

Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

September 2020

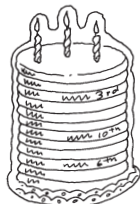
Spring-Ford Area School District

TOOLS & TIDBITS

Family birthdays

This birthday chart lets your child practice

writing numbers—and will remind him to wish relatives and friends a happy birthday! Help him cut out a big paper cake and draw lines to divide it into 12 layers. He can label each layer with a month, then write names and birthdays (“Grandpa, April 3”) on the correct layers.



Plant parts we eat

Does your youngster know that when she eats carrots, she’s eating plant roots? Together, identify the plant parts you eat. *Examples:* seeds (peas, corn), stems (asparagus, celery), leaves (lettuce, spinach), flowers (broccoli, cauliflower). If you’re not sure which plant part a veggie is, help her look it up in a book or online.

Book picks

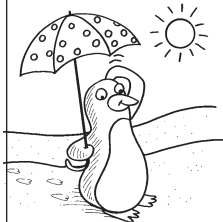
▣ The rhyming riddles in *Math for All Seasons* (Greg Tang) will inspire your child to experiment with different ways to solve math problems.

▣ *The Backyard Bug Book for Kids* (Lauren Davidson) introduces your youngster to insects like caterpillars and crickets with interesting facts and at-home activities.

Just for fun

Q: What do you call a penguin in the desert?

A: Lost!



Number sense in daily routines

“I have 5 buttons on my shirt.”
“There are 8 apples in the fruit bowl.” Strengthen your child’s number sense with these ideas that fit easily into everyday life.

Getting dressed

Your youngster’s clothing has lots of things to count, from buttons to pockets to designs. Perhaps she’s wearing her favorite shirt with stars on it. Ask her how many stars there are. As she counts, she should touch each star and say a number. This helps her work on one-to-one correspondence (matching one number to one object).



Washing hands

Show your child that math and good hygiene go hand in hand—literally! Have her write each handwashing step on a separate sticky note and number the notes. (“1. Wet. 2. Lather. 3. Scrub 20 seconds. 4. Rinse. 5. Dry.”) She can put the steps in order on the bathroom wall. For more practice with numbers,

encourage her to count slowly to 20 while she scrubs.

Doing chores

Invite your youngster to help you around the house and count by 2s, 5s, or 10s at the same time. When you fold laundry, she could count socks by 2s, since there are 2 socks per pair (“2, 4, 6, 8”). Or when she puts away small toys, she might pick up 5 blocks or 5 cars at a time and count by 5s. 🐛

Be a cloud collector!

Your youngster can observe clouds every day—rain or shine—and learn to describe weather patterns with this craft project.

Watch the sky together, and let your child model clouds he sees by gluing cotton balls on paper. Are the clouds big and fluffy or thin and wispy? Encourage him to write under each cloud what color it was (white, gray, black) and what kind of weather he observed (sunny, cloudy, rainy).

Repeat this activity in different types of weather, and let him staple the pages together into a book. He could make a cover and title the book “My Cloud Collection.” He’ll discover that clouds can help him predict the weather. (“I know big, dark clouds mean a storm is coming!”) 🐛



Measurement challenges

Just about anything can become a math tool when your child uses it to practice measuring. As he learns to compare sizes, try these activities.

Crayon contest. Give each player a pile of used crayons. For each round, draw a crayon from your pile, and line it up evenly alongside other players' crayons. The person with the longest crayon keeps the crayons. (If all the lengths are equal, "draw"



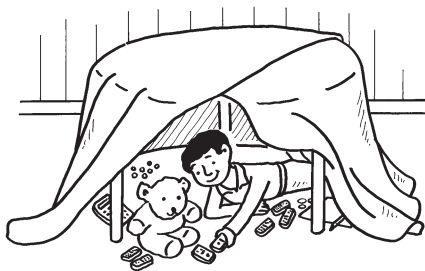
again.) Play until someone runs out of crayons. Count your crayons, and the person with the most wins. Repeat the game—this time, the shortest crayon wins.

Length hunt. Let your youngster choose a random object (say, a flashlight). Now have him find two objects that he thinks are longer (umbrella, baseball bat) and two that he thinks are shorter (bookmark, TV remote). Ask him to line up all the items from shortest to longest. If his predictions were correct, the flashlight will fall right in the middle. Now he can pick an object and let you search for longer and shorter items.

MATH CORNER Make a math fort

Four chairs + 1 blanket = 1 math fort that will become your youngster's new favorite place to hang out—and do math.

First, let your child drape a blanket over the chairs (or a table). Have him stock his tent with all kinds of things to play with math. He might gather coins or pretend money, dice, dominoes, a ruler, a calculator, a pencil, paper, and small objects to count with like marbles or erasers.



Now suggest that he invite his stuffed animals inside and "teach" them what he's learning. He might use erasers to show patterns (red, blue, red, blue) or to practice making equal groups. *Example:* "There are 5 of us, and I have 10 marbles. How many marbles will we each get?" (Answer: 2.)

OUR PURPOSE

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

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www.rfeonline.com
ISSN 1942-910X

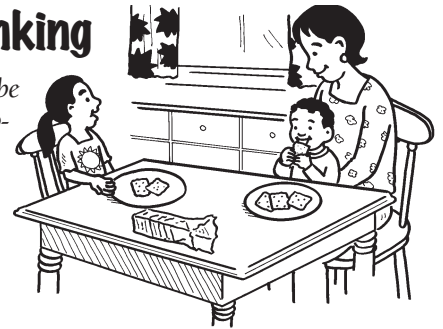
Q & A

Explain your math thinking

Q: My daughter's teacher said students will be asked to explain their answers to math problems this year. Why is this, and how can I help her?

A: The teacher wants to know what's going on inside your child's head when she does math. Hearing or seeing her explanation tells him whether she understands how she got the answer. Plus, talking through math thinking (or writing about or drawing it) will often help your youngster correct her mistakes.

If your daughter mentions numbers or amounts during conversations, try asking a question that begins with "How do you know..." You might say, "How do you know your brother has more crackers than you?" or "Explain why that's 26 cents." She'll get used to explaining her thinking—and become a better mathematician in the process!



SCIENCE LAB

Launch a balloon-rocket

Your youngster will have a blast with this demonstration that teaches her about the moving force of air.

You'll need: yarn, scissors, straw, two chairs, uninflated balloon, masking tape

Here's how: Help your child cut a 6-foot piece of yarn and thread it through a straw. Tie the ends of the yarn to the backs of two chairs and set them apart so the yarn is pulled tight. Blow up the balloon,

and have her pinch the opening while you tape the straw along one side of the balloon. Then, she can slide the balloon to one end of the yarn and let go.

What happens? The balloon-rocket races along the yarn, and the balloon deflates.

Why? You blew air into the balloon, causing pressure to build inside. As the air escaped, the pressure was released—pushing the air backward and the balloon-rocket forward.

