

Math+Science Connection

Beginning Edition

Building excitement and success for young children

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Dorchester School District Two
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TOOLS & TIDBITS

Be the scorekeeper

When you play games, let your youngster keep score. She'll get practice writing numbers and keeping them lined up. Help her add up the scores, and then ask her to read them in order ("Mom is in first place with 54, Zach has 51, I have 50, and Dad has 47").



Animal alphabet

Here's a fun family game to play at dinnertime or anytime. Go through the alphabet, taking turns naming animals starting with each letter. *Example:* alligator, bear, cougar. Thinking of animals and hearing other people's ideas will help your child increase her animal vocabulary.

Web picks

Your dinosaur lover will learn all about the prehistoric creatures at www.kidsdinosaurs.com. She can



make and name a dinosaur, vote for her favorite one, or play dinosaur memory.

Build a skyscraper out of toothpicks, solve math brainteasers, and play math games along with the cats at www.mathcats.com.

Worth quoting

"Always do your best. What you plant now, you will harvest later."

Og Mandino

Just for fun

Evan: Is it true that the law of gravity keeps us on Earth?

Teacher: Yes.

Evan: Then what kept us here before the law was passed?



Math on the go

Between school, after-school activities, and errands, you probably wonder when there's time for math practice. The answer? On the way to and from all of those places!

Use these activities to boost your child's skills while you're on the road. *Tip:* Keep a notebook in the car just for math.



Use license plates

Have your youngster add together the numbers on license plates. *Example:* For HJK 325, he would add $3 + 2 + 5 = 10$. Or ask him to rearrange the numbers to make the largest (532) or smallest (235) numbers possible. He can record his answers to track the high and low numbers of the week.

Make a set

Call out a number, and your child has to find that many objects that can make a group. If you say "3," he might locate 3 blue minivans, 3 trees, or 3 basketball hoops. In his notebook, he can sketch the sets.

Count and compare

On each car trip, pick something for your youngster to count. *Examples:* dogs, stop signs, traffic lights. Have him write down the numbers and then make comparisons. Did he see more stop signs today or traffic lights yesterday?

Predict the number

Have your child make predictions and check the results. He might predict how many pickup

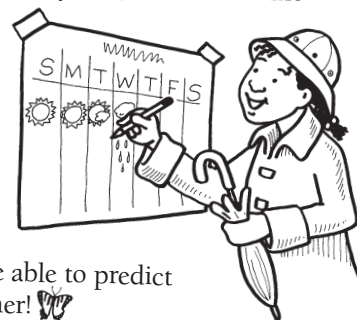
trucks you'll pass or which color car he'll see the most often. Have him make a tally mark for each truck or each red, silver, or green car he sees. Then, he can count the tally marks to see if his predictions were correct.

Weather reporter

The changing season is a perfect time to introduce your child to *meteorology*—the study of weather.

Together, watch the weather report on television. Help her listen for the current temperature and tomorrow's forecast. Then, have her track the weather herself. On a small poster board, she can make seven columns and write the days of the week on top.

Every morning, let her check the weather outside and record it on her chart. On a bright day, she might draw a sun and write "sunny" underneath. On a rainy one, she can outline raindrops and write "rain." As she makes new weather charts each week, she'll begin to get a sense of weather patterns—and she might even be able to predict tomorrow's weather!



Even or odd?

Teach your child how to identify even and odd numbers, and you'll help her develop number sense and even prepare her for other math skills like division.

Partners. Have her gather small objects (buttons, toy people, barrettes) and arrange them in pairs. If the objects match up two by two, the total is an even number. If there's one left over, it's an odd number. Let her count the objects, say the number, and announce whether it's "even" or "odd."

Patterns. Help her draw a grid of 10 boxes across and 5 boxes down, and number them 1–50. Have her color every other box



(starting with 1) purple and the remaining boxes yellow. She'll see a pattern (purple = odd, yellow = even).

Collages. Explain that numbers ending in 1, 3, 5, 7, or 9 are always odd, and ones ending in 2, 4, 6, or 8 are always even. Have her label one sheet of construction paper "even" and another one "odd," cut numbers out of magazines or newspapers, and glue them onto the correct sheet.

Idea: Read *Even Steven and Odd Todd* (Kathryn Cristaldi) for a humorous look at a boy who likes only even numbers and his cousin who prefers everything odd.

MATH CORNER

Write a math story

Here's a great way to get your child to practice math—and work on her writing skills, too.

Suggest that she write a math story. Help her brainstorm an idea for a tale that involves shapes or size, for example.

She might write about a girl who wakes up to find she's surrounded by triangles ("One morning a little girl opened her eyes, and her bed, lampshade, and table were all made of triangles").

Or maybe she visits a planet where she's twice the size of everything else ("She was

two times taller than all the trees and houses").

As your youngster develops her plot, she'll think about math in new and interesting ways. *Note:* If she's not writing yet, she can dictate her story to you. Encourage her to illustrate her story—being sure to use shapes, numbers, or math symbols!



SCIENCE LAB

Bobbing raisins

Your child probably doesn't know he can make raisins dance! Show him how with this bubbly experiment.

You'll need: tall clear glass, seltzer, raisins

Here's how: Have your youngster pour seltzer into the glass and drop in 6 raisins.

What happens? Tiny bubbles will form on the raisins. When they're covered in bubbles, they'll float to the surface and the bubbles will pop. Then, the raisins will drop back down.

Why? The bubbles are carbon dioxide—the gas that makes soda "fizzy." In this case, it makes the raisins bob up and down.

Variation: Instead of using seltzer, your child can create a carbon dioxide reaction himself. Have him fill the glass halfway with water, stir in 1 tsp. of baking soda, and drop in the raisins. Then, he can slowly pour in vinegar until the glass is $\frac{3}{4}$ full. Once again, the raisins will bob up and down.



Q & A

Curious scientist

Q: *I want my son to be interested in science. What do you suggest?*

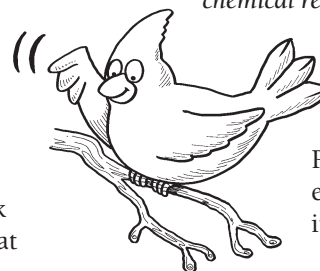
A: Young children are naturally curious. Try these easy ways to encourage that curiosity, and you'll see your son's interest in science grow.

Go for walks, and take time to stop along the way. Point out trees, animals, and insects. Use names when you know them ("Look at the red cardinal in that tree"). Ask your child to describe what

he sees, and share his enthusiasm. If he gets excited about a flower, ask him about its shape, size, or color. He'll be sharpening his observation skills.

Bring science indoors, too. Bake brownies together, and explain that *chemical reactions* cause the batter to rise. Have him line up dominoes and topple the first one, and then tell him he set off a *chain reaction*.

Pretty soon, he'll see that science is all around him—and it's fun!



OUR PURPOSE

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

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