Beginning Edition

Math+Science Connection

Building excitement and success for young children

March 2011

School District of Osceola County
Title I Program

TOOLS & TIDBITS

Guess the sound

Explore the sense of sound with this game. Show your child 3–5 items (key ring, bag of rice, rubber ball). Then, have him close his eyes while you place one object in a shoebox and hide the rest. Let him shake the box. Can he figure out what it is by the sound it makes?

Infinity: A big concept!

What's the biggest number your youngster can think of? Ask her to name it—and then add one more. Help her add one more to that. And one more. Soon she'll realize that you can always add one more number! Explain that numbers can go on forever—that's *infinity*.

Book picks

Twins Matt and Bibi get an unusual geometry lesson when they are locked in an Egyptian pyramid. Your youngster will enjoy finding shapes hidden on the pages of *Mummy Math* by Cindy Neuschwander.

Does your child know that shampoo is made of minerals? *Rocks and Minerals* (Eye Wonder) is a colorful guide that explains how rocks and minerals form and are used in everyday life.

Worth quoting

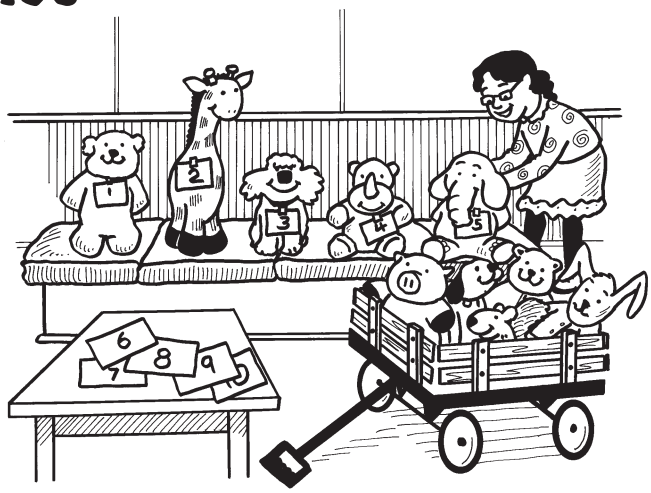
"The cure for boredom is curiosity. There is no cure for curiosity."
Dorothy Parker

Just for fun

Q: What is up and never comes down?

A: The sky.

Number lines



Seeing numbers arranged in order can help your youngster understand relationships among numbers—what's more, what's less, and how numbers increase or decrease. Let her practice with these fun ideas for number lines:

- Start with a 3-D version. Have your child number 10 index cards, 1–10, and tape each one to a stuffed animal. She can line up the stuffed animals in order (spacing them evenly)—she'll have a stuffed-animal number line!
- For this number line, your youngster will draw pictures to represent numbers. Have her make 10 marks (again, evenly spaced) across the bottom of a sheet of paper. On top of the first mark, she can draw 1 flower. On top of the second one, have her stack 2 flowers, and so on until she has 10 flowers in a column above the last mark. She'll see how numbers get larger to the right and smaller to the left.
- Help her make a traditional number line by drawing a horizontal line and marking off 0–10 from left to right. Then, say two numbers (6, 4). Ask her to find each number and tell you which is more or less ("6 is more than 4 because it's farther to the right").
- Draw a number line outside with sidewalk chalk. Call out an addition or a subtraction problem, and have your child "jump it." For instance, if you say "5 + 3," she would start at 5 and then jump up 3 numbers to the answer (8).

Playing with magnets

There's something magical about magnets. Just watch your child's face when he picks something up with a magnet and it sticks! Here are ways he can experiment.

What's magnetic? Let your youngster try to stick a magnet to various objects (dishwasher, chair, tin can, cabinet, toy train). Ask him what the items have in common. Are they the same color? Size? Shape? Material? He will discover that certain metal objects (iron, steel) are attracted to magnets. *Note:* Be sure he doesn't try magnets on computers or other electronics.

How strong are magnets? Gather several magnets (a magnetic letter, a refrigerator magnet, a bar magnet). Drop a pile of paper clips on a table, and let your child see how many he can pick up with each type. Which magnet is the strongest? The weakest?

Spring is in the air

The ground is thawing. Flowers are sprouting. Birds are returning home. Ah—spring is arriving! Enjoy the new season, and let your child work on his observation skills, with these activities.

Look for signals. Together, make a list of signs that spring is coming. Encourage your youngster to think about weather (more sun, longer days), animals and insects (frogs croaking, butterflies flying), scenery (grass turning green, ponds melting), clothing (lighter jackets, shoes instead of boots), and activities (bike riding, gardening). Take a walk to look for these signs. *Idea:* Go on regular walks with your list, and have him write the date when he sees each sign. He'll have a record of the progress of spring.

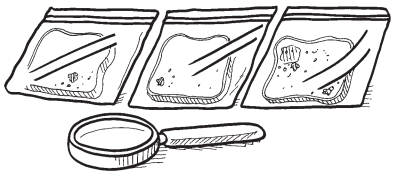
Compare branches. Have your child find three branches, one on a tree that is bare, one that has buds, and one that has a few leaves. Help him tie a different-colored piece of yarn to each one. In a notebook, he can record his data in pictures and words (blue yarn = no buds, yellow yarn = buds, green yarn = leaves). Over the next few weeks, let him observe the branches and draw the changes.

SCIENCE LAB Making mold

Maybe it's the "yuck" factor, but children love to watch mold growing on food. Here's a way for your young scientist to conduct her own mold experiment.

You'll need: 3 paper towels, water, 3 zip-lock bags, 3 pieces of bread, magnifying glass

Here's how: Help her moisten each paper towel slightly. Then, she can place a piece of bread and a damp paper towel in each bag and seal. One bag should go on the kitchen counter, one in a cabinet, and one in the refrigerator. Ask her to predict which one will grow mold the fastest. Have her check daily, using a magnifying glass to detect mold.



What happens? Mold will grow fastest in the cabinet and most slowly in the refrigerator.

Why? Mold grows best in warm, dark, moist conditions.

Note: Use this information to talk about food storage. Where should you keep bread?

Q & A Math chores

Q: *Are there ways to turn chores into math games for my children? I was thinking that would kill two birds with one stone. They would practice math—and they would be helping with chores!*

A: Yes, there are definitely fun ways to build math practice into household chores. Start with the laundry. Your kids could sort dirty clothes into whites, light colors, and dark colors. Or they can fold and sort clean laundry by type (shirts, pants, pajamas) or person (Mom's, Dad's, Becky's). Sorting will help them learn about "same" and "different."

They can also learn about sequence, or the order of things, by making a bed. Show them how they should straighten the sheets first, then tuck them in, and then put on the comforter and set the pillow at the head of the bed. Sequencing is an important skill in math—often problems have to be solved in a certain order.

MATH CORNER Probably!

When is picking out socks a math problem? When you're learning about probability! Try these ideas.

First, get your child used to the idea of probable outcomes. Show him two socks, one red and one blue. Ask him what the chances are of picking a red sock if he grabbed one without looking (he has a chance of picking a red sock half of the time).

Next, put 3 black socks and 1 white sock in a brown paper bag. Ask your youngster if he'll be more likely to pull out a black or a white sock. Then, let him experiment. Have him number a sheet 1–10. He should pull out one sock, write down the color next to the number 1, return the sock to the bag, and try again. After 10 times, what are his results?

OUR PURPOSE

To provide busy parents with practical ways to promote their children's math and science skills.

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