# Teaching Math
## with
# Everyday Manipulatives

## Grades 4-6

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**About the Author:**
Melanie Komar is an elementary public school teacher.
She is the author of over 50 books for teachers and parents.

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Name: _____

# Estimation Jars

## You Will Need:

- small objects (dried beans, pennies, buttons, etc.)
- clear containers

## Steps:

1. Fill a container with the objects.

2. Estimate how many you think are in the container. Record your guess in the chart below.

3. Next, count the objects. In the chart, record the actual number.

4. Fill the container with different objects and repeat steps 2 and 3.

5. Try using different containers to see which container holds more.

6. After several times of guessing and counting, find the **differences** between each guess and actual number.
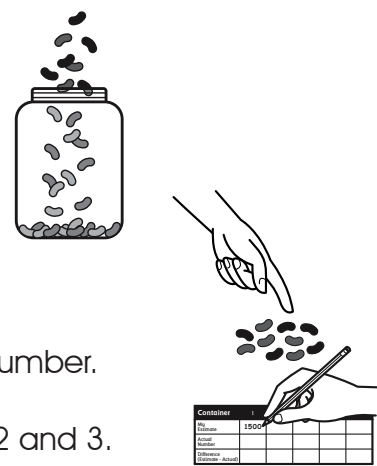
| Container | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| My Estimate | | | | | |
| Actual Number | | | | | |
| Difference  (Estimate – Actual) | | | | | |

## Make It a Game!

1. You and another player can both try guessing how many objects are in the containers.

2. Find the differences between each guess and actual number, and **add** all the differences together to figure out who had the closest guess overall!
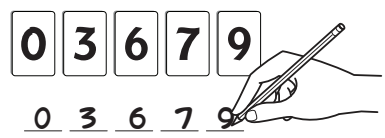
Name: _____

# Place Value

➕ ➖ ✖️ ➗

## You Will Need:

• index cards numbered 0 to 9

## Steps:

| 0 | 3 | 6 | 7 | 9 |

0  3  6  7  9

1. Take any 5 numbers. Record the numbers that you chose.

_____   _____   _____   _____   _____

2. Arrange them to make the smallest even-number 5-digit number possible.

| Ten Thousands | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|
| _____ | _____ | _____ | _____ | _____ |

3. Arrange them to make the largest even-number 5-digit number possible.

| Ten Thousands | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|
| _____ | _____ | _____ | _____ | _____ |

4. Arrange them to make the smallest odd-number 5-digit number possible.

| Ten Thousands | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|
| _____ | _____ | _____ | _____ | _____ |

5. Arrange them to make the largest odd-number 5-digit number possible.

| Ten Thousands | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|
| _____ | _____ | _____ | _____ | _____ |

## Make It a Game!

1. Each player starts with their own set of numbered cards, face down.
2. Decide on a rule about what kind of number you are going to make (for example, "largest even-number").
3. At the same time, each player will choose any 5 cards from their pile and make the number that follows the rule.
4. The first person to correctly make the number scores a point.
5. The first player to score 5 points wins.

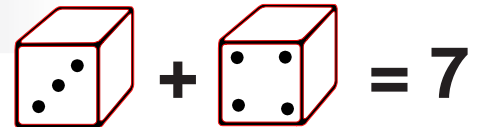**Tip:** You can also play with more than 5 cards to make bigger numbers.

Name: _____

# Number Contest

## Number Sense and Numeracy

### You Will Need:

- 2 die each numbered 0, 1, 2, 3, 4, and 5
- 2 Players

### Steps:

$$\square + \square = 7$$

1. Player 1 rolls both die and adds the numbers.

2. In the Player 1 column, fill in any space on the first row with that number.  If the total is 10, use a zero.

3. Player 2 rolls both die and fills in one space in their column on the first row.

4. Repeat until all spaces in the first row are filled in.

5. The player who creates the largest number is the winner and gets a point.
   Put a checkmark after your row if you created the largest number.

**Tip:** If you are just learning this game, use 5 spaces per line instead of 6.

| Player 1: _____ | Player 2: _____ |
|---|---|
| 1. ___ ___ ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ |
| 2. ___ ___ ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ |
| 3. ___ ___ ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ |
| 4. ___ ___ ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ |
| 5. ___ ___ ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ |

### Extension:

Put a decimal between the fourth and fifth spaces!