

# **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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### **Supplies**

- Guide for Families" handout
- Clear plastic standup display (optional)
- "What Is Place Value?" handout (1 per participant or family)
- "Place Value" Handout (1 per participant or family)
- Plastic foam cups (3–7 per participant or family)
- □Markers
- Pencils
- 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 one "What Is Place Value?" handout per participant or family.
- > Print one "Place Value" handout per participant or family.
- Write the numbers 0 through 9 horizontally on the brim of each plastic foam cup.
- Understanding place value is a progression. If you are doing this activity with younger children, you may choose to use only 2 or 3 cups (representing ones, tens and hundreds) to simplify the activity.
- In the thousands place setting, write the numbers in a color different from the rest. Also, add a comma after the number to help participants understand the thousands place setting.
- Use the photo as a guide to create your cups.





## **Twisting Place Values**

## **Guide for Families**

### **Learning Objectives**

#### What you need to know:

**Place value** is the value of each digit in a number. The position of each digit in a number tells you its place value. For example, in the number 237, the number 2 is in the hundreds position, the number three is in the tens position and the number 7 is in the ones position. The **place value chart** demonstrates this concept. It includes ones, tens, hundreds, thousands, ten thousands, hundred thousands and millions.

#### What you will do and learn:

In this activity, you will practice identifying and saying the place value for numbers.

#### Instructions

- 1. Look at the place value chart on the "What Is Place Value?" handout. Use this as a guide to help you in this activity.
- 2. Take three cups and stack them together.
- **3.** Twist the cups until the numbers align horizontally to show you a 3-digit number (for example, 321).
- **4.** Use the "Place Value" handout to practice saying the number, writing the number in standard form and writing the number in expanded form.
- Next, twist the cups to create a new number. Use the "Place Value" handout to say and write that number.
- 6. Repeat the activity, adding additional cups up to seven to create longer numbers using additional place values such as thousands, ten thousands, hundred thousands, millions and so on.



# **Twisting Place Values**

What Is Place Value? Handout



## **Twisting Place Values**

**Place Value Handout** 

Say the number.

(Example, say "Three thousand, five hundred, sixty one.")

Write the number in standard form. (Example: 3,561)

Write the number in expanded form. (Example: 3,000 + 500 + 60 + 1)