

# Math+Science Connection

Beginning Edition

Building excitement and success for young children

March 2009

Dekalb County School District  
Dekalb County School District

## TOOLS & TIDBITS

### What time is it?

Get your youngster used to talking about time. Say, "It's 8:30—time to go to school now." Look at movie or television show times together in the newspaper. Ask him to check the digital clock and read the numbers to you. Getting comfortable with time will help prepare him to tell time on his own.



### My tree

In your yard or at a nearby park, have your child pick out a tree all her own. Encourage her to watch her tree regularly for changes. She might notice leaves growing or birds building a nest. Let her sketch pictures to record what she sees. She'll learn more about nature and practice her observation skills, too.

### Book picks

■ *One Grain of Rice: A Mathematical Folktale* (by Demi) is the story of a young Indian girl who saves her village from hunger. Your child will learn a clever math lesson in this delightful book.



■ A little girl who loves the stars grows up to be America's first woman astronomer. In *Maria's Comet*, Deborah Hopkinson tells the inspiring story of Maria Mitchell.

### Worth quoting

"Imagination is the highest kite one can fly." *Lauren Bacall*

## Just for fun

**Teacher:** How many seconds are in a year?

**Emma:** Twelve!  
January second,  
February second...



## All about shapes

Your child's world is made up of shapes. Encourage her to play with squares, circles, and triangles—and she'll see from an early age that geometry is great! Try these activities.

**Count the sides.** Put out a bowl of crackers shaped like rectangles, squares, triangles, and circles. Have your youngster count the number of sides and corners each one has and name the shape: "This one has three sides and three corners. It's a triangle." "A circle is round. It has no sides or corners."


**Have a shape hunt.** Cut a cardboard shape (circle, star, oval) for each person, and go outside to look for the same shapes in nature. Your child might find a star-shaped leaf or an oval rock. *Tip:* Take paper on a clipboard, and have her list the objects she spots.

**Make a shape village.** Let your youngster mold cubes, pyramids, and cylinders out of clay to make houses, schools, stores, or farms. Or she could cut circles, triangles,



squares, and rectangles out of construction paper and glue them into shoeboxes to make a town.

**Match shapes.** Fill a box with objects of various shapes. Have your child close her eyes, reach in, and try to find two items that are the same shape. *Examples:* orange, grapefruit; candle, soup can.

**Build structures.** Give your youngster toothpicks and mini-marshmallows, and see how many shapes she can make. For instance, she might create a triangle with three marshmallows and three toothpicks or a square with four of each. 

## At the zoo

Going to the zoo is a fun way to spend a family afternoon. Did you know it's also a science lesson? Here are suggestions for your next visit:

- Teach your youngster about animal habits. Ask him to find animals that are sleeping and ones that are active. Watch animals being fed, and talk about what giraffes, bears, or walrus eat.
- Encourage your child to use his senses. He might *smell* the elephant house, *listen* to the sounds that birds make, or *touch* a snakeskin in the reptile discovery area.
- Have your youngster move like the animals. Can he balance on one leg like a flamingo or swing his arms like a monkey?



*Note:* If you don't have a zoo nearby, look for a petting zoo or farm you can visit. 

# Over the moon

*Look, Mom! There's a full moon tonight!*

Does your child get excited when he sees a bright, round moon in the night sky? You can use this fascination to help him learn about the phases of the moon.

Together, create a booklet to record the moon's phases. Cut four sheets of black construction paper into fourths, and staple the pages together. Have your youngster use a white or yellow crayon to write "My Moon Journal" and his name on the cover.

Each night, go outside and gaze at the moon. Help him use words like "crescent moon," "half moon," or "full



moon" to describe what he sees. Then, have him draw that night's moon on a page in his booklet. *Note:* If the night is overcast, he can draw a cloud.

After 28 days, flip through the pages together.

He'll notice the moon getting bigger until it's "full" and

then getting smaller again. Explain

that the moon really stays the same size and shape, but we see it differently as it circles around the earth.



## MATH CORNER Today's number is...

Give your youngster practice in all kinds of math skills with this family activity.

Once a week, declare a "number of the day." All day long, family members will try to use the number in different ways. Say you choose the number 4:

- At breakfast, your child could eat 4 pieces of cereal at a time, break a banana into 4 chunks, and take 4 sips of milk.



- On the way to school, ask him to find the number 4. He might see it on a sign, a license plate, or a house number. How many 4s can he find?

- After school, encourage your child to make up story problems using the special number. *Example:* "Max has 3 trucks. I have 1 truck. Together, we have 4 trucks."

- At bedtime, tuck your youngster in and read 4 books to celebrate "4 Day."

### OUR PURPOSE

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

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## SCIENCE LAB Shiny pennies

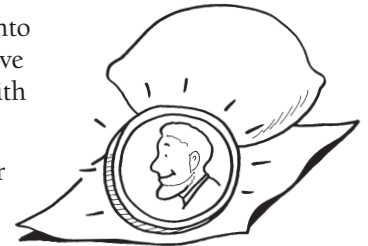
Give your child a pile of pennies, and let her make them bright and shiny.

*You'll need:* dull pennies, paper cup, lemon juice, paper towel

*Here's how:* Have your youngster put a penny into a paper cup and cover it with lemon juice. After five minutes, she can take out the penny and dry it with a paper towel.

*What happens?* The penny will be much brighter than it was before.

*Why?* Pennies are made from copper, which is naturally shiny. But the coins lose their shine over time as the copper mixes with the oxygen in the air. That chemical reaction is called *oxidation* and causes the pennies to be coated with something called an *oxide*. The acid in the lemon juice removes the oxide—leaving the penny looking brand new!



## PARENT TO PARENT Playing store

I mentioned to my mother that Katie was having trouble adding, and she gave me a good idea. She reminded me how I loved playing grocery store when I was little and suggested that I help Katie set up a play store at home.

First, we collected clean, empty food containers like cereal boxes, peanut butter jars, and milk jugs. Then, Katie set them out on a table. She thought of a price for each

item and wrote the amounts on sticky notes that she attached to the "food."

She was excited when I was her first customer. I picked out my items, and she wrote the prices on a piece of paper. She added them up and told me how much I owed her.

Now when Katie has friends over, they take turns being the customer and the cashier. She's having fun—and working on her addition skills at the same time.

