

# Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

March 2018



## TOOLS & TIDBITS



### Game-night math

Let your youngster be the scorekeeper during board games or card games so she can practice counting, addition, and writing numbers.

If a game involves play money, appoint her as banker—she'll learn about counting bills and making change.

### Redesign your room

Have your child draw a map of his bedroom on a sheet of paper. He can draw the shape of the room and mark the windows and doors. Then, he could add his bed, dresser, and other items. On another piece of paper, he might sketch out a way to redesign his room. As he draws and plans, he'll practice spatial relation skills.

### Book picks

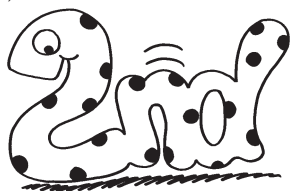
■ A shirt with 3 sleeves? A dog with 5 legs? *One Odd Day* (Doris Fisher) will have your youngster laughing out loud as he learns about odd and even numbers.

■ Your child will be amazed by the tale of a baby hippopotamus and a 130-year-old tortoise who become best friends in *Owen & Mzee: The True Story of a Remarkable Friendship* (Isabella Hatkoff, Craig Hatkoff, and Paula Kahumbu).

## Just for fun

**Q:** How many seconds are in a year?

**A:** Twelve! January second, February second, March second...



## Let's sort things out

When Andrew plays with toy trucks, he likes to separate them into groups by color. His friend Daniel puts big trucks in one row and small trucks in another. Both of these children are sorting—a fun way to play and a good way to build math skills.

Give your child a chance to practice sorting at home with these ideas.

### Matching cards

Set out piles of nuts, bolts, and washers. Let him tape one of each onto separate index cards. Then, he could sort the hardware by piling each type on its matching card. Or put a penny, nickel, dime, and quarter each into separate cups of an empty egg carton. Can he sort a handful of change into the correct sections?

### Sorting circles

Help your youngster make a “sorting map” out of a large poster board. He can draw six circles, each one a different color. Have him gather toy foods and place each one onto the matching color



circle. Or let him draw two circles and decide how to sort something (things with metal vs. things without metal). Then, examine his piles and figure out his “sorting rule.”

### Cleanup system

Build responsibility by combining sorting with cleanup time. Help your child label shelves or bins by drawing pictures or writing words (*blocks, games*) on mailing labels. Each day when he finishes playing, he can sort his toys into categories and put them where they belong. 🦋

## Mixing colors

What's special about *primary colors*—red, yellow, and blue? Show your youngster that all other colors can be made from combinations of those three:

● Get three clear glasses. Let her measure 1 cup water per glass and add blue food coloring to one, red to another, and yellow to the third.

Using a medicine dropper or straw, she can combine drops of red and blue water or blue and yellow water into empty glasses. What new colors does she make?

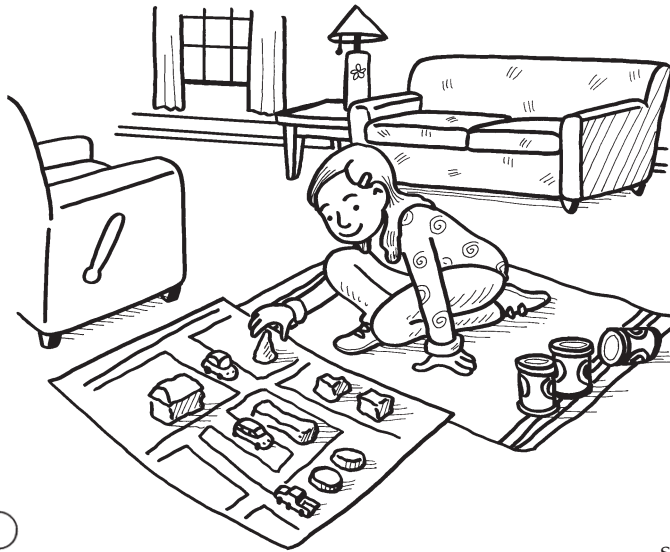
● Have your child press one palm into red finger paint and the other palm into yellow finger paint and make separate handprints on paper. Then, ask her to rub her hands together and create new handprints—they'll be orange! She can wash her hands and try a different combination. 🦋




# All about solid shapes

Your child's world is made up of solid shapes. Encourage her to play with spheres, cones, and cubes—and she'll learn from an early age that geometry is great! Try these activities.

**Make a shape village.** Let your youngster mold solid shapes like



pyramids, rectangular prisms, and cylinders out of clay. She can pretend the solids are houses, schools, stores, or barns. Then, she could arrange them to create a little town and add toy people and vehicles.

**Match the shapes.** Fill a pillowcase with objects of various shapes. Have your child close her eyes, reach in, and try to find two items that are the same shape. For instance, she might say that an orange and a grapefruit are both spheres, and a candle and a soup can are both cylinders. 

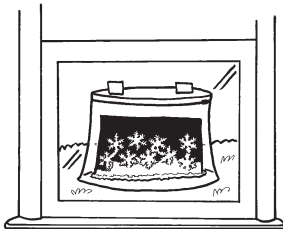


## SCIENCE LAB The wonder of crystals


Where does water go on a warm day? Let your youngster see the sparkling answer.

**You'll need:** black construction paper, scissors, 1-quart freezer bag, salt, water, measuring cup and spoon, tape

**Here's how:** Help your child cut a square of paper and place it inside a zipper bag. Have him stir 2 tsp. salt into 1 cup water and pour half on each side of the paper. Leaving the bag open, he can tape it to a sunny window.



**What happens?** After a few days, the water will be gone, and crystals will appear on the paper.


**Why?** When water is heated by the sun, it evaporates (turns into a gas and rises). But each grain of salt is a tiny crystal that doesn't evaporate, so it stays in the bag. After the water evaporates, your youngster will be able to see the crystals that are left behind on the black paper. 

## MATH CORNER Fairy tale math

Seven dwarves. Three bears. A hundred years of sleep. Fairy tales are full of numbers. Use your child's favorite stories to help him practice math.

Start by reading a fairy tale aloud. Then, make up math problems based on the story. For instance, after reading "The Three Little Pigs," ask him how many characters there were ( $3 \text{ pigs} + 1 \text{ wolf} = 4 \text{ characters}$ ).

Encourage your youngster to create problems, too. He might ask how many gumdrops were left on the house in "Hansel and Gretel." *Example:* "There were 28 gumdrops. Hansel ate 12. How many are left?" (There are 16, because  $28 - 12 = 16$ .)

Reading fairy tales and finding math in them is a win-win. Your child will build reading and math skills at the same time! 




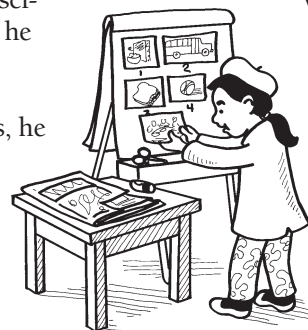
## PARENT TO PARENT First things first

At our parent-teacher conference, the teacher said my daughter Kate was having trouble putting things in order. Mr. Cooper explained that sequencing skills are important for math, science, reading, and writing. So he recommended ways we could work on this at home.

Since Kate likes art projects, he suggested that we have her illustrate events from her day in order. She cut out pictures of things like a cereal box, a school bus, a classroom, and

a baseball game. Then, she glued the photos in order on poster board. I had her use her poster to tell me the story of her day from morning to night.

Her teacher also said to look for times when Kate could count things in order. When we're in an elevator, I have her say the floor numbers we pass. And at home, she counts steps as she walks up or down. She's enjoying the activities—and I think she's getting the hang of it. 



### OUR PURPOSE

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

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