

Fired Up, Not Burned Out: PreK Math Centers That Ignite Learning

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Texas Prekindergarten Guidelines for Mathematics

Number and Number Operations

- V.A.1 Recognizes that things (or parts of things) can be counted
- V.A.2 Counting sequence to 30 (can start from a number other than one)
- V.A.3 Counts objects with one-to-one correspondence to 10
- V.A.4 Knows counting sequence is always the same, regardless of what is counted
- V.A.5 Knows last number said is the number in the set (cardinality)
- V.A.6 Knows items can be counted in any order
- V.A.7 Uses ordinal numbers (first, second, third)
- V.A.8 Subitizes (know number in set without counting) up to five items
- V.A.9 Recognizes digits 0 to 9

Adding and Taking Away

- V.B.1 Verbalizes or uses objects to create word problems (adds up to 5)
- V.B.2 Verbalizes or uses objects to create word problems (subtracts from 5)

- V.B.3 Shares or divides up to 10 items equally

Geometry and Spatial Sense

- V.C.1 Names common shapes (rhombus, square, triangle, circle, rectangle)
- V.C.2 Makes shapes (with dough, drawing, etc.)
- V.C.3 Uses positional words (over, under, beside, around, in, out, between, etc.)
- V.C.4 Knows turning or sliding doesn't change a shape's name or defining attributes

Measurement

- V.D.1 Compares two lengths
- V.D.2 Compares two capacities
- V.D.3 Compares two weights
- V.D.4 Uses language to describe passage of time

Classification and Patterning

- V.E.1 Sorts objects and describes how groups are similar/different
- V.E.2 Collects data and organizes it in a graphic representation
- V.E.3 Recognizes and creates patterns

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: birthday candle picks with digits 0-9, regular birthday candles, paper cupcake cups, playdough

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

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, then uses fly swatter to swat the correct card. Can be done with a partner where one rolls and the other swats.

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.

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.

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.

Straw Triangles

Materials: straws, scissors, playdough

Instructions: Children cut straws to different lengths then connect them with balls of playdough to form different types of triangles. Grouping similar triangles is an extension.

Measurement Tasks

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 paper 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.

Measure Me

Materials: baby photos and current photos of children, yard stick

Instructions: Measure the children at the beginning, mid-way, and at the end of the year. Have parents send baby and current photos of the children and match them. Emphasize that the children were smaller when they were babies and they are growing every day. Cut yarn to the height of each child. Tape the child's piece of yarn to a photo of the child. Children order the yarn from shortest to longest.

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.

Tips for Organizing and Using Math Centers

Select	Identical centers can be placed in several areas of the room.
Simplify	Some math centers can be permanent (like the computer or pan balance).
Review	Centers can be revisited throughout the school year.
Photograph	Take photos to document hard-to-keep activities
Engage	Make yourself one of the math centers.
Connect	Use math-themed picture books as a center
Strive	Plan on 40 minutes of math per day, mostly in centers.