

Parenting the Preschooler

 **Working for Wisconsin Families**

Joan E. LeFebvre
Area Family Living Agent
University of Wisconsin-Extension
Vilas, Forest, Florence Counties

Math Activities Are Fun

Children naturally use math in their every-day experiences. They use big and little blocks, sort colored pegs as they place them in a pegboard, use one-to-one correspondence as they match one fork to one plate, compare the tallest and shortest children, talk about who has the most or fewest crayons. These everyday activities are sources of math learning.

Experts recommend that math activities be sequential: first concrete, then pictorial, and lastly symbolic. For example, when presenting the concept of size (big/little), begin with actual objects that are big or little; then proceed to pictures of big and little objects, and finally introduce symbols such as shape outlines which are big or little. Use concrete materials first until your child is ready to move on to more abstract levels of representation. Measuring tapes can be used to explain the relative size of things like people's ages, lengths of time, and distances. One father used a measuring tape to explain how old grandfather was. He had her point to her own age, 4; then to 6 for her friend; 12 for a neighbor; 21 for a cousin; 40 and 44 for her parents; and 80 for grandfather!

1, 2, 3...

Following are activities to teach your preschooler mathematical skills.

One-to-one correspondence involves matching objects and is a prerequisite to counting.

- ▶ Provide pegs and pegboards or puzzles in which one piece fits into one space.
- ▶ Have your child set the table matching one fork, one plate, one glass at each place.
- ▶ Have your child pass out something, i.e. crackers or cards, one to each person.

Patterning means ordering objects by a specified attribute such as size. For example, place objects in the following order: big, little; big, little, etc.

- ▶ Provide an assortment of beads for your child to place in color patterns such as red, blue; red, blue; red, blue; etc.
- ▶ Give your child raisins, peanuts, and popcorn to make patterns of one each, two each, three each, etc. For example, two raisins, two peanuts, two popcorn; repeat pattern. (Hint: Make a pattern and ask your child to copy your pattern.)
- ▶ Do a clap and tap rhythm that you then ask your child to repeat. Start with any easy combination and gradually make it more complicated, depending on your child's ability to copy the pattern.

Sorting and grouping is putting objects into groups or sets according to a certain attribute such as color, shape or size.

- ▶ Give your child assorted buttons to sort by attribute--such as color or size.

- ▶ Cut colored paper into various shapes: square, triangle, rectangle. Then have your child sort by shape or by color.
- ▶ If you have a group of children, ask them to sort themselves by various characteristics: color of hair, gender, color of clothing, height.

Identifying shapes requires the recognition of similarities and differences in shapes.

- ▶ Make cardboard shapes: circle, square, and rectangle. Have your child learn the shapes by name. Next, ask the child to look away while you remove one shape. Then ask which shape is missing. Add more shapes to increase the challenge.
- ▶ Place sand or salt on a cookie sheet; ask your child to practice drawing shapes.
- ▶ Make large shape outlines by gluing heavy yarn or rope to cardboard. Have your child feel the outline of the shape. Later, blindfold the child and have them guess the shape by tracing the outlines with their fingers.

Counting involves counting objects and understanding the meaning of numbers. It is **not** simply saying the numbers by rote.

- ▶ Use the child's body to help learn about numbers: two hands, two eyes, one nose, two ears, ten fingers, etc.
- ▶ Set up a counting table with lots of small objects. Have your child count by touching the object as they say the number.
- ▶ Make a monthly calendar. At first with young ones, we use a linear calendar with numbered days all in a row. Later, a calendar with weeks in rows will help a child get the idea of moving left to right, as we do in reading. Have your child mark off (count) the days until the weekend or a holiday.

Comparing is the process of determining whether two objects are the same or different in a specific attribute such as color, shape, or size.

- ▶ Gather a number of items of one type, such as nails or pencils. Have your child compare those that are tall, tallest, short, shortest, bigger than, smaller than.
- ▶ Line up a group of children according to height. Ask the children to compare various members of the group.
- ▶ Gather a variety of objects. Ask your child to pick out those that are circles, that have the color red, that are small, that are used for the same task, etc.

Measuring consists of understanding that parts make a whole and is the basis for fractions. For example, as a child separates graham crackers, talk to them about the parts (two halves make a whole and four smaller parts also make a whole).

- ▶ Collect some different sized containers to use with sugar, sand, or water. Talk about full, empty, half full, or almost full.
- ▶ Display real measuring tools such as a ruler, yardstick, tape measure, measuring cups and spoons, clock, calendar, etc. Let your child examine the tools and talk with them about the measuring tools.

Using numbers meaningfully requires an understanding that each number represents a quantity of things and that numerals are symbolic.

- ▶ Match two objects such as shoes, boots, mittens, socks.
- ▶ Make sets of small objects and ask your child to find the set of three balls, four Legos, five socks, etc.

Math is exciting and fun. You can set the foundation for and positive attitudes about math in the preschool years.

Sources:

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