

# Math+Science Connection

Beginning Edition

Building excitement and success for young children

April 2009

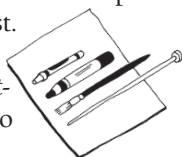
Dekalb County School District  
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## TOOLS & TIDBITS

### Shortest to longest

Gather household objects that are long and narrow. *Examples:* crayon, marker, pencil, ruler, paintbrush, knitting needle. Ask your child to line them up from shortest to longest. Then, have her use words like *shorter, shortest, longer, and longest* to compare the items.



### Build a dam

At a park with a small stream, help your youngster build a dam out of sticks, rocks, and leaves. Let him experiment to see which design holds back the most water. No stream nearby? Turn on the hose outside or pour a few cups of water into a sandbox, and have him use small toys to make a dam.

### Web picks

Let your child explore the world of bees up close—without getting stung! At <http://photo.bees.net/kids>, she can read about a bee's life, see the parts of a bee's body, learn amazing facts, and play games.



Use the computer (at home or at the library) to sharpen your youngster's addition and subtraction skills. He can create and print his own flashcards or practice online at [www.aplusmath.com](http://www.aplusmath.com).

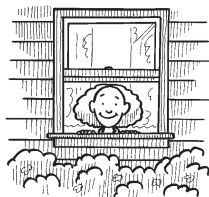
### Worth quoting

"Trees are poems that earth writes upon the sky." *Kahlil Gibran*

## Just for fun

**Q:** What's the weather forecast for tonight?

**A:** Dark.



## One-to-one

Did you know that your child can learn a crucial math skill as he moves a game piece around a board game?

It's called "one-to-one correspondence"—and it's the way we match an object to a number to count. For example, as your youngster counts, he would say "one" for the first object, "two" for the second object, and so on. Here are activities to help him practice.

### Read a book

Use storytime to read books that teach one-to-one. You might try *Mouse Count* by Ellen Stoll Walsh or *Ten Black Dots* by Donald Crews. Ask your child to point to each object as the characters in the stories are counting.

### Make a picture

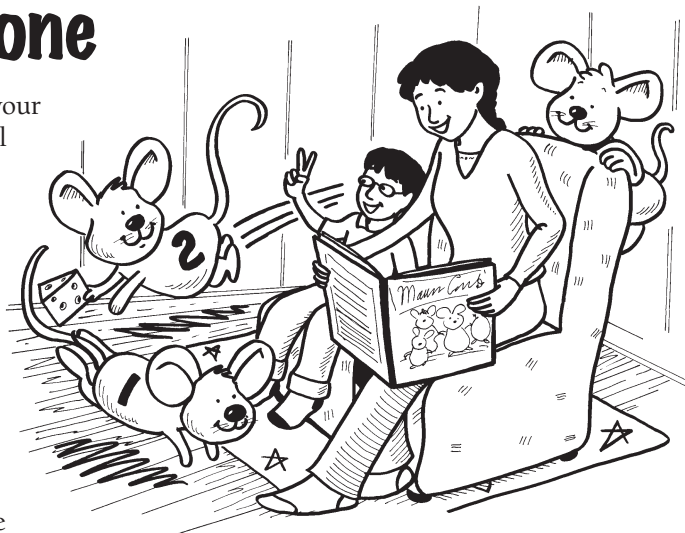
Use a pencil to divide a sheet of paper into 10 boxes. Label the boxes 1–10 by drawing sets of dots (1 dot in the first box, 2 dots in the second box, and so on). Then, let your youngster glue a small item (bead, dried bean) onto each dot. Listen as he reads the numbers when he finishes his picture.

### Clap along

Have your child hop across the yard and clap his hands once for each hop. Or he can clap along with "Mary Had a Little Lamb," clapping for each syllable. He'll learn to associate one sound with one activity.

### Count aloud

When you play board games, encourage your youngster to say the numbers



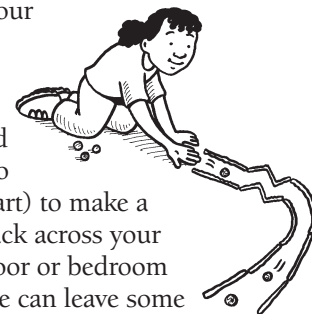
each time he moves his piece from one box to the next. Or ask him to set the table for dinner and count out each plate, each fork, and each cup.

## Marble tracks

Take a bucket of marbles, add pipe cleaners and tape, and you'll have a fun homemade physics lesson.

Have your youngster lay pipe cleaners end to end (about two inches apart) to make a marble track across your kitchen floor or bedroom carpet. She can leave some pipe cleaners straight and bend others into curves or zigzags. Help her tape them down to keep the "track" in place.

Then, take turns rolling marbles through the track. Does a curve slow the movement? Do marbles go faster on carpet or tile? In building, rebuilding, and playing with her marble track, your child will learn about motion and friction.



# Let it rain!

Why does it rain? April is the perfect month for your youngster to find out!

Start by letting her make her own rain. Have her pour a little water into a small zipper bag, seal the bag, and tape it to a sunny window. As the sun heats the water, it will evaporate and condense into little drops. When they drip down, she'll see "rain" inside the bag.

Explain that in nature, the sun heats water in rivers, lakes, and oceans. The water evaporates and condenses into



droplets that become clouds. When the clouds get too full, it rains.

Now let your child explore *real* rain. If rain is forecast, she can put a clean, clear jar outside. After the rain, help her use a ruler to measure the rainfall.

Would she like to see a raindrop? Have her fill a shoebox lid with flour and pat it down flat.

During a light rainfall, she can hold the lid out to catch drops. Back inside, help her pour the flour into a colander set over a bowl and shake the colander gently. The lumps left behind show the size of the raindrops.

## MATH CORNER In the cards

Card games are a great family activity—and a great way to build math skills. Here are two to try. *Note:* Remove the face cards. Aces = 1.

**It's a match.** Deal four cards to each player. Turn four cards faceup in the middle, and stack the rest facedown. On each turn, a player tries to match a number in her hand. She can take a faceup card—and replace it with one from the deck—or pick one from the deck. If she has a match, she sets the pair aside. The first player to clear her hand wins.



**High number.** Place the deck facedown. Each player draws two cards, adds the two numbers together, and calls out the sum. Whoever has the highest total keeps all the cards from that round. Continue playing until there are no more cards. The person with the most cards wins.

### OUR PURPOSE

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

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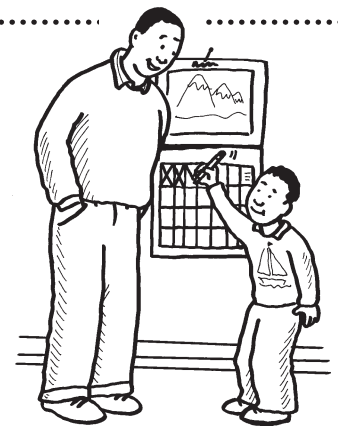
## Q & A Calendar talk

**Q:** My son has a hard time understanding the passage of time. When I say we're doing something in three days, he constantly asks me if it's time yet. How can I help?

**A:** You can start with this simple solution. Get your child a calendar, or help him make one with construction paper or on the computer. Hang the calendar on his bedroom wall, and refer to it regularly.

For example, if he has a friend coming over Thursday, suggest that he write the child's name on that day in the calendar. Have your youngster count the boxes until Thursday (three) and discuss how many times he will wake up (three), go to school (three), and go to sleep (three) before Timmy comes over. Do the same thing each day until Thursday.

Also, at bedtime each night, you might have your youngster make an "X" in the day's calendar square. Then he'll understand that when he gets up in the morning, it will be a new day!



## SCIENCE LAB Buried trash

Give your child a firsthand look at what happens to trash in a landfill—and he'll understand the benefits of recycling.

*You'll need:* deep pan, small shovel, soil, variety of household garbage (examples: tin foil, newspaper, foam cup, can, plastic bag, banana peel, lettuce leaf), notebook

*Here's how:* Have your youngster fill the pan with soil and bury the garbage. Let him set the pan outside. Then, help him dig up the trash once a

week for several months. Each time, he should write and draw what he sees (newspaper falling apart, cup is the same) in the notebook.

*What happens?* Some items will break apart. Others will not change.

*Why?* Some materials (food, paper) are *biodegradable*—they will break down and disappear into the environment. Items that aren't biodegradable (plastic bottles, aluminum cans) won't break down.

