Beginning Edition

Math+Science Connection

Building Excitement and Success for Young Children

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Harmony Elementary School
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TOOLS & TIDBITS

Odd or even?

Here's an easy way for your child to distinguish between odd and even. Say an even number (perhaps 6). Have her count checkers into stacks of 2. Every checker has a "partner," so the number is even. Now give her an odd number, such as 7. She'll make 3 stacks of 2, with 1 checker left over. The extra, "lonely" checker means the number is odd.

Our "wonder wall"

Encourage your youngster to think like a scientist on a regular basis by creating a "wonder wall." He could hang up a poster board where family members may post science questions ("Do oceans freeze in winter?") or photos (a close-up of a spider web). Others try to find answers to the questions or write observations about the pictures.

Web picks

Your child can blast slime on a Minus Mission, count money in a Dolphin Dash race, and more at *mathplayground.com*.

At *journeynorth.org/KidsJNAbout.html*, your youngster will learn about and track migrating animals like monarch butterflies and bald eagles. There's even a link for reporting her own sightings.

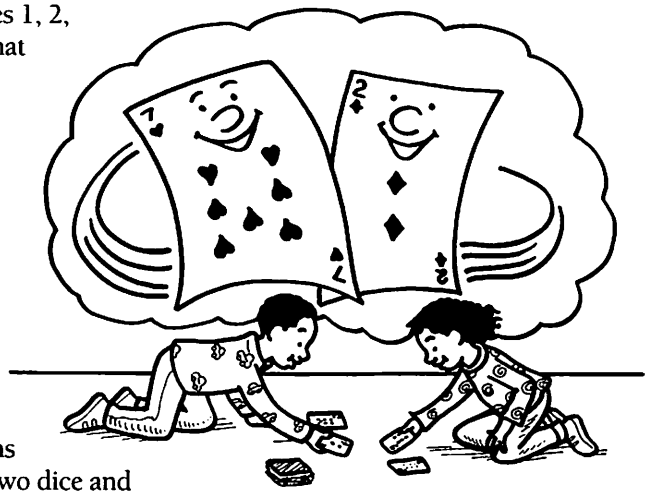
Just for fun

Q: How many times can you subtract 6 from 30?

A: Once. After that, it's no longer 30.

Numbers, take your places!

If your youngster arranges 1, 2, and 3 in different orders, what does he get? Different numbers, of course: 123, 132, 213, 231, 312, and 321! Try these activities that show him how a digit's place determines its value.



Crafty caterpillars

These cute "caterpillars" let your child see tens and ones. Get six craft sticks, and have him glue 10 small pom-poms or dry beans on each. Take turns rolling two dice and using the caterpillars (tens) and loose pom-poms or beans (ones) to make the number rolled. For 6 and 5, he could show 65 (6 caterpillars, 5 pom-poms) or 56 (5 caterpillars, 6 pom-poms).

Digit scramble

Stack a deck of cards facedown (aces, 10s, and face cards removed). Each player draws two cards and turns over one at a time. Decide whether to put each card in the tens or ones place. Then, say your number ("7 tens and 2 ones—72"). Whoever forms the biggest number takes all the cards. When you've used the whole deck, the player with the most cards wins.

Secret number

Help your youngster divide his paper into columns labeled "Hundreds," "Tens," and "Ones." Secretly think of a three-digit number. He should guess each digit *and* its place value ("Is the digit in the hundreds place worth 500?"), and write each correct guess in its column. When he gets your number, he thinks of one for you.

A texture hunt

With this treasure hunt, your child will rely on her sense of touch to describe properties of objects.

1. Together, make a list of texture words. *Examples: rough, smooth, squishy, prickly, hard, soft.*

2. Walk around indoors and outdoors. How many objects can your youngster collect that match each description? She might find a *rough* key, a *smooth* bouncy ball, *squishy* play dough, a *prickly* hairbrush, and a *hard* wooden block.

3. Now let your child display her finds. She could label each item on a separate index card ("A *soft* cotton ball").

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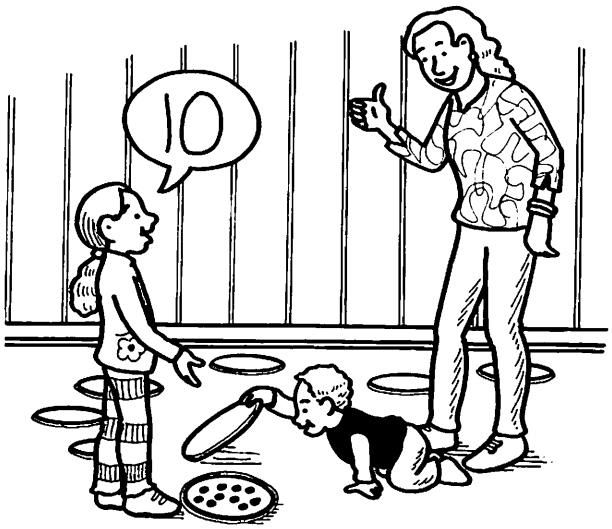
Estimation makes sense

Quick! How many geese are flying overhead? Your youngster can make a reasonable estimate by combining what she sees with what she knows about numbers. Here's how.

Supermarket estimates. While you shop, encourage your child to estimate everything from fruits and vegetables to brands of cereal. *Example:*



"There are about 30 bunches of bananas." Ask how she got her estimate. She might say there are 3 rows on the display and about 10 bunches in each row, and she counted by 10s to get 30. Now have her look at the bananas and count to check her estimate.

Polka-dotted plates. Help your youngster learn from previous estimates with this idea. Draw groups of 10–50 colored dots on separate paper plates, and turn the plates dot-side down. Let your child flip over one plate at a time and quickly say how many dots she thinks there are. Then, she could count to see how accurate her estimate was. As she turns over more plates, her estimates will get closer to the mark.

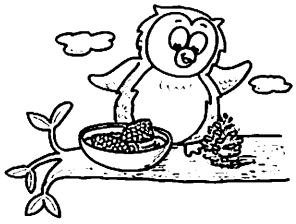
SCIENCE LAB

Pinecones: Super seed protectors

This experiment reveals the amazing way pinecones protect the seeds that grow inside them.

You'll need: *two dry pinecones, bowl, measuring cup, water, timer*

Here's how: Have your child place one pinecone in the bowl and one on the counter. Now he should add 2 cups of water to the bowl and set a timer for 30 minutes. When the timer goes off, he can remove the wet pinecone from the bowl and compare it with the dry pinecone on the counter.



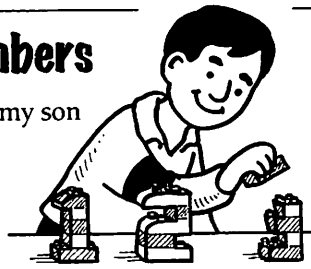
What happens? The dry pinecone is unchanged, but the wet pinecone closes up.

Why? Pinecones protect the seeds inside them. One way they do this is by closing up in wet weather. When it's dry, they open and release their seeds so new pine trees can grow.

Tip: Take a walk after it rains or snows, and let your youngster observe the closed-up pinecones on the ground.

PARENT TO PARENT

I can write my numbers



At dinner one night, I noticed my son Liam curling his spaghetti into numbers. I asked where in the world he got the idea to do that. He said his class is learning to write numbers. They form them with different materials, and the noodles reminded him of the yarn they used that day.

Now Liam and I look for more ways to practice writing numbers at home. He loves building numbers with Legos. He also "wrote" numbers with a glue stick and sprinkled on glitter. And after his bath the other night, I walked into the bathroom to find the numbers 0–9 written in fog on the bathroom mirror.

This weekend, there's a chance of snow, and Liam has his fingers crossed that he'll get to write in the snow with a stick.

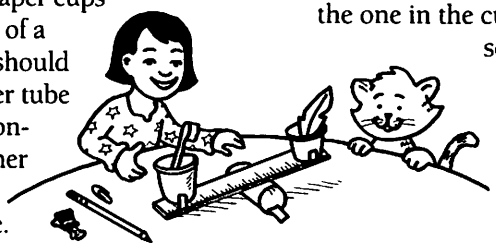
MATH CORNER

Comparing weights

"My paperweight is heavier than my gymnastics medal!" This homemade balance scale lets your child explore measurement by comparing weights.

Make a scale

Have your youngster tape two small paper cups to opposite ends of a ruler. Next, she should tape a toilet paper tube to a table (horizontally). Now ask her to balance the ruler on the tube.



Weigh objects

What does your child want to weigh? Suggest that she gather small items like a toothbrush, a leaf, and a pencil. She can choose two at a time, predict which is heavier, and put one in each cup to find out. The object in the cup that drops down toward the table is heavier than the one in the cup that goes up. If the scale balances, their weights are equal.

Idea: As she tests the items, she could line them up from lightest to heaviest.

OUR PURPOSE

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

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