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

Twisting Place Value

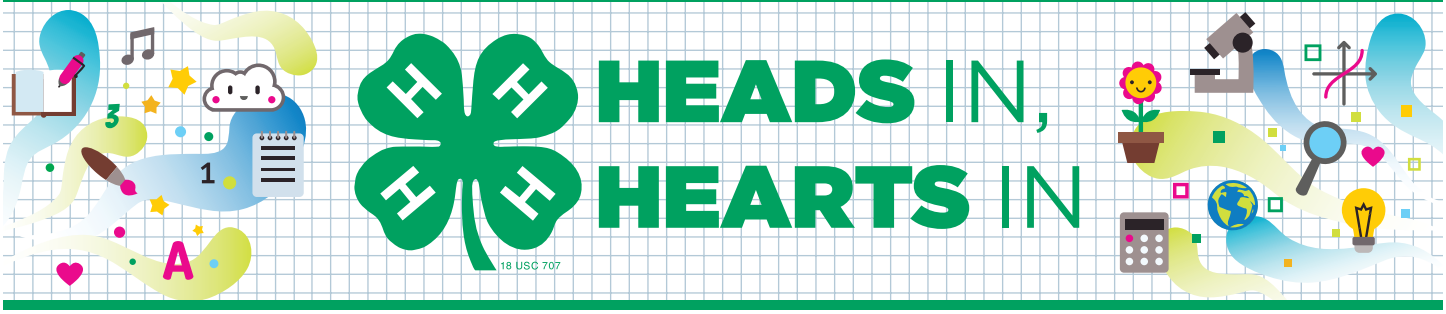
Instructions for Set-Up

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.
5. 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.

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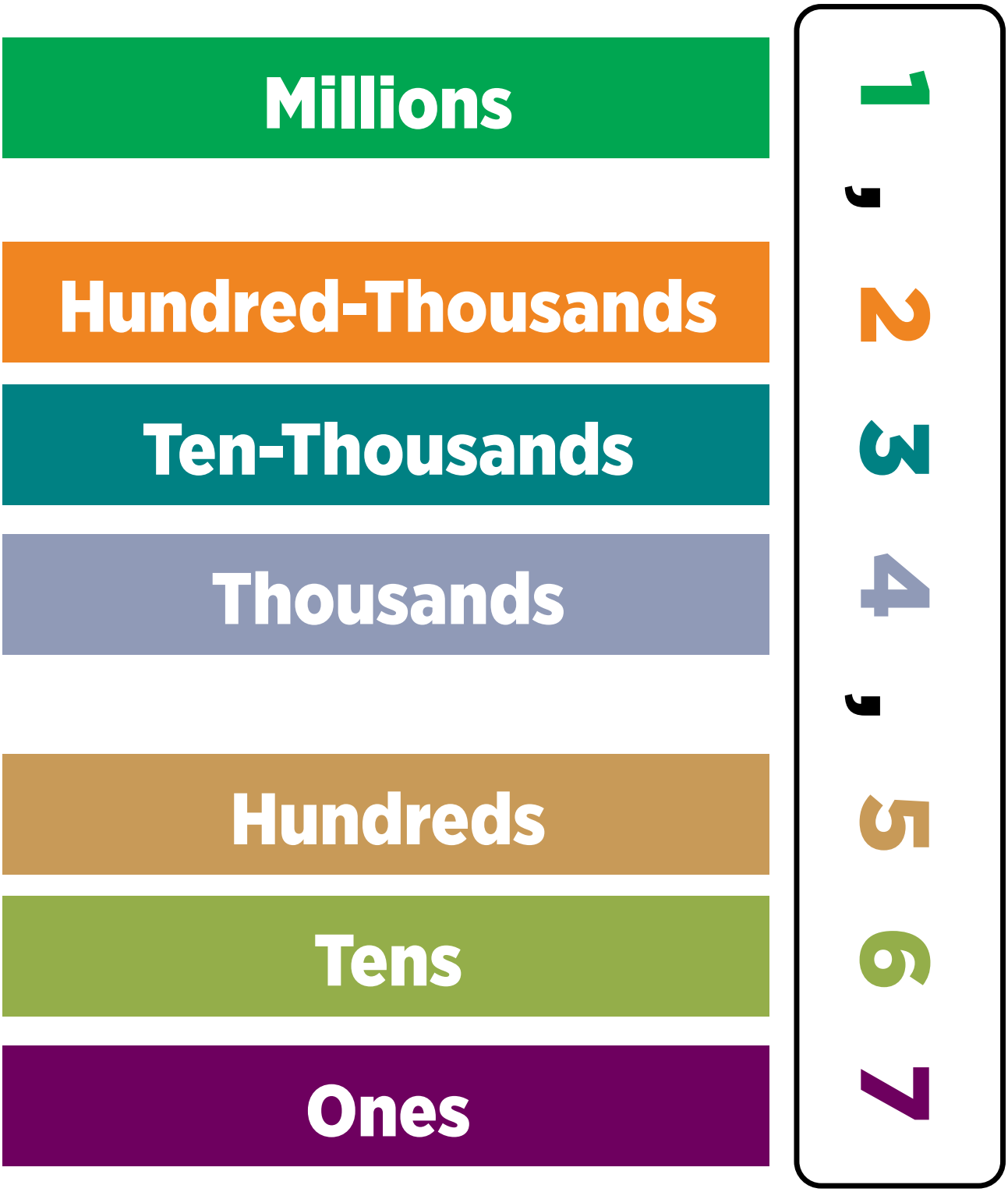
Twisting Place Values

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)