Beginning Edition

Math+Science Connection

Building excitement and success for young children

November 2009

Mansfield Independent School District
Elementary Math and Science

TOOLS & TIDBITS

Act out songs

Use fingers or stuffed animals to act out number songs. For example, your youngster could count rubber ducks "running away" as you chant "Five Little Ducks" together. Acting out the song will help your child see—and understand—the math. *Note:* Find number songs in a library book or online (*www.preschoolrainbow.org/preschool-rhymes.htm*).

Hear the food?

Show your youngster how her sense of hearing helps her identify foods. Have her close her eyes or put on a blindfold. Make sounds with food (crack an egg, toast bread), and see if she can name the items. Explain that hearing lets us recognize familiar sounds and communicate with others.

Book picks

A shirt with three sleeves? A dog with five legs? A calendar with only odd dates? *One Odd Day* (Doris Fisher) will have your child laughing out loud as he learns about odd and even numbers.

Discover the links between plants and animals in *Here Is the Wetland* (Madeleine Dunphy). Your youngster will delight in the beautiful pictures of birds, marshes, muskrats, and more.

Worth quoting

"Millions saw the apple fall, but Newton asked why." *Bernard Baruch*

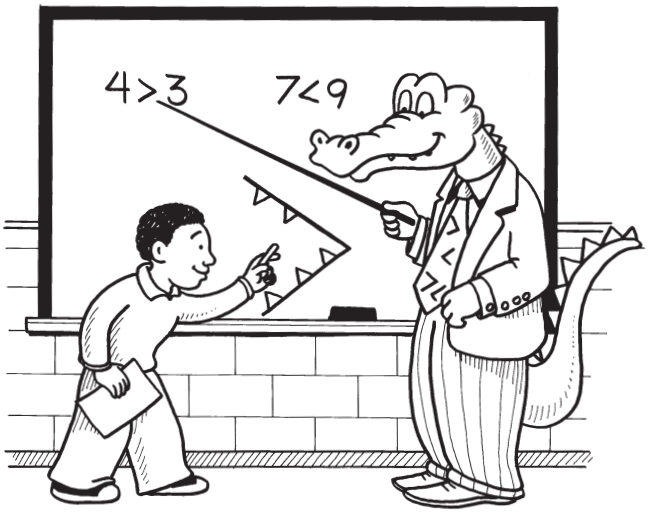
Just for fun

David: How are you doing in math?

Jack: I've learned how to add up the zeroes, but the rest of the numbers are still giving me trouble.

More or less

Comparing numbers helps your child understand what they mean and how they relate to each other. Boost his number sense with these ideas for exploring *more than* and *less than*.



Group comparison

Put out separate piles of objects (toy people, crayons). Have your youngster count each group and tell you which one has more—and by how many. *Example:* One pile has six crayons. The other has four crayons. He can point to the larger one and say, "This pile has *two more* crayons than the other pile."

Hungry alligator

Help your child draw the *more than* (>) and *less than* (<) signs. Have him add teeth to the "mouth" part—now they're alligators that want to "eat" the bigger number! That's why the open part faces the higher number. Write pairs of numbers, and ask him to add the correct sign ($4 > 3$, $7 < 9$). He can read the number sentences out loud: "Four is *more than* three. Seven is *less than* nine."

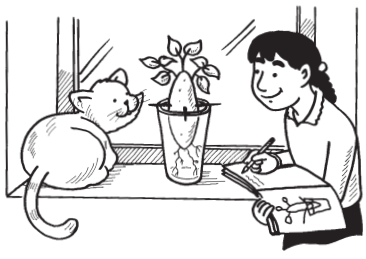
Highs, lows

Play a game of High Card. Deal a deck of cards (face cards removed). Players turn over one card at a time. Whoever has the highest number takes the cards and puts them aside. (If players turn over the same number, they should play another card.) Play until one person has all the cards. *Variation:* Play Low Card—the player with the lowest card takes the hand.

Watch it grow

Your youngster can learn about plant growth with her own potato-in-a-jar.

Help her place four toothpicks around the middle of a sweet potato, fill a jar with water, and add the potato. The toothpicks should rest on the mouth of the jar to keep the top of the potato above water. Have her put the jar in a sunny window. In a few days, she'll see roots growing from the bottom. Within a week, shoots will come out of the top.

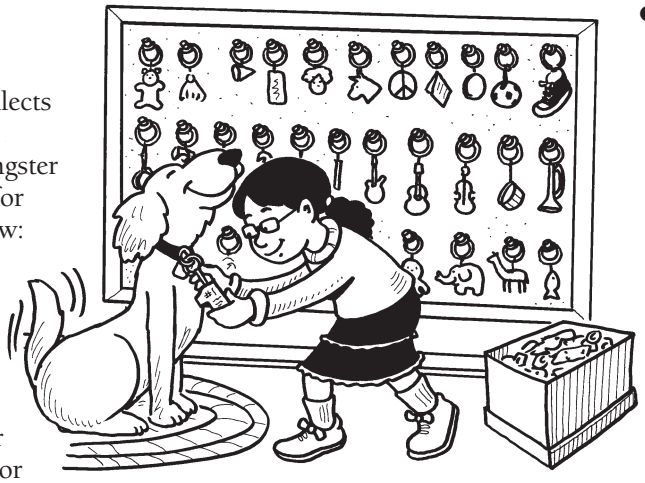


Encourage your child to keep a journal to document what she sees. Have her date each entry and draw pictures of her plant. Help her label the parts and write sentences to describe the changes.

My collection

Maggie collects key chains. Charlotte collects stickers. And Tony collects pinecones.

Collections are a great way for your youngster to explore an interest. They're also perfect for building math and science skills. Here's how:



● How many items does your child have in her collection? Have her count the total. Then, ask her to sort them into smaller groups and count each set. For example, she might classify her toy horses by color (black, brown, white) or divide her postcards by whether they're from a beach or a city.

● Encourage your youngster to find new ways to arrange her collection as she plays. She could line up feathers from smallest to largest or stack pennies from oldest to newest. This will let her practice putting objects in order.

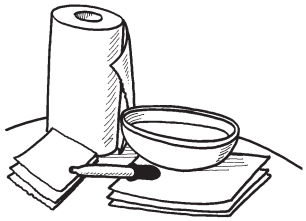
● Figuring out how to store a collection will help your child learn about volume—the amount of space that something occupies. For example, she might put small items (beads, seashells) in clean egg cartons. Trading cards can go into a recipe or an index card box. A collection of dolls could go on shelves.

SCIENCE LAB Drop by drop

What kind of paper is most absorbent? Your child can conduct this experiment to find out.

You'll need: paper towel, tissue paper, newspaper, bowl of water, eyedropper, small notebook, pencil

Here's how: Have two family members or friends hold the first piece of paper by its four corners over a sink. Let your youngster use the eyedropper to squeeze water onto the paper until water drips from the bottom. Ask him to count the number of drops and record the number in the notebook. Let him repeat the experiment with each kind of paper.



What happens? Eventually, water will begin dripping from each type of paper. The one that held the most drops of water is the most absorbent.

Why? Water is absorbed into tiny air pockets in the paper. Once all the pockets are filled, extra water will leak out.

Q & A Numbers in the news

Q: *I already use the newspaper to help my child learn words. How can I use it to help him practice math?*

A: Newspapers are great for building math skills. First, see how many numbers your youngster can find on the front page. He might notice the date, volume number, or price. Next, show him the weather map. Can he find the highest temperature? The lowest?

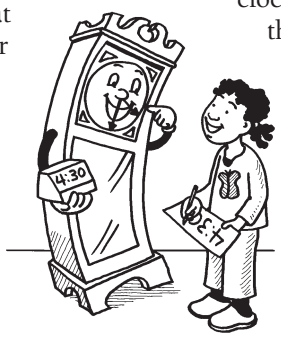
Have him make a number book using ads from the newspaper. He can cut out pictures and glue them onto construction paper in sets. For example, he might choose a picture of one bracelet and write the number 1 on the first sheet. On the second sheet, he could put two pictures of shirts and the number 2, and on the third, three pictures of chairs and the number 3.

Help him staple the book together. Then, he can "read" it to you.

MATH CORNER Telling time

Learning to tell time is a big step for a little one. Help your child practice with these tips.

Show and tell. Show her a clock with hands (analog). Explain that the little hand tells the hour and the big hand tells the minutes. Then, take out a clock with numbers only (digital). Point out that the number before the colon (:) is the hour, and the number after the colon shows the minutes.



Match the time. Make a game to practice analog and digital times. Help your child write a different digital time (9:00, 3:30) on six index cards and draw matching clock faces on six more cards. Put the cards facedown in rows. Take turns turning two cards over and trying to match a clock face with the correct digital time. If the cards match, say the time out loud and keep the cards. If not, turn them back over. Keep playing until all the matches are made.

OUR PURPOSE

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

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