

# Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

September 2019

Fauquier County Public Schools

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## TOOLS & TIDBITS



### Name that shape

“That red and white sign is a triangle!”

“Those orange and white barrels are cylinders!” Let your youngster explore geometry by asking her to name flat and solid shapes she spots. To “collect” the shapes,



help her draw them on separate index cards and label them with their names.

### A five-senses log

With this homemade book, your child will discover different ways he uses his five senses. Have him staple together five squares of paper, one for each sense (sight, smell, taste, touch, hearing). Now he can list things he notices thanks to each sense. He might write “Mom’s coffee” on the “smell” page and “wind chimes” on the “hearing” page.

### Book picks

▣ In *Zero the Hero* (Joan Holub), your youngster will realize just how “super” important zero is.

▣ Your child can read bite-sized poems while learning about food groups in *Our Food: A Healthy Serving of Science and Poems* (Grace Lin and Ranida T. McKneally).

## Just for fun

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

**A:** A desk.



## Back to school...in numbers!

From the big yellow bus to the September calendar, your child’s school year is full of numbers! Try these school-themed activities that encourage him to write numbers and count.

### Math pictures

Have your youngster draw pictures that involve math. For example, he might cut a school bus out of yellow construction paper and label it with his bus number. Or ask him to tell you how many students are in his class (say, 28)—he could draw a picture with that many students.



### September calendar

Let your child find numbers on a calendar. Together, look at the month of September, and ask him how many days it has (30). Then, encourage him to circle and count only the school days—how many are there? He could put stickers on days he has special classes (library, music, art, PE) and count how many times he’ll go to each one this month. (“I will have PE 8 times.”)

### Business card

Your youngster can learn his address and phone number by making “business cards.” Help him print his name and his contact information (“123 Apple Tree Lane, 555-0123”) on index cards and decorate them with stickers. Now suggest that he hand out his cards to relatives. Maybe they’ll make their own business cards to trade—then he can read their addresses and phone numbers. 🦋

## Observe the daytime sky

What’s in the sky today? Encourage your child to observe and record what she sees—just like a scientist does.

**Sun.** Watch a sunrise or sunset together so your youngster can see how the sky changes colors. She could draw a series of pictures as the sun rises or sets, using crayons (peach, lavender) that match the sky for each sketch.

**Moon.** Show your child that the moon is always in the sky—even in the daytime. When she spots it, let her draw it along with a landmark (say, a tree) to show where it’s located. She can draw the moon again a few hours later, then compare the drawings to see that it appears in a different location. 🦋



# Sort and pretend

Math + imaginary play = learning and fun. Invite your child to open a pretend store or restaurant and practice sorting with these ideas.

**Play store.** Let your youngster sort and display products to “sell.” For an arts and crafts store, maybe she’ll sort crayons and markers into different cups on one shelf and make separate piles for plain paper and construction paper on another. Or perhaps she’ll sort by color (red crayons and red markers with red paper). Pretend you’re her customer, and she can sort the coins you pay with.



**Make a menu.** To play restaurant, your little chef can first create a menu. Help her fold a sheet of paper into thirds, and give her old magazines to cut out food pictures. She might sort the foods by meal (breakfast, lunch, dinner), course (appetizers, entrees, sides), or food group (fruits, vegetables, grains). She could pick her favorite sorting method, then label the menu sections and glue the pictures to the pages where they belong. Now you get to order food from her restaurant.



## PARENT TO PARENT

### Math box

At back-to-school night, my son Bobby’s teacher had a great idea for helping children practice math at home. She suggested that we put together a portable “math box” to play with anytime.

I got a plastic tote box, and together Bobby and I filled it with math tools. He put in a deck of cards, dominoes, dice, and flash cards. I added a pencil, a notepad, and a small bag filled with beads.



Then, we thought of math games he could try. Bobby suggested rolling three dice and arranging them from smallest to largest number. I said he could add the dots on both sides of the dominoes.

We wrote each idea on a separate piece of paper and stapled them into a “math idea book.” Now he’s using his math box in the car, in bed before he goes to sleep, and even at breakfast—because he likes playing with math!

## OUR PURPOSE

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

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## SCIENCE LAB

### Liquids vs. solids

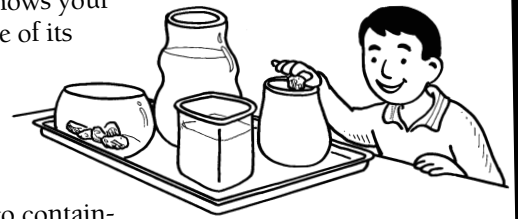
This experiment shows your youngster that a liquid takes the shape of its container—and a solid doesn’t.

**You’ll need:** four clear containers of various shapes and sizes (vase, jar), water, rocks

**Here’s how:** Have your child fill two containers with water and put rocks in each of the other two.

**What happens?** Water (a liquid) changes shape to fit the container. A rock (a solid) stays the same shape no matter which container it is in.

**Why?** The molecules, or tiny particles, in liquids move around freely. But the molecules in a solid are tightly packed and can’t move past each other, so a solid doesn’t change shape.



## MATH CORNER

### Let’s graph our names

Which family member has the longest name? The shortest? Your child can make a name graph to find out.

**Materials:** poster board, pencil, markers, strips of paper, scissors, glue

**1.** Help your youngster divide poster board into 12 columns and 8 rows. Number the top row 1–12.

**2.** Give each person a strip of paper and a marker to write her first name. (Make strips for pets’ names, too!)

**3.** Have each family member cut her name apart into individual letters.

**4.** Now everyone can glue their letters in order across the poster board (one letter per column).

**5.** Look at the graph together, and compare the length of your names. For example, how many more letters does Mallory have than Carl? Do any two names have the same number of letters?

