

Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

October 2015

District School Board of Pasco County
Title I



TOOLS & TIDBITS

Eat your shapes

Put a little geometry into snack time. Offer foods resembling different 3-D shapes, and ask your youngster to identify them. For example, try spheres (cherry tomatoes), cylinders (marshmallows), cones (ice cream cones), or cubes (cheese cubes). What other foods can he think of for those shapes?

Recycle and reuse

Together, think about ways to reduce your family's impact on the environment. Have your child make signs saying "Landfill" for your trash cans and "Recycle" for your recycling bins to remind everyone where the items will wind up. Then, brainstorm ideas for reusing objects rather than throwing them away. For fun examples, read *Joseph Had a Little Overcoat* (Simms Taback) to her.



Web picks

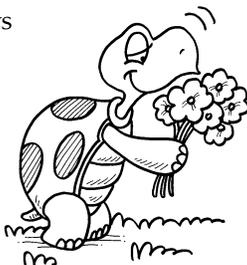
☐ Jetski Addition, Rhino Rink, and Wheely are just a few of the fun games at mathplayground.com. Sorted by topic.

☐ From folklore about rainsticks to facts about fossil fuels, climatekids.nasa.gov covers everything climate- and earth-related.

Just for fun

Q: What always smells but has no odor?

A: A nose!



Learning with pumpkins

Q: It's round, it's orange, and you can use it to explore math and science. What is it?

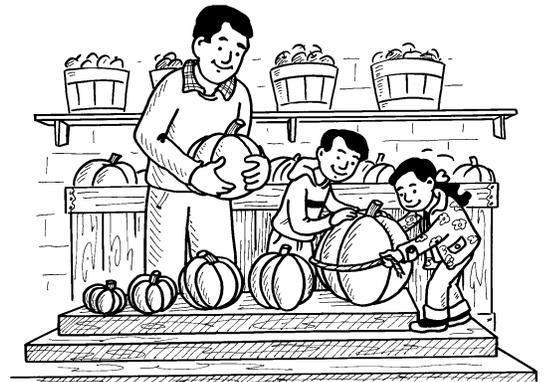
A: A pumpkin!

Here are activities to enjoy with your child this pumpkin season.

● **Estimate and count.** Ask her to estimate the number of pumpkins in one section of a pumpkin display. Then, she can count them. How close did she come?

● **Compare size.** Have your youngster line up five pumpkins from smallest to biggest. Or help her use yarn to measure the *circumference* (distance around) her wrist, her ankle, her waist—and a pumpkin. For each one, wrap the yarn once and cut to fit. She could lay the yarn pieces side by side in order.

● **Weigh it.** Your child can stand on a bathroom scale while holding a pumpkin, then record the weight. Next, weigh her without the pumpkin. Help her subtract the difference—that's how much her pumpkin weighs.



● **See what's inside.** Let her draw a picture of a pumpkin and another one of what she thinks it looks like inside. Now, cut off the top so she can peer in. How is it the same as or different from her picture?

● **Compare traits.** Help your youngster draw two overlapping circles labeled "pumpkin" and "apple." She could write shared traits (round, seeds inside) in the overlapping part and individual traits (orange and bumpy, red and smooth) in the separate parts. 

Who's been in my backyard?

No matter where you live, critters also live in your neighborhood. Encourage your little scientist to be on their trail with these steps.

Predict

Ask what animals and insects he thinks live nearby. Help him list the names in a small notebook.

Look for clues

Go outside together, and take along a magnifying glass, colored pencils, and his notebook. Have your child examine plants, trees, and the ground. He might find clues like chewed leaves, small holes in the ground, or an ant hill.

Record

Suggest that your youngster sketch pictures of his findings and label them. Let him check back regularly to look for changes. He may even catch the animals and insects in action! 



Add it all together

The more your youngster uses addition, the better he'll get at it. Suggest these two clever ideas.

Vowels + consonants

On a sheet of paper, have your child write several first names (his own, yours, his best friend's) and circle the vowels. Let him count the vowels and consonants in each name and make an addition sentence telling the total number of letters. *Example:* Brandon would be



$2 + 5 = 7$. Challenge him to use different names to make as many math facts as possible.

1 + 1 + 1

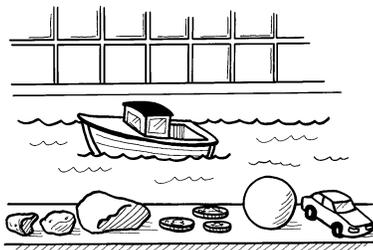
With this activity, your youngster will practice adding three numbers together. Ask him to draw 3 boxes. Next, have him roll a die 3 times and fill in each box with a number rolled

(2, 6, 4). He can add any 2 numbers and write that equation ($6 + 4 = 10$). Then, he should add the total to the third number ($10 + 2$) and write the sum (12). *Idea:* For more of a challenge, roll 2 dice each time.

SCIENCE LAB

Floating along—or not

Sinking a toy boat is almost as much fun as floating it. Let your child explore sink-and-float concepts with this experiment.



You'll need: toy boat, bathtub or sink, water, small objects of various weights (buttons, bouncy balls, coins, metal toy cars, marbles, pebbles, rocks)

Here's how: Have your youngster put a toy boat in a bathtub or sink filled with water and observe how it floats. Next, she'll try to sink it. Have her weigh the boat down with the various objects, each time predicting if the item or items will make the boat sink.

What happens? When the load gets too heavy, the boat will sink.

Why? If the weight of an object in water is less than the weight of the water displaced, the object floats—this is called *buoyancy*. If not, it sinks.



MATH CORNER

Skip, skip, skip (count) to 100

Play this fun skip-counting game at a birthday party, a family gathering, or just with family and friends.

1. Start by having everyone stand in a circle. The idea is to move around the circle, counting by 10s. Let the youngest player (or the birthday girl) go first. She says "10," the next person says, "20," and so on around and around the circle. The person who has to say 100 sits down.

2. The next person in the circle starts counting over again at 10, and counting continues with all the remaining players.

3. Keep playing until only one person is left standing—she's the winner.

Variations: Start at a different number, such as 30, and count by 10s to 100. Count by 5s (start at 5 and continue to 100). Skip count backward. Or count by 100s, and sit down if you're the one to say 1,000.



PARENT TO PARENT

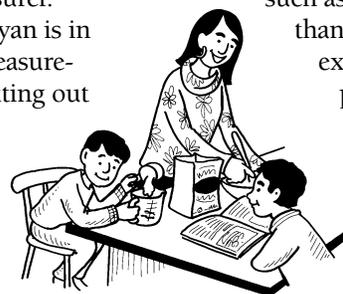
Measure while we cook

My son Ryan loves to cook and bake with me. I realized this was a good opportunity for him to practice measuring, so I named him "Chief Measurer."

As Chief Measurer, Ryan is in charge of reading the measurements in recipes and getting out the measuring cups and spoons that he needs. Then, he gets to measure the ingredients and add them to the dish.

I was telling my sister about this, and since she's a first-grade teacher, she had a few good suggestions. She said I should ask Ryan to compare amounts in recipes, such as whether $\frac{1}{4}$ cup is more or less than $\frac{1}{2}$ cup. She also said he could explore the number of cups in a pint or pints in a quart.

Ryan is proud to have his own job in the kitchen. And it's not only helping him with math—I'm also getting help at dinnertime!



OUR PURPOSE

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

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