

Math+Science Connection

Building Understanding and Excitement for Children

October 2020

Cape Central Middle School

Mr. Rex Crosnoe, Principal



INFO BITS

Let's skip count

Can your child skip count by numbers other than 2s, 5s, or 10s? Give him a random number (say, 7) and a starting point (perhaps 65). He would count 65, 72, 79, 86. Then, have him skip count backward. Maybe you'll have him begin at 103 and count back by 11s (103, 92, 81, 70).

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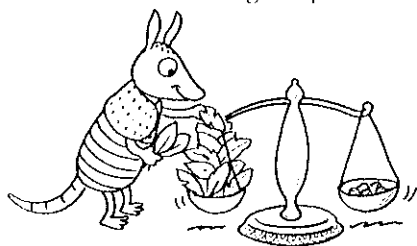
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Mental math games

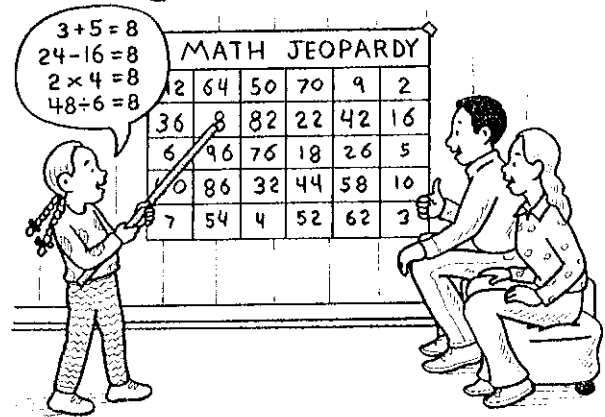
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Take turns picking an answer (say, 8) and stating four problems (addition, subtraction, multiplication, division) that equal it. *Example:* $5 + 3$, $60 - 52$, 4×2 , $16 \div 2$. Your youngster will practice doing all four operations in her head!

Check problems on a calculator. If they're all correct, score 8 points and cross out the 8. When all answers are chosen, the person with the highest score wins.



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Who can score closest to 100 points without going over? Each player rolls a die to get her starting score. On each additional roll, she may add the number rolled to her score or multiply the number by her score.

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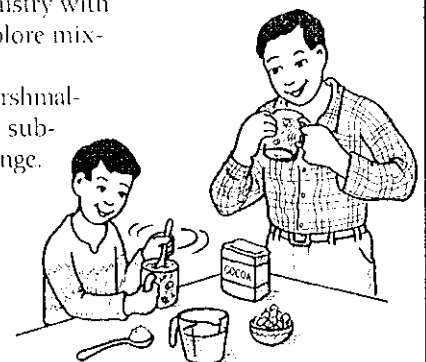
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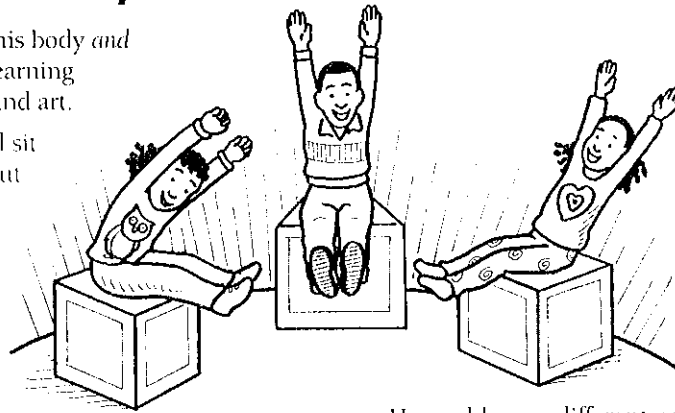
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Geometry: Move it, draw it

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Strike a pose. Have your child sit upright with his legs straight out in front of him and his arms stretched above his head. He's a right angle (90°). How could he make an acute angle (less than 90°)? (Lean



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He could use a different color for each type of shape (trapezoid, rhombus, pentagon) and count how many of each there are. Now let him display his colorful work of art on the refrigerator. 📺

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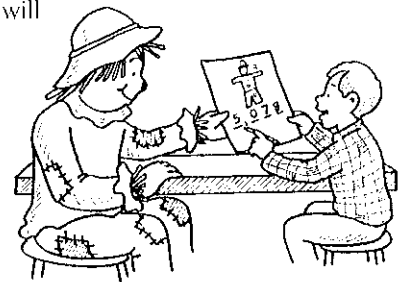
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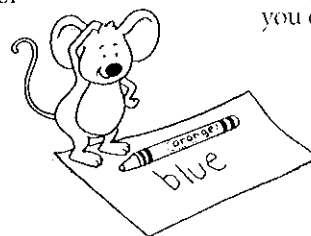
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OUR PURPOSE

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

Resources for Educators,
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Middle Years

Working Together for School Success



Short Stops

Boost self-esteem

Your middle schooler's friends can have a big impact on how she feels about herself. If her self-confidence is lagging, ask, "Which friends make you feel good?" and "Do any friends put you down?" Suggest that she hang on to friends in the first category—and rethink how much time she spends with those in the second.

DID YOU KNOW?

Working in front of a computer screen can cause eye strain. To avoid headaches, blurred vision, and watery eyes, your child should use the 20-20-20 rule. For every 20 minutes of screen time, look up at something 20 feet away for 20 seconds.

Energy investigator

Learning about your family's energy use introduces your tween to science concepts—and gives him a chance to help take care of the planet. Have him search online for top energy-wasters and then find opportunities to correct them at home, like unplugging a fully charged phone or a printer that's in "sleep" mode.

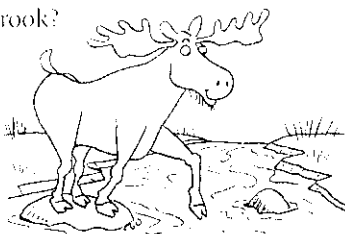
Worth quoting

"Life is like a trumpet. If you don't put anything into it, you don't get anything out of it." W. C. Handy

Just for fun

Q: What do you get when you cross a stream and a brook?

A: Wet feet!



Limits for middle schoolers

Your tween might not admit it now that he's getting older, but boundaries help him feel safe and secure. Rules also teach him to make positive choices as he grows up. Consider these tips for setting limits.



Prioritize rules

Having too many rules can be confusing for everyone. Try to narrow them to key categories like health and safety (no drugs and alcohol, limit screen time), school (complete homework on time, keep grades up), and family life (do chores, be respectful).

("Screen time can interfere with sleep, and you need sleep to stay healthy and do well in school.")

Be clear and reasonable

State each rule simply but clearly, and try to phrase it in a positive way. *Example:* "Sign off from social media and put away your phone 1 hour before bed" vs. "Don't chat with friends at night." Listen to your tween's input ("My friends text late!"). Then explain your reasoning.

Remain consistent

Stand firm in enforcing rules—letting something slide teaches your child that the rules don't really matter. Also, assign a consequence that's directly linked to each rule. Have him make and hang up a two-column list labeled "Rules" ("I agree to finish homework before playing video games") and "Consequences" ("If not, I understand that I can't play video games for one day").

Stay on top of projects

A long-term project will seem more doable if your tween thinks of it as a series of smaller assignments. Recommend this strategy.

■ **Break it into chunks.** Your child can start by listing everything she needs to do. For a paper analyzing a famous speech, steps might begin with: "1. Read the speech," and "2. Research the speaker's life." Seeing that each step is something she can handle will give her the motivation to begin.

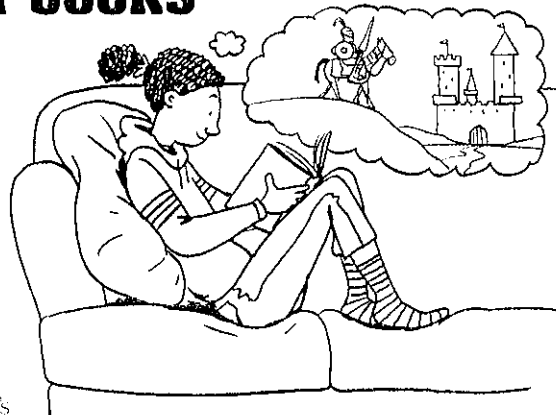


■ **Assign a deadline to each chunk.** Your middle grader could work backward to make a schedule for completing her project. On her calendar, she should write in the project's due date, then add her own due date for each step.

Find meaning in books

Thinking “outside the book” often leads to deeper understanding when your child reads novels for school. Share these activities.

Pair it up. Encourage your middle schooler to find a poem or another book that’s related to what she’s reading. For a novel about the Dust Bowl, she might choose Langston Hughes’s poem, “Dust Bowl.” How does the poem affect her feelings about events in the book? Or she could read an ice-skater’s biography along with a novel about ice-skating.



What does knowing more about the world of ice-skating add to her understanding of the challenges the characters in the book faced?

Visualize it. Picturing people and places helps your middle grader comprehend books set in other times and lands. Suggest that she look up images online from the time period the book is set in. Ask her to imagine how people she reads about would

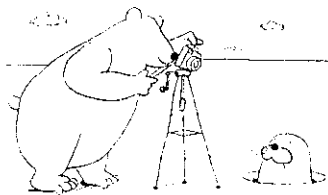
have dressed or what they might have eaten. Or perhaps she’ll learn more about a setting in her book by looking at images on google.com/earth/.

Take a picture!

Snapping photos is a popular pastime for tweens. With these ideas, your child will boost his creativity as he takes interesting shots.

Experiment with subjects

Encourage your middle grader to shoot extreme close-ups of objects, such as marbles in a jar or the inside of an orange. Then, he can share the photo with family members and challenge them to figure out what’s pictured. Or he might snap photos related to a theme, perhaps water or happiness, and put them in an album to keep on the coffee table.



Explore all the angles

Your tween could try shooting the same scene or object from various perspectives. Maybe he’ll lie under a tree and point his camera straight up to take a picture. Then he can stand up, step away from the tree, and get a photo at a different angle.

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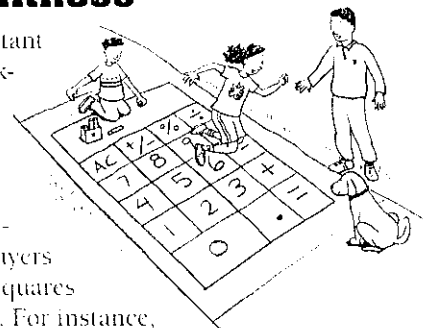
Parent to Parent

Fall for family fitness

I know exercise is important for my family’s health, but we weren’t making time for it. So now each week, we appoint an “activity director” who plans an active game to play.

My seventh-grader, Mariah, invented Calculator Hopscotch. She drew a calculator on the driveway, and on each turn, players toss a rock onto a number and hop onto squares to create equations equaling that number. For instance, when Mariah’s rock landed on 7, she solved $36 \div 8 = 7$ by hopping on 5, 6, \div , 8, =, and 7. Since her equation was correct, she scored 7 points. High score won the game.

My sixth-grader, Rafael, made up a nature scavenger hunt. He listed things to find, like an acorn or something blue, and we raced to find them. We’re having so much fun playing outside that we don’t even feel like we’re exercising!



Q & A

Academic honesty—at home

Q How can I make sure my son doesn’t cheat when he works online at home?

A It can be tempting for tweens to copy and paste information from the internet or chat answers to friends. Or they may not even realize they’re cheating. Explain to your child that cheating is dishonest, can cause him to get a zero on his work—and will prevent him from learning.

Instead of copying and pasting, encourage him to read his

source material, close that window, and type the information in his own words. Point out that it’s not enough to rearrange words and sentences. He needs original explanations and examples, and he needs to cite the source. If he’s taking a test or quiz at home, make sure he turns off chat and email notifications. He won’t be distracted by pings or feel pressured to share answers.

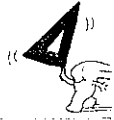
Finally, praise hard work rather than focusing on grades—you’ll teach him to value both effort and honesty.



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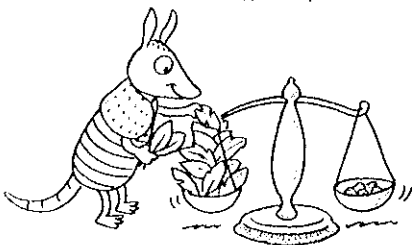
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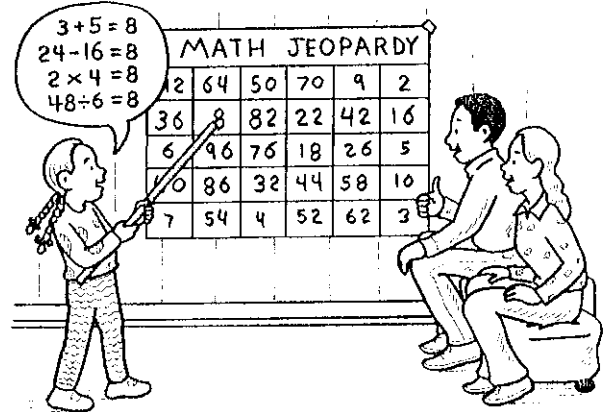
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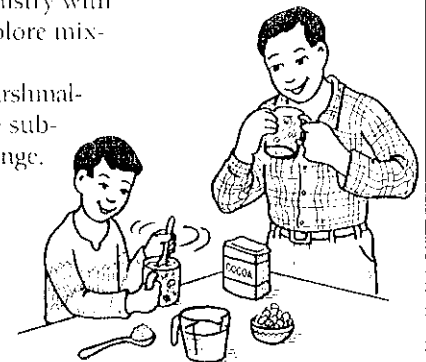
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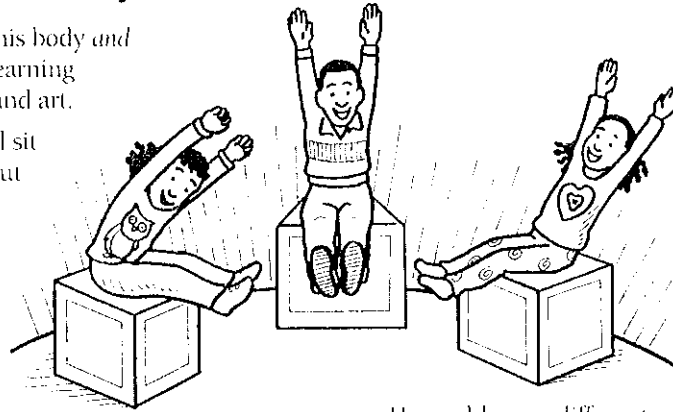
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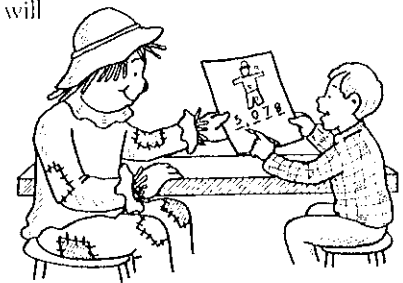
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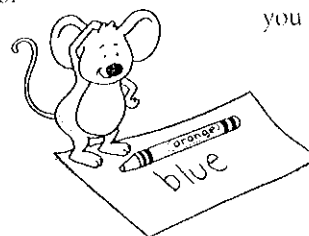
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