

Give Your Child Mathematical Power

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Four Steps to Building Math-Positive PreK Mindsets

1. Speak kindly about math.
2. Explore and play with math ideas.
3. Incorporate picture books.
4. Point out math in everyday situations.

Activity & Link	Materials & Instructions	Where's the Math?
Transform	Materials: playdough Instructions: Sit across from a small group of students. Make a sphere with your playdough, then have the students do the same. When all the students have made a ball ("You can call it a ball. Or I call it a sphere.") then have them "transform" the dough into another 3D shape such as a cone, cylinder, cube, etc.	Adults scaffold children's informal language with mathematical terms. Children notice the composing elements of 3D shapes as they form the shapes.
Straw Triangles	Materials: straws, playdough or clay Instructions: Child cuts straws to different lengths. Roll small ball of clay to join three lengths of straws to make a triangle. Emphasize that a triangle has 3 sides. Make as many different triangles as possible.	Help children move into the understanding that a triangle is a triangle because it has 3 sides not because it looks a certain way.
Swat a Number	Materials: flyswatters, a die, and index cards with digits written on them. Instructions: Roll the die then swat the card with the correct digit.	Match the digit with its value. To practice teen numbers, cover a regular die with masking tape and write the digits on it. Write the dots in rows and columns on the index cards since there's more space on the cards than on the tiny die.
Pattern Dance	Materials: none Instructions: Children take turns creating a dance using three different motions in sequence. For example, in this video I chose kick-stomp-shake. The pattern is repeated in an A-B-C pattern.	Algebraic reasoning involves generalizing mathematical ideas from a set of particular instances (kick-stomp-shake), establishing those generalizations (hey, we can also use hop-twist-clap), and expressing the generalization in increasingly formal and age-appropriate ways (let's just say A-B-C because it means the same as hop-twist-clap and kick-stomp-shake).
Disappearing Train Game	Materials: blocks, die Instructions: With a partner build a train 20 cubes long. One partner rolls the die and removes exactly that number of cubes from the train until there are no cubes left. The person who takes the last cube is the winner.	The game gives practice with recognizing the spatial pattern on a die, counting with one-to-one correspondence, and comparing numbers.
Shape Hunt	Materials: stickers--circles (garage sale stickers work well), squares (post-it notes are perfect), rectangles (name tags or address labels are great). Instructions: Child finds shapes and identifies them with the sticker.	Two-dimensional shapes like circles, rectangles, squares, triangles, and ovals make sense to kids when they practice finding them, naming them, and showing them off! Later, these 2-D shapes will be

		recognizable as the faces of 3-D shapes. For example, a cube has 6 square faces.
Count 'Em Up Socks	Materials: socks, clothesline or yarn, clothespins. Instructions: Hang the clothesline at child-height. Set out an assortment of socks, some of which do not have matches. Have children match the socks and hang them beside each other on the line.	For 3-year-olds, have children practice counting 1-2, 1-2. For older kids, have them count all or skip count by 2s. Make patterns by alternating the socks kids hang on the line. Any socks that do not have a match are left off the line. Discuss what the term "pair" means.

Tips for Exploring a Counting Book

1. Read the book straight through as the author/illustrator intended.
2. Point out that each page has things to count.
3. Help child explore book by placing a cube on each thing to be counted.

A Few Favorite Math Picture Books

Mis Numeros by Rebecca Emberley
There was an Old Lady Who Swallowed a Fly by various
How Do Dinosaurs Count to Ten? By Jane Yolen and Mark Teague
My Very First Book of Numbers by Eric Carle
1, 2, 3 to the Zoo by Eric Carle
Anno's Counting Book by Mitsumasa Anno
The Doorbell Rang by Pat Hutchins
One Family by George Shannon
Animal Antics from 1 to 10 by David Wojtowycz
Soup Day by Melissa Iwai
Curculo! Esfera! Circle! Sphere! By Grace Lin

Numbers in Context

- Let your child put in your PIN number
- Label kitchen drawers or cupboards with digits
- Go on digit hunts around the house
- Point out digits on street signs, house numbers, and the clock in the car.

Shapes and Patterns in Context

- Ask children to identify shapes
- Use correct mathematical terms
- Go on shape hunts around the house
- Make shapes with clay, drawing
- Find and create patterns with sound, movements, colors, and shapes