Beginning Edition

Math+Science Connection

Building Excitement and Success for Young Children

March 2020

Title I

Prince William County Public Schools

TOOLS & TIDBITS

How many parking spots?

A cardboard box makes a great garage for your child's toy cars—and it's a counting tool, too. To find out how many parking spaces she needs, ask her to count her cars, touching each one as she says each number. Then, she could use a marker to draw that many spaces in her "garage," numbering one space for every car as she goes.

Left hand, right hand

Encourage your youngster to try everyday tasks with his nondominant hand. If he's right-handed, for instance, he'll see that it's harder to throw a ball, write his name, and eat cereal with his left hand. Now share this interesting fact: The left side of his brain controls his right hand, and vice versa.

Book picks

12 Ways to Get to 11 (Eve Merriam) shows combinations of numbers that add up to 11. A colorful introduction to addition.

A Journey Through Space (John Haslam and Steve Parker) takes your youngster on a trip to discover planets, comets, asteroids, and more.

Just for fun

Q: What did the dog get when he ate two dog treats plus four dog treats?

A: A full belly!

All kinds of patterns

Colors, movements, numbers … there are lots of ways for your child to make patterns. Enjoy these hands-on activities together.

Create a color pattern

Have your youngster cut two different-color sheets of paper, perhaps green and orange, into strips. Help him staple the ends of a green strip together, loop an orange link through it, and staple its ends. Let him repeat the pattern (green, orange, green, orange) until he runs out of links. *Variation:* Use three colors (red, red, yellow, green, red, red, yellow, green).

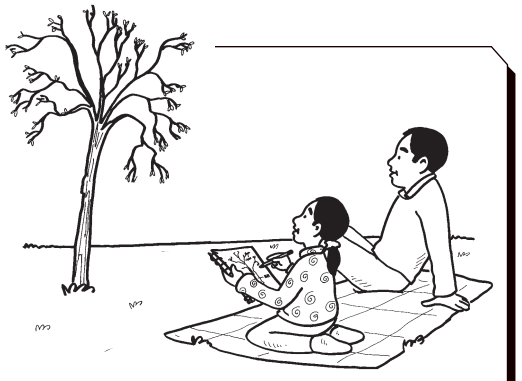
Continue a dance pattern

Perform a routine with a pattern of simple movements. After a few repeats, stop so your child can complete the pattern. *Example:* Slide left, slide right, spin around, slide left, slide right, spin around, slide left. Then, your youngster should slide right and spin around. Now he starts a dance for you to continue.

Grow a number pattern

Play with growing patterns where the same number is added to each number before it. Secretly choose a number between 1 and 10 (perhaps 6). On a piece of paper, write a number pattern (starting at 1), adding your number repeatedly: 1, 7, 13, 19. Can your child determine your secret number based on your pattern? Next, he could give you a pattern to grow.

Adopt a tree



"That's my tree!" Encourage your youngster to learn about seasonal changes by choosing a special tree to watch throughout the year.

Get a notebook and crayons, and take a walk to let your child pick out her tree. She can sketch it and label its parts (trunk, branches). Have her write observations ("The branches are bare") and add the date.

Now visit her tree regularly as winter changes to spring. Soon she may notice tiny buds on the branches and, later, flowers, leaves, and perhaps even a bird's nest. What will the tree look like in summer or fall?

Muffin tin math

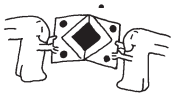
A muffin tin makes a great math tool for practicing a variety of skills your youngster learns in school. Try these ideas.

Sequencing. Have your child number a dozen cupcake liners 1–12. Mix them up, and see if she can put them into the tin in order. Rearrange them—can she start with 12 and put them in reverse order?

Sorting. Give your youngster a bin of craft supplies (pom-poms, beads, buttons, googly eyes) or other small objects that will fit into muffin tin cups. Suggest that she find a way to sort them, and you guess her sorting rule. Maybe she'll sort by color (yellow, pink, white) or by material (fabric, plastic, metal). Now you sort them and let her figure out your rule.

Money. Turn the muffin tin into a "vending machine." Ask your child to write "prices" (5 cents, 25 cents, 41 cents, 83 cents) inside cupcake liners and put them in the tin. Now she can add a small toy (plastic dinosaur, bouncy ball) in each liner. Dig up spare change, and take turns "shopping" for a toy, putting the correct coins into the cup.

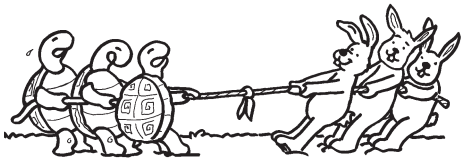
SCIENCE LAB Tug-of-war science



Your youngster will have a field day with this experiment while he learns about two forces: pushes and pulls.

You'll need: jump rope, "flag" (bandanna, dish towel), two safety cones or trash cans

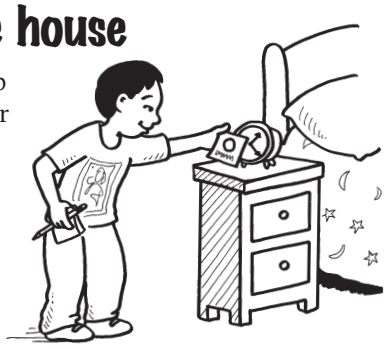
Here's how: Play the popular field day game tug-of-war. Help your child stretch out the rope on the ground and tie a flag in the center. Now he should put a cone at each end of the rope. To play, partners or teams stand on opposite ends, holding the rope. On "Go," tug on the rope to get the flag over the cone on your side.



What happens? Tug-of-war involves pushes and pulls. You push your feet firmly against the ground while pulling on the rope. The person or team that pushes and pulls the hardest wins.

Why? Pushes and pulls are both forces. When applied in opposite directions, as when two opponents pull on a rope, an object moves toward the greater force.

PARENT TO PARENT Math around the house



Last week my son woke up and told me about his funny dream—he said our whole house was made of numbers and shapes! We had a good laugh, but it actually gave me an interesting idea.

When he got home from school that day, I told him we were going to make his dream come true. "Let's put math all through the house. We can label everything with a number or shape." He thought that sounded like fun and got out sticky notes, construction paper, crayons, and tape.

First we labeled a window ("4 windowpanes") and bookcase ("3 shelves"). Then, we drew shapes and wrote their names on sticky notes. My son put them onto matching shapes, such as "rectangle" on the dishwasher door and "circle" on his alarm clock.

We've left the labels up, and now he can walk around the house and read them. His dream turned into a clever activity, and I'm happy that he's practicing his math skills and vocabulary.

MATH CORNER Symmetry quilt

This "quilt" lets your youngster explore symmetrical designs—ones where each half is a mirror image of the other.

She'll need 20 index cards. She can fold each card in half vertically or horizontally, unfold, and draw a symmetrical picture. For instance, she might draw a heart or a flower with the *line of symmetry* (the crease in the card) vertically down the exact center. Or on a card with a horizontal fold, she could create a symmetrical design—say, zigzags, stripes, or polka dots—on the top and bottom halves.

Have your child line up the cards in even rows and columns, and help her use clear packing tape to connect them all into a quilt. Now she can hang up her symmetry quilt for all to see!

OUR PURPOSE

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

Resources for Educators,
a division of CCH Incorporated
128 N. Royal Avenue • Front Royal, VA 22630
800-394-5052 • rfecustomer@wolterskluwer.com
www.rfeonline.com
ISSN 1942-910X