

# Math+Science Connection

Intermediate Edition

Building Understanding and Excitement for Children

March 2020

Title I

Prince William County Public Schools

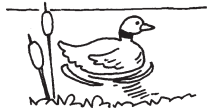
## INFO BITS

### Factor your age

What factors are in your youngster's age? If he's 10, he would say 1 and 10, and 2 and 5 (because  $1 \times 10 = 10$ , and  $2 \times 5 = 10$ ). For a bigger challenge, have him tell you the factors in your age. Is any family member's age a prime number (its only factors are 1 and itself)? *Note:* The smallest prime number is 2.

### Home sweet home

When you're out with your child, encourage her to look for animals in their habitats. She may notice ducks in a pond or deer in the woods. Now suggest that she ask faraway relatives about their local animal habitats. An aunt who lives in a desert may see lizards, and grandparents at the beach may spot seagulls.



### Book picks

📖 *The Girl with a Mind for Math: The Story of Raye Montague* (Julia Finley Mosca) tells the true story of a persistent young girl who grew up to become an award-winning engineer.

📖 Explore the world of geology with your youngster in *My Book of Rocks and Minerals: Things to Find, Collect, and Treasure!* (Devin Dennie).

## Just for fun

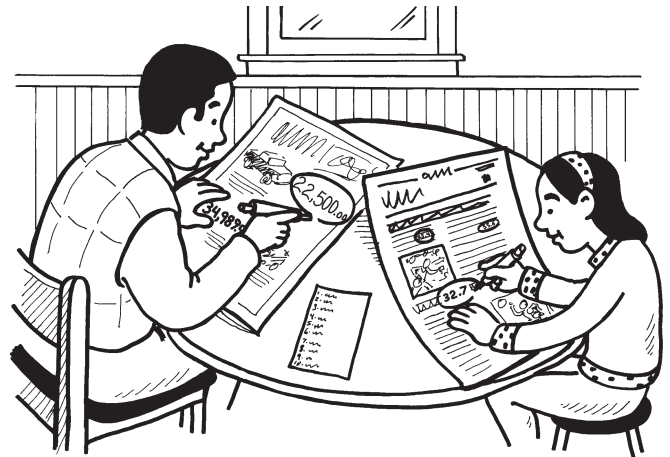


**Q:** What has four legs but can't walk?

**A:** A chair!

## Working with decimals

Decimals are a part of everyday life that children begin to learn about in the upper elementary grades. These activities will let your youngster use them at home.



### Hunt for decimals

Your child can discover different ways decimals are used. Together, list 10 types of numbers with decimals to locate in a newspaper (a number with three digits to the right of the decimal point, a price, a sports statistic). Each person takes a page or section and circles as many as possible—then compare your finds.

### Play decimal war

On separate index cards, have your youngster write 20 decimals, such as 0.4, 0.31, 0.70, 0.06, 0.85, and 0.7. Shuffle the cards, and deal them evenly to two players. Now play war as usual: Each player flips over a card, and the person with the bigger number takes both cards. If they're equivalent, turn over another card each. Whoever has the larger number takes all four cards. Collect all the cards to win.

### Add decimals

Ask your child to use a grocery circular to plan her favorite meal and calculate the total cost. She could estimate, then add to check. Remind her to stack the numbers in a column, being sure to line up the decimal points. Aside from that, adding numbers with decimals is the same as adding whole numbers! 📦

## Science haiku

Your child can combine science vocabulary with poetry by writing a haiku. This traditional Japanese poem contains three lines—the first and third lines have five syllables each, and the second line has seven syllables. Here's an example:

### Planets

*Eight unique planets  
Revolving and rotating  
Through our galaxy.*

Space is just one science topic your youngster could write about. Encourage him to think of

more, such as weather, atoms, or the rain forest. Then, he can write a haiku, weaving in science vocabulary. Listen while he reads his haiku, and ask him to explain terms he used.

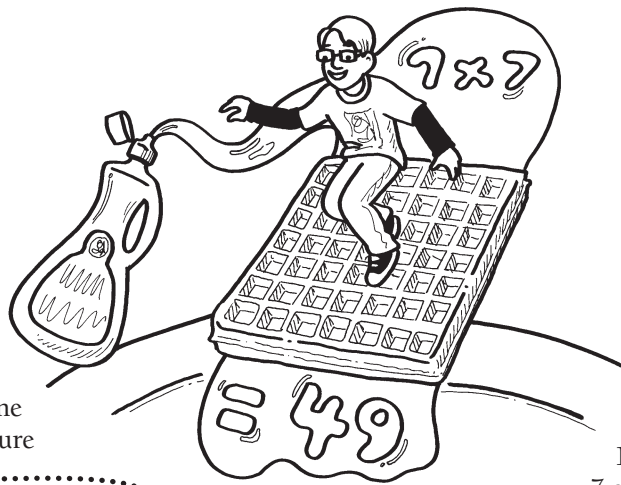
*Idea:* Each time he finishes a new science unit in school, suggest that he write a haiku about it. 📦



# Fun with area

What's the area of that waffle your child is eating? How about the room he's sitting in? He can practice calculating area any time with these ideas.

**Waffles.** A waffle square makes a tasty unit of measurement. As your youngster pours syrup onto his waffle, encourage him to count the squares along one edge (perhaps 7). How can he figure



out the number of squares in the whole waffle without counting each one? *Hint:* He should use the formula for area (length x width). If the waffle is a square, he would multiply  $7 \times 7 = 49$ .

**Floor tiles.** Let your child use floor tiles to calculate the area of a room. He could measure one tile in your kitchen or bathroom, or in a waiting room, then count the rows and columns of tiles. If each tile is 1 square foot and there are 9 rows and 7 columns of tiles, what is the area of the room? (*Answer:*  $9 \times 7 = 63$  square feet.)

## SCIENCE LAB Fly a hovercraft

How does air help a hovercraft ... well, hover? This project lets your young engineer see the phenomenon with her own eyes.

**You'll need:** pencil, paper plate, straw, uninflated balloon, tape

**Here's how:** Use a pencil to poke a hole in the center of the plate. Have your child turn the plate over and stick the straw in the hole so about  $\frac{1}{2}$  inch comes out the bottom. Now help her fit the balloon over the top of the straw, secure it with tape, and blow through the bottom of the straw to inflate the balloon. Carefully pinching the neck of the balloon so air doesn't escape, she can set her "hovercraft" down with the balloon on top—and let go.



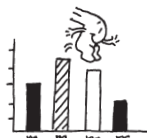
**What happens?** The plate hovers above the table, scooting around until the balloon deflates.

**Why?** Your youngster blew air into the balloon. As the air escaped, it formed an air cushion under the plate, causing the hovercraft to lift off the table.

**OUR PURPOSE**

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

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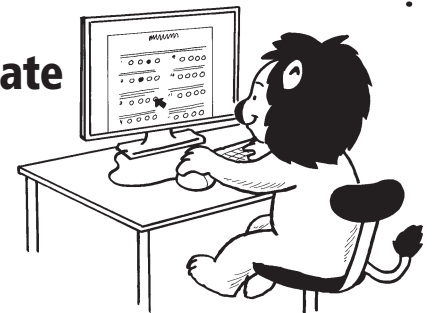
## PARENT TO PARENT

### Understanding state math tests

My daughter Lyla will take a standardized math test this month. When she showed me a completed practice test, I was surprised by how different it was from the ones I took as a kid.

I asked the teacher about the test, and she said students will be asked to apply math problems to real situations like converting a recipe for six servings to one with four servings. They'll also be required to show their work and explain their reasoning for each test problem. These are skills they've worked on all year, the teacher said, so Lyla can feel confident that she's prepared.

Finally, the teacher suggested that I have Lyla tell me about problems on the practice tests she brings home. She said that explaining her reasoning out loud will help Lyla do well on test day.



## MATH CORNER

### Explore line graphs

A *line graph* is used to measure data over time and spot trends. Here's how your youngster can create his own on a sheet of graph paper.

**1. Decide what to plot.** Maybe your youngster would like to track how many pieces of mail you receive each day.

**2. Set up the graph.** He should write the days you get mail (Monday–Saturday) across the bottom of his paper and numbers 1–10 up the left side. Have him label each axis ("Day of the

week" and "Number of pieces of mail") and add a graph title ("Mail received per day").

**3. Track data.** If you get 4 pieces of mail on Monday, he'd make a dot at the point where the Monday line and the 4 line cross. Each day, he can connect the new dot to the previous one.

**4. Analyze.** On which day did you get the most mail? Let him graph more weeks—does he notice any patterns?

