

# Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

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South Seneca Central School  
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## TOOLS & TIDBITS

### The time is now

Give your youngster extra practice telling time—in all different ways. He can tell it's early morning because he sees the sunrise. Or he might know the time by his activity—perhaps it's noon when he's eating lunch or 4:30 when he's at karate. Of course, a clock is handy for telling time, too!

### Teddy needs some help

What would your child do if her teddy bear hurt its knee? Challenge



her to engineer a knee brace for her stuffed animal. She could use rubber bands to attach a soft cloth to the knee, adding

a flexible straw on each side to bend with the knee. What other household materials might she try?

### Book picks

▣ *One Grain of Rice: A Mathematical Folktale* (Demi) tells the charming story of feeding a village by doubling the grains of rice it gets each day.

▣ With vibrant photos and simple words, *I Use Science Tools* (Kelli Hicks) introduces your youngster to equipment for exploring science.

## Just for fun



**Q:** What goes up but never comes down?

**A:** Your age!

## Math all summer long

Counting, reasoning, and recognizing numbers aren't just for the classroom. Keep your youngster's math learning on track through the summer with these fun ideas.

### Follow the leader

Suggest that your child write the numbers 1–40 outside with sidewalk chalk. Each player picks a number to stand on.

The "leader" tells everyone how far to hop so they can "count on"—or count forward by a given number. If she says, "Hop forward 5 numbers," the player on 16 would hop and count, "17, 18, 19, 20, 21." Take turns being the leader.

### Open a lemonade stand

Let your little entrepreneur practice measuring ingredients and counting coins by setting up her own lemonade stand. She can shop for supplies with you, design a cute sign, and mix up a batch of lemonade. Before opening her stand, have her identify and count coins to rehearse giving change. If a cup of lemonade costs



25 cents and a customer gives her \$1.00, what change would she make? (3 quarters or 2 quarters, 2 dimes, and 1 nickel, for example.)

### Toss water balloons

Splat! On a hot day, help your youngster fill 20 water balloons and number them (1–20) with a permanent marker. Place two hula hoops on the grass, labeling one "Odd" and the other "Even." Take turns throwing balloons, in order, into the matching circle (1 goes in "Odd," 2 in "Even," and so on). *Variation:* See if she can pick up balloons in random order and still know which target to aim for. 🦋

## How things change

Your child can observe for himself how things in the environment change slowly or quickly—starting in your own neighborhood.

What might he see that appears different from one day or week to the next? He could notice how flowers bloom and die or that seeds planted in the garden grow into vegetables. If he touches dirt, he'll find it's wet or dry, depending on whether it has rained recently.

Next, help him spot things that change more slowly. For instance, point out that trees grow tall over many years. Or let him feel smooth rocks from a streambed, and explain they have been worn down over time by the water. He'll begin to understand that everything is changing, even when he can't see it happening. 🦋

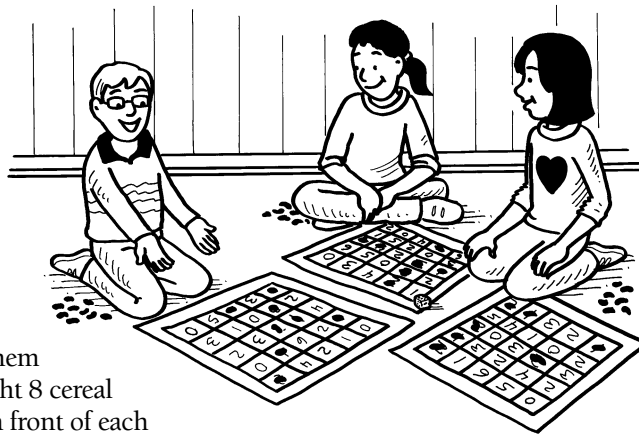


# Split up that number!

Addition becomes easier when your child learns to break numbers into parts. These clever activities will help him do just that.

## Share them

When you bring groceries home, let your youngster imagine sharing them between 2 action figures. If you bought 8 cereal bars, for example, he could place 4 in front of each figure—and see that  $4 + 4 = 8$ . Then, if he moves 1 cereal bar to the first character, it would have 5 while the other had 3, so



$5 + 3 = 8$ . How many different ways can he find to share the 8 items?

## Pair them

For this game, each player should create a 5 x 5 bingo board with a number 0–6 in each square. (Most should be 0–3, with a few 4–6.) One person rolls a die, and all players try to cover 2 numbers (with beans or coins) that add together to equal the number rolled. For a 3, your child could cover 0 and 3 or 1 and 2. Continue playing until someone has 5 in a row horizontally, vertically, or diagonally. “Bingo”—he’s the winner! 🦋

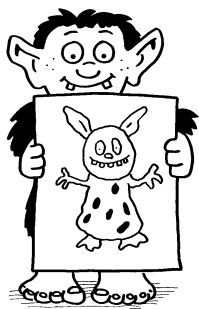


## Q & A Monster glyphs

**Q:** When my daughter came home the other day, she told me about making glyphs in school. It sounded like fun. Could we make these at home for a summer project?

**A:** Glyphs—pictures used to convey information—are an easy way to represent data. Suggest that your daughter and her friends make glyphs about themselves by each drawing a monster. For instance, they might add:

- teeth equal to the number of people in their family
- spots equal to their age (6 spots for a 6-year-old)
- a toe for each letter in their name



They’ll need to write a key explaining what each symbol means

(example: 1 tooth = 1 family member). When they finish, they can display their monsters—and use the key to figure out which child each monster belongs to! 🦋

## MATH CORNER

### Find the object

Next time you’re out on a family walk, use the opportunity to play around with position words—words that describe where objects are in relationship to other objects.

Take turns secretly choosing an item. Then, use position words to help family members identify what you picked.

If your youngster chose a mailbox, she might say, “I spotted something that is *next to* a pine tree, *beside* a driveway, and *above* the grass.”

Ask questions about the object’s position (“Is it *behind* us?” “Is it *below* the chimney?”), or make a guess. Keep asking and guessing until someone correctly identifies the object. That person chooses the next item to describe with position words. 🦋



### Position words

above	next to
below	in
under	on
top	beside
middle	between
bottom	in front of
behind	in back of

## SCIENCE LAB

### Two eyes are better than one

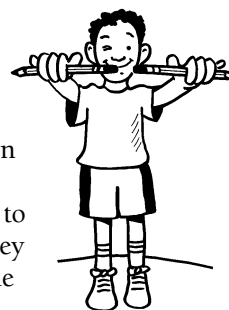
Your youngster may think he sees the same thing with one eye that he sees with both eyes. This experiment will help him “see” differently.

**You’ll need:** two pencils with erasers

**Here’s how:** Your child should grip a pencil in each hand and stretch his arms out in front of him, with the erasers pointed at each other. Ask him to bring the erasers together so they touch. Next, have him close one eye at a time and try again.

**What happens?** With both eyes open, he should easily be able to touch the erasers together. However, when trying with only one eye open, he will likely miss.

**Why?** When our eyes see an image, they send a message to the brain about that image. Yet each of our eyes sees things from a slightly different perspective. The brain takes the two images and combines them to form the correct one, allowing your youngster to line up the erasers. This is called *depth perception*. 🦋



## OUR PURPOSE

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

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