

Math+Science Connection

Intermediate Edition

Building Understanding and Excitement for Children

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Colonsay School

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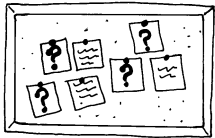
INFO BITS

Counting by 7s

Suggest your child count out loud by 7s. The catch is—she needs to start at 17. As she counts (17, 24, 31), ask her how she's figuring it out in her head. She might say, "I added 3 to 17 and then added 4 more." Try giving her different starting points and numbers to count by to keep her thinking mathematically!

Wall of questions

Asking questions is common for children, and it's critical for scientists. Foster curiosity by having your youngster create a "Question Wall" where he tacks up science questions and—when he finds them—the answers. He may wonder, "Why do cheetahs run so fast?" or "How do rockets lift off?" He can look up information or do experiments, and soon he'll have a collage filled with scientific facts.



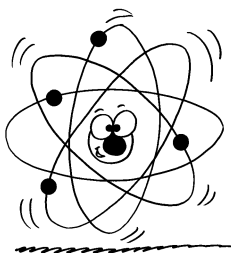
Book picks

- Geometry, logic, division, and measurement come together for fun in *The Everything Kids' Math Puzzles Book* (Meg, Glenn, and Sean Clemens).
- Science Experiments You Can Eat* (Vicki Cobb) presents tasty ways to learn the science behind gelatin or how sugar decomposes to make caramel syrup.

Just for fun

Q: Why can't you trust atoms?

A: Because they make up everything!



Try it this way—or that way!

Having more than one math strategy to use helps your youngster solve problems more easily and gives him confidence. Suggest these two.

Commutative property

You might commute to work. In math, *commuting* means moving around numbers rather than people. Your child can change the order of numbers in addition or multiplication problems—no matter how many numbers he's adding or multiplying—and get the same answer.

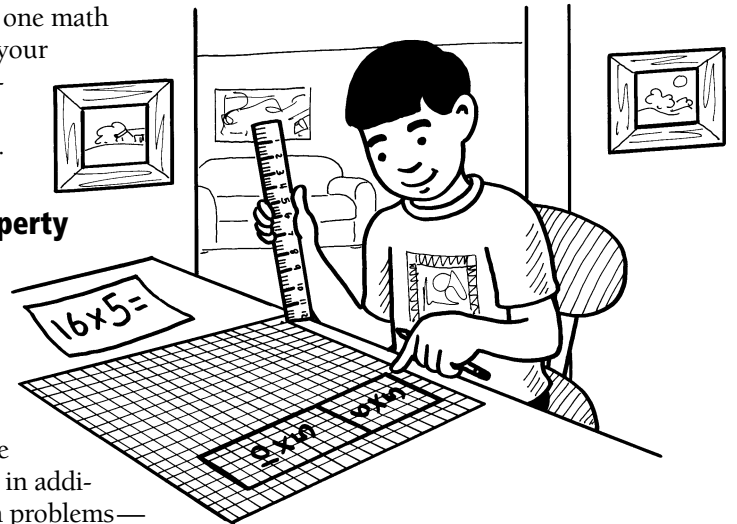
Encourage him to turn this concept into a strategy: He could re-order numbers within a problem to make it easier to solve. *Example:* Change $112 + 66 + 8$ to $112 + 8 + 66$ because $112 + 8 = 120$, and then $120 + 66 = 186$.

Area model

When multiplying two numbers, suggest your youngster draw a rectangle on graph paper to match the problem. For 4

$\times 8$, he would make a rectangle that is 4 rows by 8 columns. Then, he could count the squares inside to see that $4 \times 8 = 32$.

With larger numbers, he can divide the rectangle into smaller chunks that are easier to multiply in his head. Say he's solving 16×5 . He might draw a rectangle 16 rows by 5 columns and then mark a line to divide the 16 rows into 10 rows and 6 rows. He now has two rectangles (10×5 and 6×5) that are easier to multiply in his head—and then add to get his answer ($10 \times 5 = 50$, $6 \times 5 = 30$, and $50 + 30 = 80$).



"A day in the life of..."

In school your child often writes about herself, maybe even about what she does in a day. But has she ever considered what a day is like for a volcano or a frog?

Let her choose something she's interested in and write a creative story about its "day." If volcanoes fascinate her, she might build one with baking soda and vinegar and then draw a cartoon about what she witnessed. "The first thing Victor Volcano noticed in the morning was that the earth was shaking. 'Hmm... I may blow my top today!'" Encourage her to include details like a diagram of a volcano or a list of famous volcanoes.



