

Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

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Allan Composite School
Nadia Breckner, Principal Kelly Wandler, Vice Principal

TOOLS & TIDBITS

Math scrapbook

As your child brings home math papers from school, have her collect her favorites in a binder or notebook. She might pick ones showing methods she's proud of learning. Suggest that she decorate a cover with cutouts of shapes, numbers, or math symbols. When school ends, she'll have a record of all the great things she did in math this year.

Look like a scientist

Make your youngster feel like a real scientist by helping him *look* like one. Find an old white button-down shirt, and write his name over the pocket with a permanent marker. Cut or roll up the sleeves to fit. Then, let him wear his "lab coat" whenever he does science activities and experiments.



Web picks

From Addition Bubble Pop to Snake Trap and Island Chase Subtraction, hoodamath.com is filled with math games. Arranged by grade.

Let your child join the Nasa Kids' Club by exploring outer space with the activities at nasa.gov/audience/forkids/kidsclub/flash/.

Just for fun

Q: What did the dog get when he added 2 dog bones + 4 dog bones?

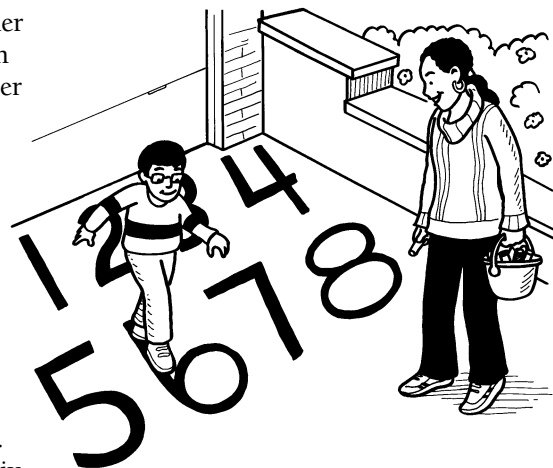
A: A full belly!



I recognize that number!

Being able to identify numbers is the important first step for every other math skill your child will need in school and in life. Use these clever ideas to help him learn to recognize and name numbers:

- Write numbers outside with sidewalk chalk. Ask your youngster to "walk" each number and say it aloud. Or let him "drive" the numbers with a toy car.
- When you make phone calls, let him punch in the digits. Say the numbers one at a time, giving him time to find and press each one.
- In a darkened room, use a flashlight to "write" digits for each other to identify. Naming the numbers you form and writing his own numbers for you to identify are both good practice. *Hint:* This is a fun bedtime activity.
- Get a package of magnetic numbers (available at dollar stores) and a stainless steel cookie sheet. Call out activities for



your child to do (the numbers will stick to the cookie sheet). *Examples:* "Show me the number for how old you are" or "Put down a number that is larger than 5."

- On a poster board, have your youngster trace 20 circles with a paper cup. Help him number the circles 1–20 and then number 20 cups. Mix up the cups, and take turns picking one to place on its matching number. ♀

Let's eggs-periment

Eggs are not only good for breakfast, they're also good for learning about chemistry. Here's a fun activity to try.

- 1. Soak.** Have your child put two eggs in separate glasses. Help her cover one egg with water and the other with vinegar, and label them. Ask her to predict what will happen, and then wait two or three days to find out. (The shell will disappear from the egg soaked in vinegar. The one in water won't change.)
- 2. Bounce.** Rinse the "naked egg" with water, and let her carefully examine it. She'll be able to see through to the yolk. For fun, she could gently bounce the egg (since it will be rubbery). But do this outside because if she bounces too hard, it will go splat!

The science: Soaking eggs in vinegar (an acid) causes a chemical reaction that dissolves the shell. ♀



Skyscraper engineer

Does your youngster love to build towers? Harness that creativity to encourage her to explore engineering.

Discover

Visit tall buildings in your town or city. Talk about the main parts: the foundation (like the basement of a house), the beams (the skeleton of the building), the floors (the stories, or levels), and the facade (the outside). Suggest that she count the floors and sketch pictures of the buildings, numbering each floor.



Build

At home, let your child experiment with building her own skyscraper out of cardboard and blocks or empty toilet paper tubes. For each floor, she should arrange blocks or tubes and lay a piece of cardboard on top. How many floors can she stack?

Test

Ask your youngster to test the strength of her skyscraper. She might put toy people on different floors to find out how many they'll hold without the building caving in. Or she could remove one tube or block at a time and rearrange the remaining ones. She'll see that the load (the weight) has to be balanced. How can she keep her skyscraper from falling down?



SCIENCE LAB

My mini garden

Your child will see an ecosystem in a jar when he makes this simple terrarium.

You'll need: large clear jar or container with a lid, small rocks, activated charcoal (available at pet stores), potting soil, small shovel, plants



Here's how: Have your youngster line the bottom of the jar with rocks (about an inch deep) and top them with an inch of the charcoal. Next, he can add potting soil and dig holes for the plants. Let him put in the plants and add more soil to fill in the gaps. Now it's time to water his garden and put the lid on. Place it in indirect sun, and encourage him to visit it daily.

What happens? The terrarium creates its own water cycle.

Why? As the jar heats up, water in the soil will evaporate. Water droplets condense on the lid and then drip back down—raining on his plants! And then the cycle starts all over again.

MATH CORNER

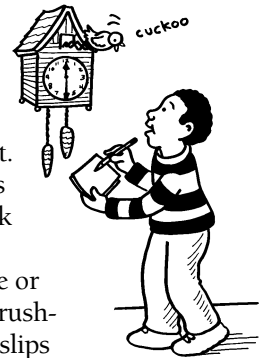
Time check

Digital or analog, kitchen clock or cell phone...your youngster will be telling time his entire life. Help him practice with this activity.

Give your child a pad of sticky notes to keep in his pocket. At random points during the day, call "Time check!" He goes to a clock, reads the time, and writes it on a sticky note. Look at his note to make sure it's right.

Then, ask him to add a.m. or p.m. to the note and to write or draw a picture of what he was doing. (Example: "8:00 a.m. Brushing my teeth.") At the end of the day, he can put all his time slips in order. Then, do it again tomorrow.

Tip: Begin by calling "Time check" at the hour or half-hour. As he gets better at telling time, you could catch him at other points, such as 2:25 or 7:50.



Q & A

The story behind story problems

Q: My child has trouble with story problems. Why is it important for her to do them?

A: The great thing about story problems is that they show real-life situations. When you're at the store, you're not shown an equation for the price of apples. Instead, you might think, "If apples are \$3.00 a pound and I get 2 pounds, that will be \$6.00."

Also, working on story problems is a good way for your youngster to practice math *and* reading. To successfully solve the

problems, she has to understand both the words and the numbers.

Try to have fun with story problems at home. For example, you could say, "When Julia and Nina come over today, you might play library. If you check out 2 books, Julia checks out 3, and Nina checks out 4, how many total books would you check out?"

Challenge your child to make up story problems for you, too. The more fun she has with them, the easier they will be for her.



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
540-636-4280 • rfeustomer@wolterskluwer.com
www.rfeonline.com
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