

Easy Preschool Math Activities You Can Do with Stuff Around the House

Dr. Carrie S. Cutler www.carriecutler.com

Counting Tasks

Make Four Elbows!

Materials: none

Instructions: Children form a circle and begin slowly walking in one direction. At a signal from the leader, they stop and listen to instructions. When the leader states, "Make four elbows," the children touch one or both of their elbows to other children's elbows to make a total of four connected elbows. Each group then shares their methods for accomplishing this task. Other directions might include: make 12 fingers, make four knees, and make 12 fingers.

Birthday Candle Counting

Materials: toothpick with a digit taped to it (numbers 0-9), regular birthday candles, paper cupcake cups, playdough

Instruction: Children roll playdough into ball and place in cupcake cup. They poke a digit stick in the dough and then the correct number of candles.

Hole Punch of Fun Counting

Materials: hole punchers, quarter-sized sheets of construction paper

Instructions: Write a number on the paper. The child punches the correct number of holes in the paper. Don't forget zero!

Swat a Number

Materials: fly swatter, die programmed 0-5 (can be differentiated based on age/experience), cards numbered 0-5

Instructions: Child rolls die, counts the pips, the uses fly swatter to swat the correct card. Can be done with a partner where one rolls and the other swats.

Lose a Tooth Counting Game

Materials: small marshmallows, drawing of mouth with spaces for about 20 teeth, die

Instructions: Children place marshmallows on top of each tooth. Roll the die and remove that many teeth from the mouth (eat them ☺) Whoever loses all their teeth first is the winner.

Number Sculptures

Materials: floral foam or Styrofoam, miscellaneous craft items such as feathers, tees, craft sticks, straws, etc.

Instructions: Children create a sculpture to represent a quantity. For example, if they choose the number four, they would use four feathers, four bobby pins, and four straws to create their sculpture.

Newspaper Ball Toss

Materials: bucket (or empty trash can), newspapers

Instructions: Assign a child a number of balls to make from wadded up newspaper. Child takes three big steps from bucket and tosses the balls. Have child count how many land IN and how many land OUT. Repeat several times. Record the results on a t-chart labeled In and Out. Vary the number of balls to provide differentiation.

Pairs of Socks

Purpose: Counting is a foundation for children's early work with number. They establish one-to-one correspondence by moving, touching, or pointing to objects as they say the number words (NCTM, 2000).

Materials: socks (some with matching pairs and some without), clothesline, clothespins

Instructions: Children match the socks and hang them beside each other on the line. Children practice counting "1-2, 1-2." Socks that do not have a match are left off the line. Discuss what the term pair means.

Pizza, Pizza

Purpose: Children are motivated to count everything around them. They learn that the final number named represents the last object as well as the total number of objects in the set (NCTM, 2000). In this task, children practice counting as they build a pepperoni pizza.

Materials: paper plates, red paper cut into circles, index cards numbered 1-10, glue

Instructions: Children draw a card and create a pizza with the number of pepperoni slices as shown on the card by gluing the construction paper circles (pepperoni) to the pizza (paper plate). Glue the numbered index card to the back of the paper plate.

Wrapping Paper Sets

Purpose: This task gives children repeated, focused practice with counting. For example, as children circle sets of two objects, they count aloud “One, two.” Children repeat this counting and grouping process until the wrapping paper is covered with looped sets of two objects.

Materials: wrapping paper scraps, markers

Instructions: Children circle sets of two objects, such as two teddy bears, two presents, or two balloons—whatever pattern is found on the wrapping paper. Next have children circle sets of three, four, or five.

Counting Drops

Purpose: Children count the dots on the recipe card, then practice the pincer grasp as they drop food coloring into cups of water.

Materials: eye droppers, bowls of food coloring diluted with water, clear plastic cups halfway filled with water, recipe cards made by drawing combinations of different colored dots on index cards (for example: three blue dots and two red dots)

Instructions: Children select a recipe card and then use the eyedroppers to count the appropriate number of food coloring drops to be dropped into each cup of water. Children count drops as they squirt them.

Geometry Tasks

Shape Books

Materials: magazines, scissors, glue, paper for books

Instructions: Help children draw a different shape in the upper corner of each sheet of paper. Staple. Children find pictures in magazines to glue on the correct pages of their little books.

Cereal Shape Sorting

Materials: different shaped cereal

Squares: Chex, Cinnamon Toast Crunch

Circles: Cheerios, Fruit Loops, Apple Jacks

Rectangles: Frosted Mini Wheat

Instructions: Children sort the cereal pieces by shape.

Shape Hunt

Materials: square sticky notes, rectangular address labels, circular stickers

Instructions: Children hunt for squares, rectangles, and circles and mark them with the correct sticker or sticky note.

I Have, Who Has 2D and 3D Shape Game

Materials: clue cards (available on www.carriecutler.com) cut apart and laminated

Instructions: Give each child one card. Child reads their clue aloud to the group. The person with the answer reads their card next. Continue until all cards have been read.

Tabletop Composing Shapes Activity

Materials: colored masking tape, 3D or pattern blocks

Instructions: Use tape to outline 2D shapes on tabletop (squares, rectangles, rhombi, different types of triangles). Children use the blocks to “compose” the larger shapes. For example, six small squares might compose the rectangle.

Feed the Shape Monster Sorting Activity

Materials: large cardboard cutout triangle, square, rhombus, hexagon (can add googly eyes to make them look like monsters), pattern blocks or other blocks
Instructions: Children sort shapes and feed them to the matching shape monster.

Cookie Cutter Halves

Purpose: This task helps preschoolers to recognize and create shapes that have symmetry (National Council of Teachers of Mathematics [NCTM], 2000).
Materials: cookie cutter shapes that show a line of symmetry, clay, plastic knives
Instructions: Children cut out clay shapes using cookie cutters and then use the knife to cut the shape into two equal parts along the line of symmetry.

Straw Triangles

Purpose: The equilateral triangle is the type of triangle that adults most often present to children. Children need exposure to right, acute, and obtuse triangles as well. This task helps children recognize a variety of triangles and gives practice with comparing and sorting triangles into groups.
Materials: straws, clay
Instructions: Children cut straws to different lengths and then roll small balls of clay to join three straws, forming a triangle. Children make as many different triangles as possible. Compare the triangles and discuss similarities and differences between them. Sort the triangles according to their attributes.

Missing Dot Triangles

Purpose: This task allows the child to create unique triangles depending on where (s)he places the final dot on the card. Using the terms sides and vertices exposes the child to accurate mathematical vocabulary.
Materials: dot stickers, crayons, paper, ruler
Instructions: On several index cards, place two dot stickers. The dots may be in the same position on each sheet of paper or you may vary the position. Children place a third dot and then connect the dots to form a triangle. Emphasize that a triangle has three sides (the lines) and three vertices (the dots). Compare the triangles and discuss similarities and differences between them.

Button Sorting

Purpose: When children look carefully at buttons, they gain experience with analyzing objects' attributes. Describing attributes and parts of two- and three-dimensional shapes helps children develop geometric thinking (NCTM, 2000).
Materials: buttons, sheets of paper labeled 1, 2, and 4
Instructions: Option One: Children sort buttons by counting the number of holes (1, 2, or 4) and placing the button on the appropriate sheet. Option Two: Children sort the buttons using whatever attribute they wish. The only requirement is that they must be able to support their decision to place a button in a certain pile. Option Three: Two children work together. One child selects five buttons—four of which have a common attribute and one of which does not have that attribute. The partner tries to guess which button does not belong and why.

Shape Hopscotch

Purpose: Recognizing and naming shapes helps children develop mathematical communication and enables them to accurately share their ideas during discussions.
Materials: hopscotch layout with eleven sections and a shape drawn in each section, bean bag
Instructions: Children take turns hopping on the squares, calling out the shape names as they land on them. Next, children toss a bean bag and play traditional hopscotch, naming a real world object that is the same shape as the one on which the bean bag landed. Finally, the teacher calls out a pattern for children to hop on such as "circle, square, square, triangle."

Measurement Tasks

Show and Tell Measuring

Materials: pan balance, small items from child's home, such as a can, spool of thread, toy, pen, jar, cap, stuffed animal, or coffee mug

Instructions: Have each child try to find another student who brought an item that is about the same length. Then have them find another student who has an item that has about the same weight. Use a balance scale to check.

You Are Not Small Comparing Activity

Materials: *You Are Not Small* by Anna Kang or another book where one character is compared in size to other characters, photocopy of the character

Instructions: Using a cutout creature like the one in the book, have children find and share examples of classroom objects that are bigger and smaller: "This __ is bigger/ smaller than the creature." Children can record on a t-chart labeled BIGGER and SMALLER by drawing a picture or actually laying the object on the t-chart.

Shoe Comparisons

Materials: each child removes one shoe, sentence strips labeled SAME LENGTH, SHORTER, and LONGER

Instructions: Lay the sentence strips on a table. Children hunt for objects that are longer or shorter than their shoe and place them in the correct category. For an added challenge, find something that is exactly the same length as your shoe!

Wind Up Toy Race

Materials: wind-up toys, unifix cubes

Instructions: Children make a race track by connecting cubes to make two long sticks. Have each child wind three twists on the toys and set them down. See which toy goes the farthest. Children can compare the distances visually or by counting how many cubes the toys went past.

Fill Up the Boats

Materials: tinfoil, flat-sided glass marbles or plastic counters, shallow pan of water

Instructions: Children form boats out of heavy-duty tinfoil and place them in a water-filled pan or sensory table. They count and place counters in the boat until it starts to sink.

Shoe Comparisons

Purpose: In this task, children recognize the measurable attribute of length and use their own shoe as a nonstandard unit to make comparisons.

Materials: children's shoes

Instructions: Each child takes off one shoe and then finds something in the room that is shorter than the shoe. Repeat the task with children finding something that is longer than the shoe. Use terms such as length, shorter, and longer to discuss the shoes and the objects the children found.

If the Box Fits

Purpose: Children use reasoning to select the appropriate box for each item. They use ideas about length, height, and width to make comparisons between the items and boxes.

Materials: collection of boxes, items that fit into the boxes

Instructions: Tell children that each object needs to fit into one and only one box. Caution them not to choose a big box for a small item because the big box may be needed for a larger item. Children select the container for each object and place the object inside. They may order the boxes from smallest to largest.

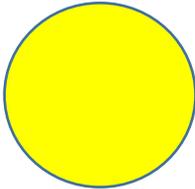
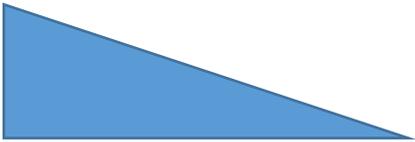
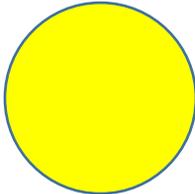
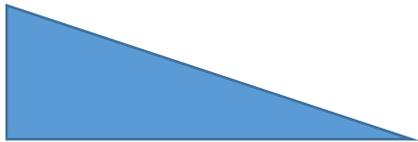
How Much Does It Hold?

Purpose: Making comparisons is an early measurement concept. In this task, children use reasoning to compare the capacity of several containers. More, less, and same are important mathematical terms relating to equivalence.

Materials: empty cans or boxes, packing peanuts, beans, wooden blocks, rice, scoops to measure capacity

Instructions: Children choose three or four cans or boxes. Choose one can or box to be the target. Play a game guessing to discover which Hold More, Hold Less, and Hold the Same as the target can or box. Children devise a method for testing their capacity guesses.

I Have, Who Has 2D and 3D Shape Game

<p>I have</p>  <p>Who has</p> 	<p>I have</p>  <p>Who has</p> 
<p>I have</p>  <p>Who has</p> 	<p>I have</p>  <p>Who has</p> 

I have



Who has



I have



Who has



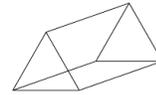
I have



Who has



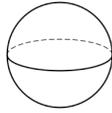
I have



Who has



I have



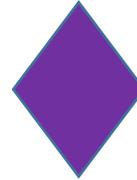
Who has



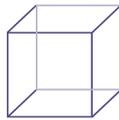
I have



Who has



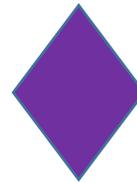
I have



Who has

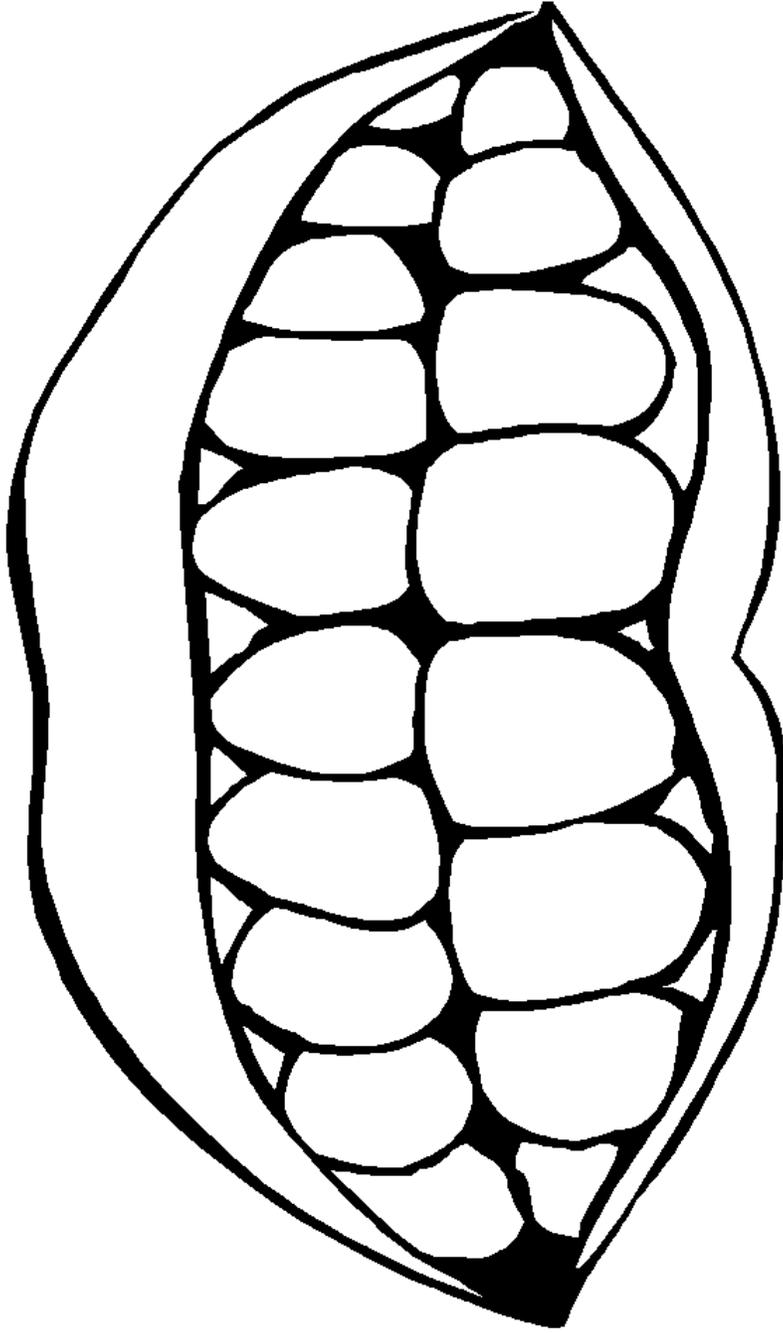


I have



Who has





Fcer