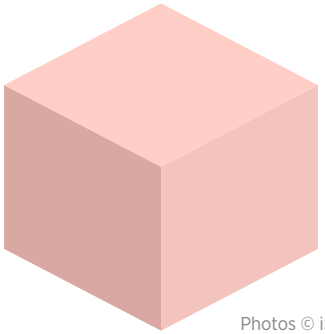
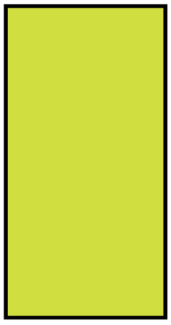
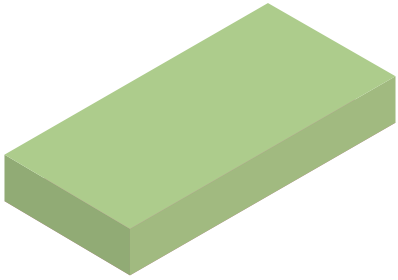
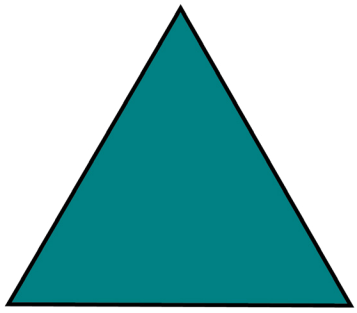
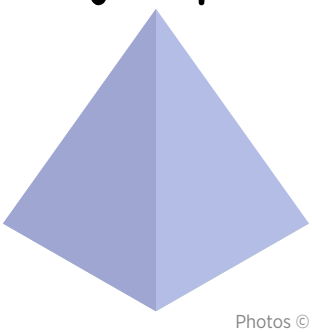
# Marshmallow Structures

## 2D and 3D Shapes Handout

| 2D or Flat Shapes | 3D or Solid Shapes |
| --- | --- |
| square  | cube   |
| rectangle  | rectangular prism   |
| triangle  | triangular prism   |