

Math+Science Connection

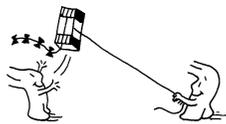
Beginning Edition

Building Excitement and Success for Young Children

March 2017

Fargo Public Schools

Title I



TOOLS & TIDBITS

Picture the data

Introduce your child to pictographs by having him take a survey and show his data with pictures. He could ask family members which fruit they like better, bananas or apples. To graph his results, he can draw the two fruits and put a smiley face next to each one to represent a vote. Which fruit has more smiley faces? How many more does it have?

I spy the wind



Your little one may not be able to see the wind, but you can ask her to *show* it to you anyway. Outside on a windy day, have her toss blades of grass into the air and watch them being carried away. Or she might hold up a flag or ribbon to flutter in the breeze.

Book picks

At Miss Bloom's boardinghouse, guests enjoy her yummy cake with a side of fractions in the rhyming story *Full House: An Invitation to Fractions* (Dayle Ann Dodds).

A little girl who loves the stars grows up to be America's first professional woman astronomer. Read the inspiring true story of Maria Mitchell in *Maria's Comet* (Deborah Hopkinson).

Just for fun

Q: What has arms but no hands?

A: A couch!



Ones, tens, and hundreds

What makes 21 different from 12? Swapping the placement of the 2 and the 1 turns them into totally different numbers! These suggestions let your youngster work on this concept of *place value*.

Hunt for numbers

Ask your child to point out two-digit numbers in your home (March 31 on the calendar, page 19 in her storybook). Can she tell you which number is in the tens place and which is in the ones? (For 31, the 3 is in the tens place, and the 1 is in the ones place.)



worth 6. She will see that tens are worth more than ones.

Collect tens and ones

Together, find household items to represent tens and ones (*examples*: pretzel sticks for tens, sunflower seeds for ones). Put a sticker on each side of a quarter—one labeled "tens," the other "ones." Take turns rolling a die and flipping the coin. If your youngster rolls a 5 and flips "tens," she gets 5 pretzels, equaling 50. If you roll a 6 and flip "ones," you get 6 seeds,

Stand in place

Let your child write "hundreds," "tens," and "ones" on separate paper plates and place them on the floor. Give her a three-digit number, say 231. Then ask, "Where would you stand for the 2?" (She would step on the hundreds plate, because the 2 is in the hundreds place in 231.) Next, have her give you a number. Challenge her by standing on the wrong plate to see if she corrects you!

Where did they go?

One way animals protect themselves from predators is by blending into their environment using *camouflage*. This simple activity will teach your child what camouflage is all about.

1. Have your youngster cut out squares of different-colored paper.

2. Hide the squares for him to find. Pick places where they will—and won't—be camouflaged.

A red square might go on a red bedspread or a white pillow, and a brown square could be on a wood dresser or a yellow cushion.

3. As your child finds each one, encourage him to notice the squares that blend in with the color it's sitting on, just like a polar bear blends into snow or a deer hides in the woods. The squares—and animals—that don't blend in are exposed for anyone to see.

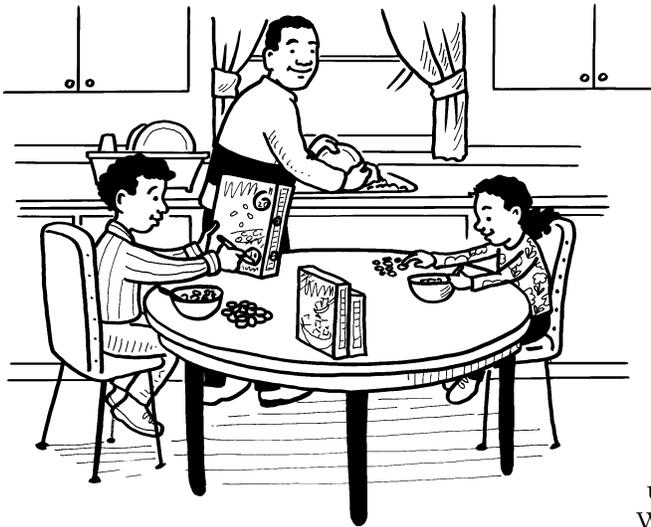


Breakfast of mathematicians

The kitchen table is a great place for morning math fun. Put out boxes of cereal, and try these ideas.

Counting. Ask your youngster to grab a handful of cereal and count the number of pieces. Perhaps he counted 14. How many pieces would he have if he adds 1 more (15) or takes 1 away (13)?

Number sense. Give your child a marker, and challenge him to find and circle all the



numbers he sees on the cereal box. He might find “Net weight 10 oz.” and “Sugar, 2 grams.” What’s the highest number he can locate?

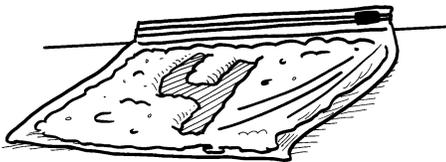
Geometry. Have him count the number of corners (8), edges (12), and faces (6) on the cereal box. Then, empty the cereal into another container, and help him unfold the box so it’s flat. What 2-D shapes can he

identify? Maybe he’ll see rectangles or squares. Finally, he’ll enjoy folding and gluing the cardboard back into a box! 

Q & A Writing my numbers

Q: My daughter is learning to write her numbers. Are there fun ways she can practice at home?

A: Definitely! Here’s a hands-on idea she is sure to love. Let your child mix food coloring into 2 cups shaving cream. Put the colorful shaving cream into a gallon-sized zipper bag, squeeze out the extra air, and seal it closed. Now say a



number—with her finger, she writes it on the squishy bag. The number will show up as the shaving cream is pushed aside. She can easily “erase” it to write the next number you give her.

Or try this: Write numbers on paper in yellow highlighter. Then, have your youngster trace over them in pencil or crayon. The more she practices forming numbers, the more comfortable she will get with writing them. 

OUR PURPOSE

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

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MATH CORNER Fishy math

With your child, create a “tackle box” of math problems so she can fish for answers anywhere!

First, make a fishing rod. Cut a 12-inch piece of yarn, tie a pencil to one end, and tape a refrigerator magnet to the other end. Then, have her write 0–9 on separate index cards. On four more cards, she should write + or –. Now slide a paper clip on each card.

Let her keep the fishing rod and index cards in a shoebox. To play, your youngster fishes in the box until she “catches” two number cards and one operation card. Then, she gets to solve the problem. *Examples:* $3 + 6 = 9$, $5 - 2 = 3$. Older kids can fish for four number cards to create two-digit numbers and solve harder problems, such as $13 + 27 = 40$. 



SCIENCE LAB Bobbing raisins

Your youngster may not know that he could use science to make raisins dance. Here’s how.

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

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

What happens? Tiny bubbles begin to form on the raisins. When they’re completely covered in bubbles, the raisins will float to the surface. Then the

bubbles will pop, and the raisins will float back down.

Why? The bubbles are carbon dioxide—the gas that makes soda fizzy. This gas makes the raisins bob up and down.

Variation: Instead of using seltzer, your youngster can create his own carbon dioxide reaction. Have him fill the glass halfway with water, stir in 1 tsp.

of baking soda, and drop in the raisins. Then, he should slowly pour in vinegar until the glass is $\frac{3}{4}$ full—the baking soda and vinegar combine to make carbon dioxide. Once again, the raisins will start bobbing! 

