

Math



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Introduction

Cootie Catchers Math is an interactive and motivating tool for daily skill review. Using a new twist on the popular origami fortune tellers, this hands-on resource provides a fun and unique approach to practicing and reviewing standards-based math concepts and academic language. *Cootie Catchers Math* features 20 reproducible cootie catchers that each reinforce a specific math skill. Each page includes a *Before You Flip* hint for students to apply while they use each cootie catcher and an *After You Flip* activity to extend their learning after they have finished. Once the cootie catcher is made, students read and solve the problems; then they lift the flaps to reveal the correct answers. A recording sheet is provided on the inside back cover to help teachers keep track of assigned cootie catchers.

Aligned to the National Council of Teachers of Mathematics (NCTM) standards, *Cootie Catchers Math* is an ideal resource for providing specific content review for all students. Research shows that repetition is essential for the brain to learn and recall information. Furthermore, children have a tendency to repeat activities they enjoy. *Cootie Catchers Math* offers a fun and quick way for students to repeat and retain essential skills. This teacher-tested, student-approved resource can be used for classroom center activities, as enrichment assignments when regular class work is completed, or for homework. Perfect for individuals, partners, or small groups, *Cootie Catchers Math* makes practicing math skills enjoyable. The following areas are addressed in this resource:

- * Place value
- * Rounding
- * Addition
- * Subtraction
- * Multiplication
- * Division
- * Fractions
- * Decimals
- * Algebra
- * Geometry
- * Time
- * Money
- * Measurement
- * Problem solving

Cootie catchers fit in pants pockets, backpacks, or lunch boxes for review on the go! Students can use them in a classroom center, at their desks, on the playground, or in a car or bus. Parents can slip Cootie catchers into a pocket or purse and use them to review with their child at home, in line at the store, or while waiting for appointments. With these easy-to-make, fun-to-use, portable manipulatives, students will love reviewing math skills and vocabulary the *Cootie Catchers Math* way!

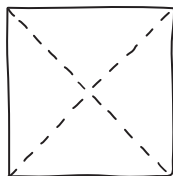
Getting Started

How to Use

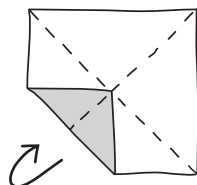
1. Select a skill you would like your students to practice, and make multiple copies of the corresponding page. Store the pages in a labeled hanging file in a math center or where math manipulatives are stored.
2. Demonstrate how to fold the Cootie Catchers. Display the instructions for students' reference.
3. Remind students to read the *Before You Flip* section before using each cootie catcher.
4. Have the students complete the *After You Flip* activity as an extension or quick assessment after they have used each cootie catcher. Ask the students to return the top portion of the page to you. Use this, along with the recording sheet, to keep track of assigned cootie catchers.
5. Send the cootie catchers home for additional practice.

How to Make

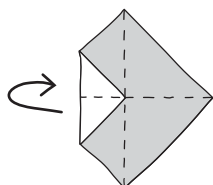
1. Carefully cut along the outline of the square. Fold and unfold the square in half diagonally in both directions to make two creases that form an X.



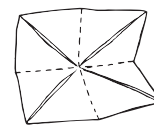
2. Place the paper facedown, and then fold each of the four corners in so that their points touch the center.



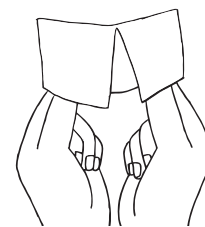
3. Turn the paper over so the flaps are facedown. Again, fold each of the four corners in so their points touch the center.



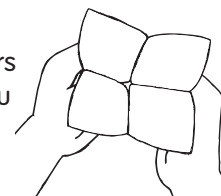
4. Fold the square in half, making a rectangle. Unfold and fold in half in the opposite direction, making a rectangle.



5. Slide both index fingers and thumbs under the four flaps.



6. Use your thumbs and index fingers to pinch the top corners together and form a point. You are ready to play.



How to Play

1. Choose a number from one to five.
2. Open and close the cootie catcher (front to back and then sideways) as many times as the number selected.
3. Choose one of the four questions shown inside and answer it.
4. Lift the flap on which the question is written and check the answer.
5. Continue playing in the same way until all eight questions have been answered.

Value of the Underlined Digit

Before you "FLIP"

Millions				Thousands				Hundreds	Tens	Ones
hundred millions	ten millions	millions	,	hundred thousands	ten thousands	thousands	,	hundreds	tens	ones
8	3	6	,	2	1	0	,	9	4	5

After you "FLIP"

Write the following number in word form: 56,890,304

Top-Left Quadrant: 9,742,315
Value of the Underlined Digit: three hundred 300

Top-Right Quadrant: 2,525,003
Value of the Underlined Digit: five hundred thousand 500,000

Bottom-Left Quadrant: 128,960,382
Value of the Underlined Digit: three million 3,000,000

Bottom-Right Quadrant: 5,465,021
Value of the Underlined Digit: sixty thousand 60,000

Central Labels:
 - Top-Left: four thousand 4,000
 - Top-Right: six million 6,000,000
 - Bottom-Left: one hundred million 100,000,000
 - Bottom-Right: forty million 40,000,000



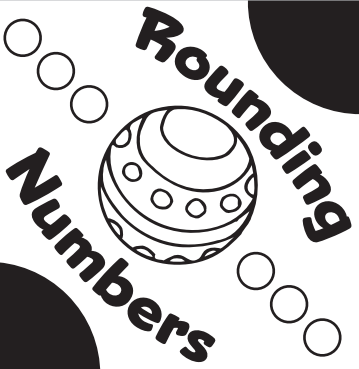
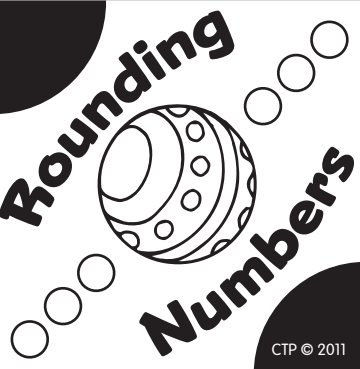
Rounding Numbers

Before
you
"FLIP"

Hint: Determine your rounding digit (the digit you need to round to). If the digit to the right of the rounding digit is less than 5, do not change the rounding digit. If it is 5 or greater, add one to the rounding digit. Round 6,342 to the nearest hundred. $6,3\textcircled{4}2 \rightarrow 6,300$

After
you
"FLIP"

Round 487,858,039 to the nearest ten thousand, hundred, and ten.

 <p>Round 57,613 to the nearest hundred.</p>	 <p>Round 234,439 to the nearest hundred thousand.</p>
<p>Round 9,999 to the nearest thousand.</p> <p>10,000</p>	<p>Round 45,923 to the nearest ten thousand.</p> <p>50,000</p>
<p>Round 644,432 to the nearest hundred thousand.</p> <p>600,000</p>	<p>Round 2,999 to the nearest hundred.</p> <p>3,000</p>
 <p>Round 45,589 to the nearest thousand.</p>	 <p>Round 376,209 to the nearest ten thousand.</p>
<p>57,600</p>	<p>200,000</p>
<p>46,000</p>	<p>380,000</p>

Mean, Mode, Median, and Range

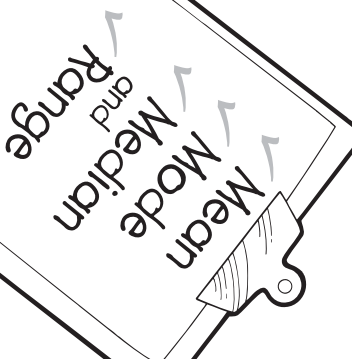
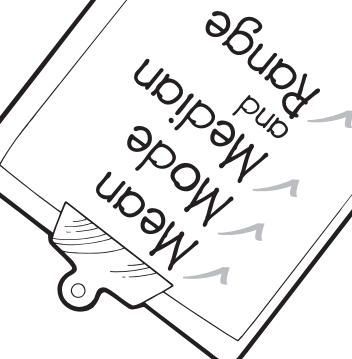
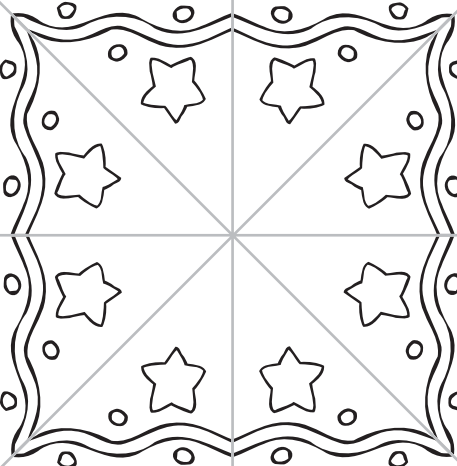

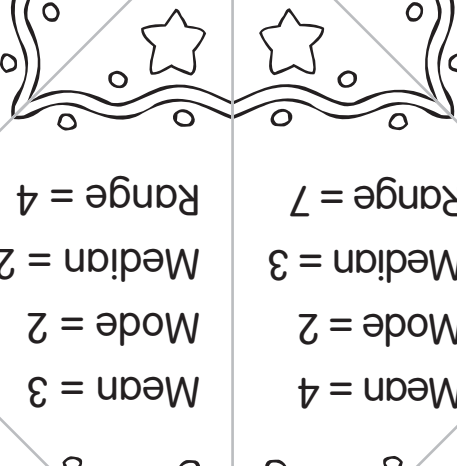
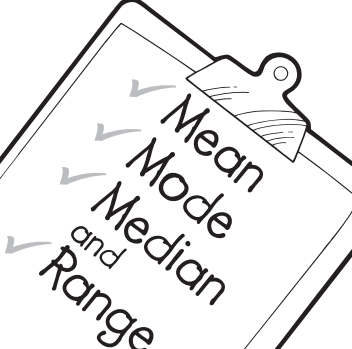
**Before
you
"FLIP"**

Hint: **Mean** is the sum of the numbers divided by the number of addends. **Mode** is the number that occurs most often. **Median** is the middle number of a set that is in numerical order. **Range** is the difference between the greatest and least numbers.

**After
you
"FLIP"**

Find the mean, mode, median, and range for the following test scores: 75, 98, 90, 100, 87

Mean = _____ Mode = _____ Median = _____ Range = _____

	<p>7, 2, 2, 5, 4</p> <p>Mean = 4 Mode = 2 Median = 4 Range = 5</p>	<p>9, 6, 6</p> <p>Mean = 7 Mode = 6 Median = 6 Range = 3</p>	
<p>4, 4, 7</p> <p>Mean = 5 Mode = 4 Median = 4 Range = 3</p>		<p>1, 2, 1, 1, 5</p> <p>Mean = 2 Mode = 1 Median = 1 Range = 4</p>	
<p>7, 5</p> <p>Mean = 6 Mode = 5 Median = 5 Range = 7</p>		<p>2, 4, 9, 3, 2</p> <p>Mean = 4 Mode = 2 Median = 3 Range = 7</p>	<p>2, 13, 7</p> <p>Mean = 9 Mode = 7 Median = 7 Range = 6</p>
	<p>2, 3, 2, 2, 6</p> <p>Mean = 3 Mode = 2 Median = 2 Range = 4</p>	<p>2, 4, 9, 3, 2</p> <p>Mean = 4 Mode = 2 Median = 3 Range = 7</p>	