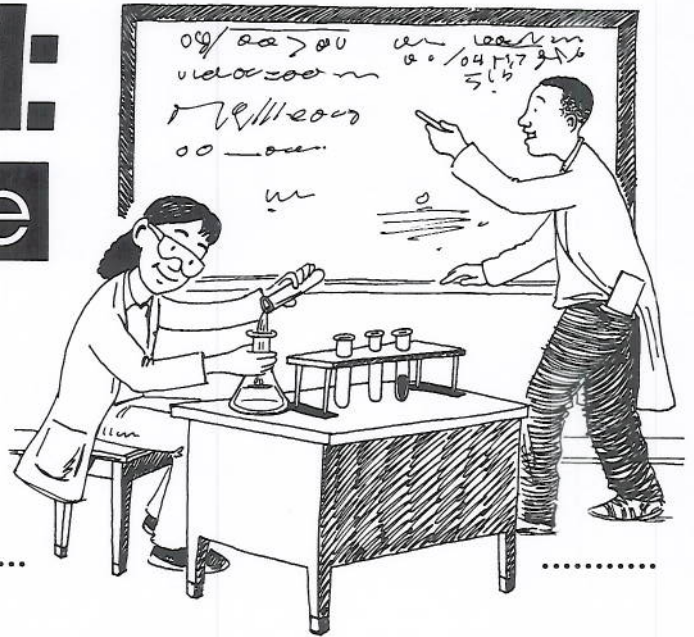


The Real World: Math and Science

"I'll never need to know this stuff in real life!"

Sound familiar? Many middle graders have trouble seeing the connection between math or science studies and everyday life.

Here are some easy ways to show your child how he can use what he's learning in math and science now—and in the future.



Math matters

Help your youngster see how the math skills he is learning will help him manage money, shop wisely, decorate his home one day, and even figure out batting averages.

Personal finances. You can start by teaching your child to handle a checkbook. Let him watch you write a check, fill out a deposit slip, and record transactions. Have him practice writing a check (you can void it afterward). When you balance your checkbook, ask your middle grader to do the calculations. If you use online banking, invite him to join you the next time you log on. *Idea:* Schedule a "learning" appointment for the two of you at your bank. A bank employee will go over how accounts work and give you brochures about banking. Your child will see the importance of basic math skills (addition for deposits, subtraction for checks written) in managing a bank account.

Savvy shopping. Teach your middle grader to be a smart shopper by putting her math skills to work in the grocery store. Using a calculator, she can divide an item's price by the units (ounces, servings) and advise you on which size or brand is the best value for the money. *Example:* Sixteen ounces of cheese that costs

\$4.59 is a better deal than 10 ounces of cheese costing \$3.99. ($\$4.59 \div 16 = \0.287 per ounce, and $\$3.99 \div 10 = \0.399 per ounce). Letting your youngster help you make some money decisions will show her that calculations are a part of everyday life.



Sports figures. Strike up a dinnertime conversation about your favorite baseball hitters. How can your child make a case for his pick? By using math! Help him figure out a player's batting average with percentages. For instance, if a player has been up to bat 230 times and has 79 hits, he would divide the hits (79) by at-bats (230) for a batting average of .343. Your middle grader can follow players' batting averages in the newspaper and even offer to figure them out for his school's team.

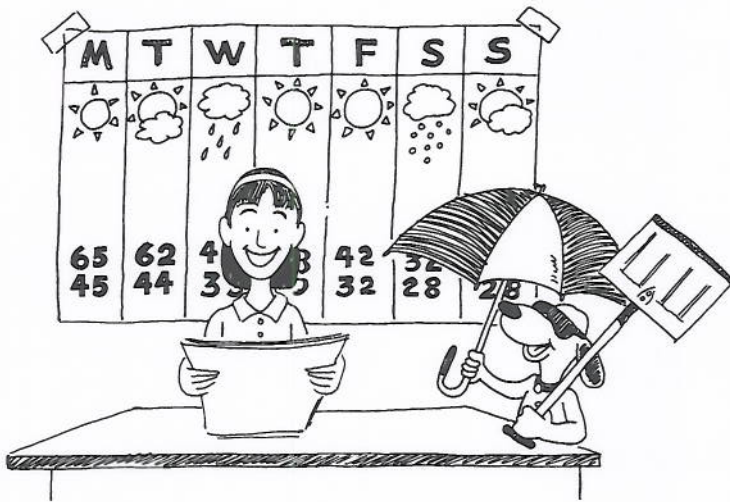
Gas 'n' go. Does your youngster dream about having a car one day? Get him on the road to being a good consumer by teaching him to compute gas mileage. At each



fill-up, have him record the date, miles on the odometer, and gallons pumped. He can subtract the new mileage reading from the old one and divide the answer by the number of gallons needed to fill the tank. Does the figure match the car maker's estimated miles per gallon? (Suggest that he check the manufacturer's Web site to find this information.)

Geometry at home. Teach your child ways to put her geometry skills to work by asking for her help in rearranging a room. Have her draw the room on graph paper (*example:* 8 squares x 2 squares for a sofa, 3 squares x 3 squares for a chair). Where else could the sofa fit? If you're thinking about getting new carpet, have your middle grader calculate the price. She will need to compute the room's square footage (multiply the length of the room by its width) and then multiply the total by the square-foot cost of the carpet.

continued



Science smarts

Show your middle grader that science is important outside the classroom—from predicting the weather and growing food to taking care of the environment and learning about the world around her.

Weather report. Understanding weather patterns will help your youngster plan activities, prepare for bad weather, and dress appropriately. Have her keep a weather log for a month. By listening to the radio or visiting a Web site like www.weather.com or www.wunderground.com, she can track temperature, rainfall, wind speed and direction, warm and cold fronts, cloud cover, and barometric pressure. Are there significant changes before rain, snow, or a heat wave? Using that information, ask your middle grader to try her hand at predicting the weather. Let her make a nightly forecast at dinner.

Nature hunt. Spark your child's scientific curiosity with a look at her natural surroundings. Grab a notebook, pencil, magnifying glass, and binoculars, and head for a nearby park.

Have your middle grader get down on the ground and observe insects or plants closely.

In her notebook, she can jot

down descriptions and make simple drawings of each. Ask her to describe where the plant or insect is, its size, and what it is doing or how it looks. Nature trips can encourage kids to ask questions, develop their powers of observation, and become familiar with the world around them—important skills as they go through life. For more information, your child can find nature field guides online at www.enature.com/fieldguides.



Farm to table. Help your child see the relationship between agriculture and the food he eats. In a backyard plot or in flowerpots, let him plant easy-to-grow vegetables such as tomatoes, beans, and peppers. He can follow the directions on seed packages. As he cares for his garden, ask him science-based questions: "Why do plants need water?" "What happens without sunlight?" When you serve vegetables for dinner, your middle grader will see the value of knowing the science behind growing things!

Clean up and recycle. Bring home the importance of environmental sciences with a neighborhood cleanup and home recycling project. Together, pick up trash in your neighborhood (take along trash bags, and wear gloves for safety). Talk about the kind of litter you find (Styrofoam, plastic, cans, paper). When you return home, discuss the benefits of recycling (less pollution, lower energy costs). Then, ask your child to think of five ways your family could save resources. *Example:* Reduce paper waste by using both sides of computer paper, and wrapping presents with comic pages. Perhaps your middle grader could be in charge of separating paper, plastic, and aluminum into the proper bins for recycling. Finding ways to reuse materials will show him the benefits of learning about—and caring for—the environment.

"When I grow up..."

A strong grounding in math and science can lead to many different kinds of careers. Let your middle grader know about these interesting possibilities:

- Children with good math skills might become accountants, bankers, engineers, psychologists, marketers, teachers, computer programmers, or financial analysts.
- Kids who like science could be doctors, forest rangers, farmers, nurses, veterinarian technicians, crime lab specialists, science book illustrators, teachers, or technical writers.

Tip: For more information about math and science careers, go to www.bls.gov/k12/index.htm (click on "Math" or "Science").



Middle Years