

# Math+Science Connection

Intermediate Edition

Building Understanding and Excitement for Children

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## INFO BITS



### Think logically

Mathematical thinking comes into play anytime we organize things. Help your child stretch his logical thinking by asking him to sort something,



such as the spice jars in your cupboard. He might arrange them alphabetically, by color, or another way. Point out that sorting makes it easier to find items later.

### Shorter days

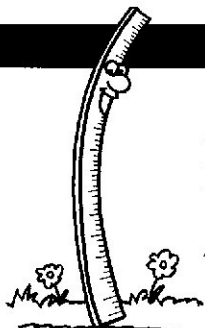
How does a scientist say it's the first day of fall? She says it's the *autumnal equinox*. After the equinox, the days (or daylight hours) get shorter than the nights. This year the equinox is September 23. Have your youngster record what time the sun rises and sets each day for a week. How do the minutes of daylight change?

### Book picks

■ *The Man Who Counted: A Collection of Mathematical Adventures* (Malba Tahan) combines an adventure story with interesting math puzzles.

■ Learning about the solar system is fun when planets tell the story themselves. Dan Green's *Astronomy: Out of This World!* contains fascinating facts and details along with cartoon illustrations your child is sure to love.

### Just for fun



**Q:** What has three feet but no legs or arms?

**A:** A yard.

## Fractions of fun

Understanding fractions is much easier when your child can visualize them. Here are ideas to help her see—and use—fractions.

### Keep a diary

Show her that fractions are a part of everyday life. For a week, have her record and illustrate each one she notices. For instance, she might write, "We had a half day of school today," or "Mom asked for  $1\frac{1}{2}$  pounds of turkey at the store." How many examples can she find and draw?

### Play a game

Have each player cut a sheet of construction paper into six horizontal strips. She should leave the first one whole and then cut the second one in half (fold it, and cut along the fold), and the others into thirds, fourths, sixths, and eighths. With bits of masking tape, label a die:  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{6}$ ,  $\frac{1}{8}$ , and "wild." To play, roll the die,



and lay the matching piece of paper on your whole strip (for "wild," choose any piece). The goal is to be the first one to fill your strip without overlapping any pieces (example:  $\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = 1$  whole strip).

### Put in order

Together, make a set of fraction cards, with one fraction per index card ( $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ ,  $1$ ,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ ,  $1\frac{3}{4}$ ,  $2$ ). Shuffle the cards, and see how quickly your youngster can put them in order. Then, while she closes her eyes, lay the cards in order but leave out a few. Give her the missing cards, and have her put them where they go. ■

## Melting ice

When it's icy out this winter, your youngster may see salt being sprinkled on sidewalks and roads. With this experiment, he'll find out why.

Have him gather three clear plastic containers and place an ice cube in each one. Next, he should sprinkle 1 tsp. salt on one cube and 1 tsp. sugar on the second cube. Suggest that he label each container ("salt," "sugar," "plain"). Then, he should monitor the cubes and time how long it takes each one to melt.

The result? Your child will find that the "salt" cube melts the fastest. That's because salt lowers the freezing point of water, causing the ice that it touches to melt. ■

