

# Math+Science Connection

Building Excitement and Success for Young Children

September 2017

Sask Rivers Public School Division



## TOOLS & TIDBITS

### Math on display

Celebrate your child's math learning by displaying her schoolwork. Have her make an "I love math!" banner to hang on a wall. When she brings home a shape collage or a math explanation she's proud of, hang it underneath. You'll help her feel good about what she's learning and send the message that math is important.

### Mirror, mirror

Suggest that your youngster play with a mirror to explore the science of reflection. Get him thinking by asking, "If you want to see more of yourself, should you walk closer to the mirror or farther away?" Encourage him to come up with questions, too.



### Book picks

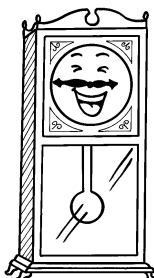
■ *Ada's Ideas: The Story of Ada Lovelace, the World's First Computer Programmer* (Fiona Robinson) is the true tale of a girl who used a love of numbers to become the world's first programmer—many years before computers were invented!

■ Help your child explore the wonder of maple seeds and trees with *Next Time You See a Maple Seed* (Emily Morgan). Part of the Next Time You See series.

## Just for fun

**Q:** What has two hands, a round face, always runs, but stays in place?

**A:** A clock!



## Hop, skip, and count

Here's an idea that's good for your child's brain *and* body: Play outdoor games that let him practice counting in all sorts of ways.


### Hop along

For stop-and-start counting practice, let your youngster design his own hopscotch game with sidewalk chalk. He might draw and number 10 or 20 circles in a zig-zag. Roll a die. For 5, he hops and counts 5 circles ("1, 2, 3, 4, 5"). Roll again. He starts where he left off—if his new roll is a 2, he would hop twice and count "6, 7." When he reaches the end, it's your turn.



3 giant gallops forward and 2 tiny steps backward"). Your child will practice counting forward (or backward) with each move. The first player to reach the "Friend" wins.

### Freeze and find

This tag game lets your youngster count objects to match a given number. Choose someone to be "It," and everyone else runs. "It" tags someone, yells "Freeze," and names a number 1–10 (say, 3). The person can be "unfrozen" by showing "It" 3 of something, perhaps 3 stripes on his shirt or 3 rocks on the ground. Play until everyone has been frozen once—the last one becomes "It." 


### Move ahead (or not)

Try this twist on Mother, May I. One player is the "Friend." The others line up opposite him and take turns asking permission to move forward—using a number and a movement. *Example:* "Friend, may I take 6 giant jumps forward?" "Friend" says "Yes" or gives an alternative ("No, but you may take

## Why is the grass wet?

Give your junior scientist the opportunity to discover *morning dew* with this activity.

1. Suggest that she pick two matching objects (say, tennis balls) and place one outside. Keep the other inside.
2. First thing tomorrow morning, have her touch both items. Are they wet or dry?
3. Let your child repeat this for several days. Help her record the daytime and nighttime weather and whether the outdoor item is damp. If it didn't rain, why might the one outside be wet?

*What's the science?* When the air cools down at night, water condenses from the air and clings to grass, spiderwebs, and toys your youngster leaves outside overnight! 



# Graphing, back-to-school style


Pencils, markers, glue sticks, and crayons may mean the start of the school year, but they can also mean the start of a fun graphing project for your youngster.

**Create it.** Have your child gather back-to-school supplies and sort each type into a different pile. Help her use yarn to make a giant grid with even columns and rows. To make her graph, she should put markers in one column, crayons in another, and so on, one item per box.



**Analyze it.** Let her use her 3-D graph to tell you about her supplies. Which column has the fewest items? The most? Are there more markers or crayons? How many more markers are there than crayons?

**Draw it.** Now your youngster could turn her 3-D graph into a picture graph. On a sheet of paper, she can label columns (“markers,” “crayons”) across the

bottom. Then, have her draw a picture representing each item (example: 8 markers in the markers column, 12 crayons in the crayons column)—again lining them up evenly. Now when she puts her supplies away, she’ll still know how many she has of each! 

## MATH CORNER Number sandwiches


When do 3 numbers make a sandwich? When the middle number is “sandwiched” between the other two! Help your child learn about “greater than” and “less than” with this game.

**Materials:** deck of cards (face cards removed, ace = 1)

Deal each player 2 “slices of bread” (cards) faceup. Stack the remaining cards facedown.

Each person puts his smaller number on the left. *Note:* If the numbers are the same or 1 number apart (like 4 and 5), draw a different card.

Take turns drawing a “sandwich ingredient” (1 card) from the deck. If it “fits,” (it’s greater than the lower card and less than the higher card), it’s a number sandwich! *Example:* 7 fits between 4 and 8. The player keeps all 3 cards and takes 2 new cards to start another sandwich. If the one he draws doesn’t fit, he returns the card to the bottom of the deck, and his turn ends.

When the deck is gone, the player with the most sandwiches wins. 




## PARENT TO PARENT

### Photos full of math

My son Sammy came home excited about an activity at school where “we saw math in all the pictures!” He said his class looked through books and made up “math captions” for the illustrations.

He wanted to show me how, so he pointed to a picture in his favorite book and said, “Four people are fishing, and 2 are boys.” Then, Sammy asked me for a caption, and I said, “Half of the people fishing are girls.” We were surprised by how many “math things” we noticed. When he said, “With 4 people, there are 8 eyes,” I added, “There are 2 blonds, 1 person with brown hair, and 1 person with no hair.”

We had so much fun that now at bedtime we read each book twice—once for the story and once for the math! 



## SCIENCE LAB

### No brown apples, please

Encourage your child to enjoy apples at snack time with this experiment that keeps them from turning brown.


**You’ll need:** 2 freshly cut apple slices, lemons, bowl, 2 paper plates, marker

**Here’s how:** Let your youngster put one apple slice in a bowl and squeeze lemon juice to cover it. After 1 minute, have her move the slice to a paper plate labeled “lemon juice.” The other slice goes on a plate labeled “no lemon juice.” Ask her

to set a timer for 60 minutes. What color are the slices when it rings?

**What happens?** The plain apple slice will turn brown. The slice with lemon juice will not.

**Why?** Apples contain an enzyme that reacts with the oxygen in air to turn them brown. Lemon juice stops that reaction.

**Idea:** Suggest that your child try the experiment with other juices, milk, or vinegar. What are the results? 



## OUR PURPOSE

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

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