

Middle Years

Working Together for School Success



Short Stops

A to-do-later list

Here's a clever way for your tween to stay focused while he works. When he finds himself tempted to do something unrelated to his assignment, encourage him to write it on a to-do-later list. *Examples:* "Check Twitter." "Daydream about summer." Moving his thoughts onto paper may get them off his mind and help him concentrate on his work.

Math in the garden

Gardening can sharpen your middle grader's math skills. Consider letting her plant flowers, vegetables, or herbs in a container or the yard. Ask her to calculate how many cubic inches of soil will fit in a planter box. She could also measure and graph her plants to compare growth rates.

DID YOU KNOW?

Starting the day in the sunshine helps to regulate the body's biological clock, making it easier to feel alert in the morning. On sunny days, suggest that your teen eat breakfast outside or by a window. *Bonus:* Sunlight is a great mood lifter!

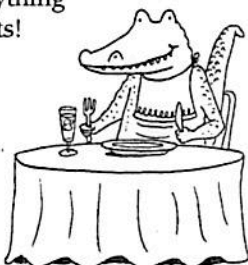
Worth quoting

"Find something you're passionate about and keep tremendously interested in it." *Julia Child*

Just for fun

Q: What do you feed an alligator?

A: Anything it wants!



Word up! Fun vocabulary boosters

A good vocabulary will make your tween a stronger reader, a better writer, and a more confident speaker. Try these activities to expand her world of words.

Play a game

Have each family member choose five unfamiliar words from textbooks or the dictionary. Write each word, along with its definition, on a separate index card. Illustrate your words on another five cards. Shuffle and deal the picture cards evenly to players, and stack the word cards facedown. Now take turns picking up a word card. Keep it if you have the matching picture card, or return the word card to the bottom of the stack if you don't. Match all your cards first to win.

Write poems

Encourage your middle schooler to get creative with words she's learning in school by writing a silly poem that defines



each one. For electron, she might write, "Around the nucleus you zoom / Being so negative / Why all the gloom and doom?" She could read her poems aloud to study the words.

Make a word jar

Suggest that your middle grader label a clear jar "My Word Jar." When she comes across a word that's new to her (on a billboard, in conversation), have her write it on a slip of paper. Later, she can look up the definition, write it on the back, and drop the slip into her jar. *Idea:* Ask her to share the coolest word she finds each week. Challenge everyone to use the word in a sentence. 👍

Avoid the blame game

Excuses, excuses. If you're hearing them from your middle grader, these tactics can help.

■ **Turn excuses into explanations.** If your child tries to justify a bad grade by saying something like "The teacher didn't remind us about the test," he's putting the blame elsewhere. Instead, have him give an explanation that begins with *I*. ("I forgot to write the test in my planner.")

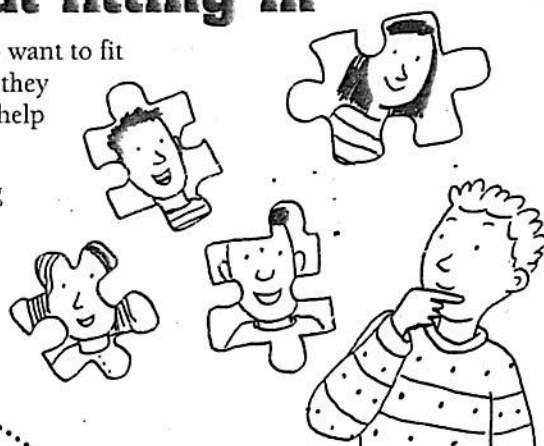
■ **Applaud accountability.** Say your tween isn't allowed to eat or drink in the living room and admits he spilled orange juice on the carpet. You could reply, "I'm glad you told me." Then, talk about what will happen next. ("Look up stain-removal tips online so you can clean the carpet.") 👍



Concerns about fitting in

It's natural for middle schoolers to want to fit in with their peers—and hard when they feel like they don't. Use these tips to help your child handle his worries.

Right-size the problem. Not being part of the “in crowd” can seem like the end of the world to your tween. Acknowledge his feelings (“It must



be tough to feel left out”). Then, let him talk to older siblings or neighbors who once struggled to figure out where they fit in. Knowing things will get better can take some of the pressure off.

Take small steps. If your middle grader longs to join a group of kids, suggest making one friend at a time instead. It's easier to form a relationship with one person than a whole group. Or encourage him to create his own circle of like-minded people by joining a club or taking part in other group activities that interest him. *Idea:* Ask

him to imagine his classmates as pieces of many different puzzles. Not every piece fits every puzzle—and that's okay. 👍

Parent to Parent Follow the leader

My son Patrick prefers to sit back and let others take the lead, while my daughter Eliza likes being in charge. When Eliza mentioned the leadership roles she was including on her college applications, I realized that Patrick could use some experience being a leader, too.

When his school astronomy club was canceled this year, I asked what he might do instead. He decided to start a new virtual club with classmates. So far he has led virtual “watch parties” for special events like International Space Station flyovers, a meteor shower, and a lunar eclipse.



I also mentioned to Patrick that his younger cousins were struggling with distance learning, and he offered to lead virtual tutoring sessions. I could tell he was proud when one cousin got an A on a recent test—and I pointed out that taking the lead was really making a difference in other people's lives. 👍

Q & A Dig deeper for research

Q When my daughter does research for reports, she just Googles the topic and uses the first few links that pop up.

How can she be more thorough?

A There's a wealth of information out there beyond the first page of search results! Finding it can help your tween learn more about her topic—and write a better paper.

First, suggest that she do a targeted search for well-researched information. For instance, including “site:.edu” or “site:.gov” along with her search terms will give her sources from educational institutions or government sites. And Google Scholar (scholar.google.com) offers articles published in scholarly journals.

Also, encourage your child to use primary sources (personal narratives, photos, audio recordings) from the Library of Congress (loc.gov) and the Smithsonian Institution (si.edu). She may find it fascinating to take notes on an article written during the Industrial Revolution or from a news broadcast of the first moon landing. 👍



Crack the code

Learning to code can sharpen your tween's logical thinking skills. That will help her in any career, whether it involves computer programming or not. Get her started with these free resources.

Scratch

This coding community developed by the Massachusetts Institute of Technology includes instructional videos. Kids of all skill levels can learn to program interactive games, animations, and stories. (scratch.mit.edu)



Code.org

At this site, middle graders will discover different programming languages as well as how to create apps and web pages. Encourage your tween to keep an eye out for videos on timely topics like voice assistants and self-driving cars. (code.org)

The Pack—NYSCI

This app made by the New York Hall of Science teaches computational thinking and other coding skills through puzzle-like game play. (nysci.org/school/resources/the-pack) 👍

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Math+Science Connection

Intermediate Edition

Building Understanding and Excitement for Children

March 2021

Middle Country School District

Title I - Parental Involvement

INFO BITS

Rhythm of poetry

Read a poem together.

Then, see if your youngster can identify a pattern. Does every other line rhyme or have the same number of beats? Noticing the rhymes and rhythms will help her hear the math in poetry. *Idea:* Suggest that she use patterns to write her own poem.

Design a zip line

Challenge your child to engineer a “zip line” for a toy. Let him tie a string between two doors and create a safety harness for the toy from twist ties or rubber bands. Have him give the toy a push—does it make it all the way across the zip line? If not, he could improve on his design by trying different materials for the harness or adjusting the slope of his zip line.

Book picks

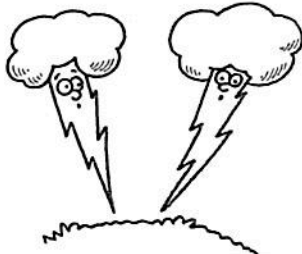
Youngsters can explore numbers in a wacky way with *How Many Guinea Pigs Can Fit on a Plane? Answers to Your Most Clever Math Questions* (Laura Overdeck).

The Science of Goo! From Saliva and Slime to Frogspawn and Fungus (DK) bursts with strange facts and goooey trivia that are bound to stick with your child.

Just for fun

Q: What did one lightning bolt say to the other?

A: You're shocking!



How far? How tall?

Accurate measurements are important not only in math, but also in science and engineering—and in everyday activities like sports, sewing, and planting. Your youngster will be excited to practice measurement with these real-life ideas.

Measure distance

Coaches and PE teachers measure running courses precisely to make sure all students run the same distance.


Using a yardstick or tape measure, have your child carefully measure a 50-yard course outside (marking it in 10-yard increments). Then, family members can take turns running a 50-yard dash and timing each other. *Idea:* Let him make courses for other distances, perhaps 60 meters or 100 meters.

Measure height

Children love to discover they've grown even $\frac{1}{2}$ inch, so show your youngster how measuring accurately can determine his true height. Ask him to stand straight with his feet together and his back and heels against a wall.




Make a light pencil mark where the top of his head meets the wall, and help him use a tape measure to determine the distance from the floor to the mark. He can write his height at the mark (say, 55 inches), then measure other family members and record their heights. *Idea:* Measure him every six months so he can track his growth.

Tip: A carpenter's “golden rule” is “Measure twice, cut once.” Encourage your child to double-check his measurements, too. If he gets the same result, chances are he measured correctly. If not, he should measure until he gets the same measurement twice. 

It's an earthquake!

With this tasty activity, your child will learn about earthquakes—and enjoy eating the results.

First, have her spread cream cheese on wax paper and lay two graham crackers on top, side by side. The graham crackers represent plates in Earth's top layer (*crust*) and the cream cheese represents the second layer (*mantle*). Next, she can model an earthquake by slowly rubbing the crackers together, back and forth. Crumbs will come off, and the crackers will break.

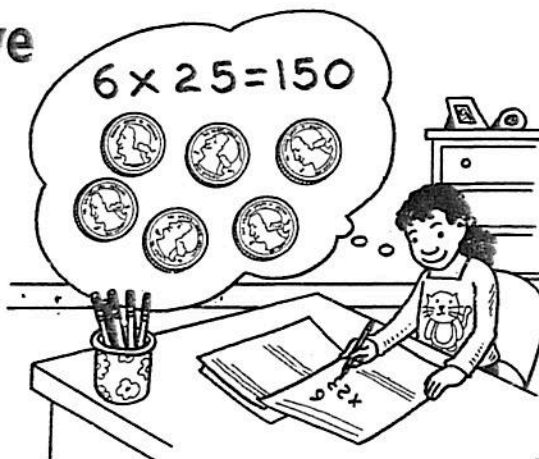
When plates in the crust slide past one another, they sometimes get caught on each other. Then, they suddenly break apart along the edges where they meet (the *fault line*), shaking the ground. 




Estimate, then solve

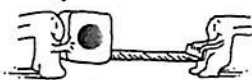
Estimating answers to math problems before solving them gives your youngster confidence that her answer is right (Yay!) or tells her to try again (Oops!). Suggest these strategies.

Make it familiar. Ask your child to think of something familiar she could use to estimate an answer. For 6×23 , she might think, “23 is close to 25, and a quarter is 25 cents. Since 6 quarters



would be \$1.50 or 150 cents, 150 is a good estimate.” Now she can compute the actual problem ($6 \times 23 = 138$). She’ll know her answer is reasonable because it is close to, but smaller than, her estimate.

Make it simpler. Have your youngster round one of the numbers to the nearest 10 so it’s easier to use. Say she’s solving $42 \div 5$. If she rounds 42 down to 40, she would estimate $40 \div 5 = 8$. Because she rounded down, she’ll know the answer will be slightly more than 8 ($42 \div 5 = 8$, remainder 2). 




Q & A Study strategies for math tests

Q: What are some strategies my son can use to study for math tests?

A: Your child’s graded math assignments make great study tools because they include the types of problems he’s likely to see on tests. Encourage him to review them and correct any problems he got wrong. He could also change the numbers to create new practice problems, then check his answers on a calculator.



Your son might also hold virtual study sessions with a friend. They could make up quizzes for each other. Creating, taking, and grading the quizzes will all help them study—together.

Finally, if your son doesn’t fully understand something that’s going to be on a test (say, how to convert fractions into decimals), he should ask his teacher for extra help. 

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MATH CORNER

Don’t break the factor chain

With this game, your youngster can practice using factors and multiples. Factors multiply to make a number (4 and 6 are factors of 24 because $4 \times 6 = 24$). Multiples are the result of one number times another (24 is a multiple of 4 and 6).



1. Draw a 10×10 grid, and number the boxes 1–100. Using dry beans as tokens, place one on any square (say, 33).
2. The first player puts a bean on any factor or multiple of that number (for instance, 3, because $3 \times 11 = 33$, so 3 is a factor of 33).
3. The next player marks a factor or multiple of the new number (3). *Example:* Cover up 15, since $3 \times 5 = 15$, so 15 is a multiple of 3. Keep taking turns, each time marking a factor or multiple of the last number played.
4. The last person who can make a move wins. 

SCIENCE LAB

See the water glow

Does your child know that 90 percent of deep-sea creatures “glow” in the dark? This demonstration lets him model *bioluminescence*—an animal’s ability to give off light.


You’ll need: measuring cup, water, clear jar, pliers, highlighter, disposable gloves, flashlight

Here’s how: Ask your youngster to measure 1 cup water into the jar while you use pliers to remove the stopper from the bottom of a highlighter.



Wearing gloves, he can pull out the felt tube, put it in the jar, and squeeze out some of the ink. Now let him turn off the lights and shine a flashlight on the jar.

What happens? The water appears to glow.

Why? A chemical in high-lighter ink absorbs and then reflects light. In bioluminescence, chemicals in animals produce light so the creatures can see in the dark. That’s why the animals and the water around them look like they’re glowing! 

Reading Connection

Working Together for Learning Success

March 2021

Middle Country School District

Title I - Parental Involvement

Book Picks



■ **Paint the Wind** (Pam Muñoz Ryan)

When 11-year-old Maya's grandmother dies, the little girl goes to Wyoming to live with relatives she's never met. There she enjoys new freedom and the friendship of a wild mustang. After the mustang saves Maya's life, she must decide whether to keep the horse or set her free. (Also available in Spanish.)



■ **Tiny Stitches: The Life of Medical Pioneer Vivien Thomas** (Gwendolyn Hooks)

In this inspiring biography, readers will learn about African American surgical pioneer Vivien Thomas. Unable to go to medical school, he landed a job in a research lab at an all-white college. There, he helped to pave the way for children's open-heart surgery.

■ **Professor Astro Cat's Deep-Sea Voyage** (Dominic Walliman)

Follow along as Professor Astro Cat explores the deep sea. Blending fiction and non-fiction, this book includes facts about shipwrecks, coral reefs, sea creatures, and much more. Contains illustrated diagrams and maps plus a glossary with ocean terms. Part of the Professor Astro Cat series.



■ **The Hero Revealed** (William Boniface)

Meet Ordinary Boy. In his hometown of Superopolis, he's the only resident without superpowers. Then, he gets to help his favorite superhero and learns that even regular people can be heroes. This humorous book is the first in the Extraordinary Adventures of Ordinary Boy series.



Creative study guides

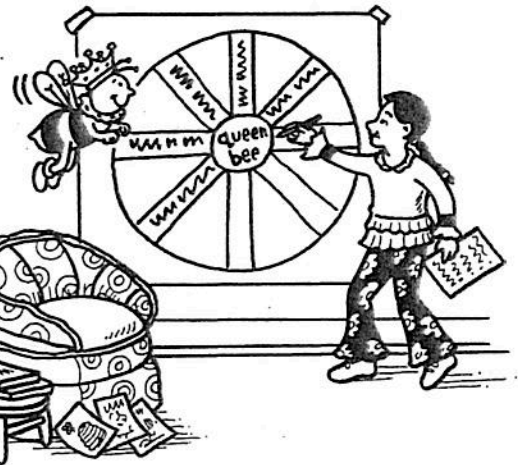
Reading for information is a skill every student needs. Suggest that your child create a study guide to use for her next test. In the process, she'll practice reading closely for key ideas and details. Here are formats she could try.

Details, details

For each section of a textbook chapter, have your child draw a wheel (a circle with spokes, coming out from its center in all directions). In the hub, she can write the topic (*queen bee*). On each spoke, she could write a detail about that topic (one queen bee per colony, lays up to 1,500 eggs per day).

Color-coding

Let your youngster choose a different-color pen or font for each kind of fact. For instance, if she's reading about the American Revolution, she could use blue to write notes about people (George Washington, Benjamin Franklin), red for dates (1775, 1783), and green for places (Bunker Hill, Yorktown).



Color-coding will help her remember the information.

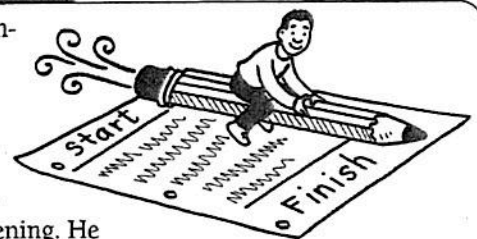
Q&A

Ask your youngster to pretend she's an expert on a topic she's studying and that a news reporter has interviewed her. She can write an "interview transcript" and use it as a study guide. First, she should rewrite each topic as a question. For instance, "The Importance of Protein" might become "Why is protein important?" Then as she reads, she can fill in the answers to create her transcript.

Strong starts, fine finishes

It takes practice to write effective beginnings and endings for essays or reports. Share these tips with your youngster.

- **Introduction:** The opening sentence welcomes the audience and hints at what's to come. Encourage your child to experiment to find the most inviting opening. He might pose a question ("When was the first robot built?") or present a fact ("The earliest known robot had wings").
- **Conclusion:** The last sentence offers a snapshot of the ideas presented. Have your youngster reread his paper and ask, "What do I want readers to remember?" Then, he can write a line with that in mind. ("Robots may seem like new technology, but history shows they've been around for a long time.")



Combine books with crafts

Crafty activities can encourage your child to think more deeply about books—and make reading more enjoyable. Spark his imagination with projects like these.

Design graffiti boards. Have your youngster decorate poster boards with drawings and words related to a book. For example, if he's reading a mystery, he could draw a part of the setting, write clues from the story in a giant question mark, and fill the margins of the poster with his favorite quotes from the book. He'll



have to read carefully to pay attention to what's important.

Build models.

Let your child use household materials to make 3-D creations that match a book. If he's reading about roller coasters, he might engineer one with cardboard tubes and straws. Or for a tale

about forest animals, he could sculpt creatures out of clay. Have him dig for details in the text and examine the illustrations so he can make accurate models. ■

Parent ² Parent Be a better speller

My son Elliott has been struggling with spelling, so I shared rules I used at his age, like "i before e, except after c." But he said he'd learned that many words don't follow those rules. So I asked his teacher for better ways to help him at home.

The teacher suggested that Elliott keep a list of words he frequently misspells and post it over his desk. For example, she pointed out that he tends to put *-able* at the end of words that should have *-ible*. So Elliott made a list that included *collectible*, *edible*, *flexible*, and *visible*.

She also said that while rules can be useful, looking for exceptions might be a fun way to help Elliott remember difficult spellings. When he found *e* before *i* in a "neighborhood meeting" notice and on a "weigh produce here" sign in the store, he decided that words with *eigh* have their own rule: *e* before *i* if it sounds like *a*. Now, he's looking for exceptions that don't include *eigh*. ■



Q&A Read and write about science

Q I think my daughter might want to be a scientist when she grows up!

How could we use her love of science to help her with reading and writing, too?

A It's great that your child enjoys science so much. Try getting books of science experiments for her from the library. She can read them and pick out experiments to do at home—following the instructions will give her good reading practice.

Your daughter may enjoy reading science fiction, too. Ask her to point out inventions or technology in the stories that are based on real science or that she thinks could be possible in her lifetime.

You might also suggest that your child start a science journal. She could record the results of her experiments or write about what she spots during walks, such as animal tracks in the mud or flowers sprouting from the ground. ■



Fun with Words Once upon a time

Give your youngster's speaking skills a boost with this family storytelling game.

1. Have each player write 10–20 random words (*feud*, *crucial*, *magical*) on separate slips of paper. Fold the slips in half, put them in a bag, and shake.

2. Let your child pull out a slip and begin telling a story that uses the word she drew. "Once upon a time, there was a *feud*

between two kings who just happened to be brothers." Then, the next person draws a word and continues the story. "One king thought it was *crucial* to build a moat to keep his brother's knights from invading." Continue taking turns picking slips and adding to the story.

3. The person who chooses the last word gets to wrap up the tale. ■



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Recipes for Success

Practical Activities to Help Your Child Succeed

MARCH 2021

Middle Country School District

Title I - Parental Involvement

READING On a mission

Send your youngster on a quest to practice "active reading," an important strategy for boosting comprehension.

Ingredients: reading materials

Let your child select a book or an article. Before he starts reading, look it over to find something specific he could watch for. For a nonfiction book about cats, perhaps you'll send him on a mission to discover three ways house cats are similar to big cats (lions, tigers).

After he finishes the book, he can come back to you with the information. Then, ask him to make up his own mission the next thing he reads. Or maybe he'll give you a mission when you read the newspaper or your novel tonight!

HEALTH Be a food critic

Inspire your youngster to try new foods—and think critically—by letting him play food critic.

Ingredients: foods, paper, pencil

Put out a sample of a food he's never had, perhaps tuna casserole or mango. Ask him to rate the food on a scale of 1 to 5 stars in different categories, such as appearance, taste, and smell.

In a notebook, he could write the name of the food and his score for each category. Have him add up each food's stars to get its final score. *Idea:* He might even want to write a review to share with you. Now on to the next new food for him to try—and rate!

MATH Rock, paper, math facts!

How many fingers are you holding up? Put a twist on "rock, paper, scissors" to help your child review multiplication facts and get used to doing math in her head.

Ingredients: two players

On the count of three, both players raise one or both hands and hold up any number of fingers they choose. For instance, one player might hold up two fingers and the other may hold up seven. Players should multiply the numbers together ($2 \times 7 = 14$). The first person to shout the correct answer gets a point. Score 21 points to win.

Variations: Younger children could add rather than multiply the numbers. Or to make the game harder, bend a finger at the knuckle to represent $\frac{1}{2}$ ($2\frac{1}{2} \times 7 = 17\frac{1}{2}$).

STORYTELLING

Encourage your child to turn a picture into a story. Each of you can draw an object, such as a flying car or a house shaped like a cake. Swap drawings, and ask her to tell a story based on your illustration ("Jane drove a flying car. It had a mind of its own..."). Next, make up a tale for her drawing.

NATURE

Suggest that your youngster start a spring nature journal. Together, spend time outdoors to observe plants and animals. He could sketch and label what he sees (a robin, yellow flowers) and include the date and location. What does he notice if he returns to the same place tomorrow or in a week?

Refrigerator Poster
Just hang your Recipes poster on the refrigerator and sneak in an activity when you have a few minutes. These fun activities will help develop school success and positive behavior. Check off each box as you complete the "recipe."

Recipes for Success

Practical Activities to Help Your Child Succeed

MARCH 2021

Character Corner

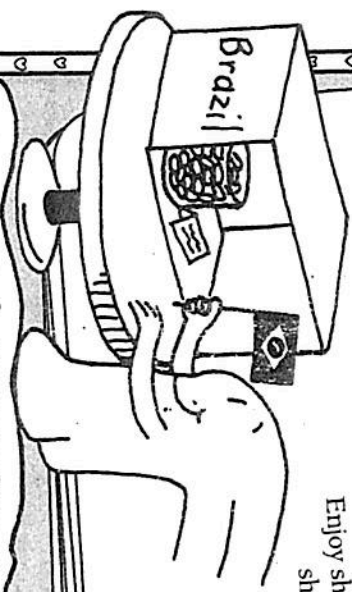
GEOGRAPHY Countries in a box

Collecting items that represent countries around the world gives your child a chance to explore geography.

Ingredients: shoebox, construction paper, crayons

What country intrigues your youngster? Perhaps she'd like to visit Brazil to see its rain forests. She could read about Brazil in library books or online and look up other features, such as its flag, language, or crops. Now she can make her research come to life with a shoebox display. She might make a Brazilian flag from construction paper, write words in Portuguese, and include coffee beans to represent one of the country's biggest crops.

Enjoy show-and-tell as she shares her shoebox with you. Then, suggest that she create a box for another country!



Congratulations!

We finished _____ activities together on this poster.

Signed (parent or adult family member) _____ Signed (child) _____

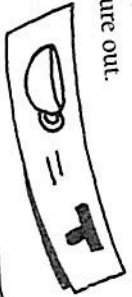
ORGANIZATION

Ask your youngster to stuff a backpack so it's messy. He might include folders, pencils, erasers, and food wrappers. Add mystery items like small toys. Give him a list of things to find, and time him. Now have him repack the backpack in an organized way and try again. Was he faster or slower this time?



SPELLING

Suggest your child make a code to practice spelling. Perhaps she'll draw an emoji, symbol, or animal to represent each letter of the alphabet (examples: boat = B, teacup = T). Take turns writing words in her code for each other to figure out.



INTERVIEWING

Together, read a short interview in a magazine, perhaps of a famous scientist or actor. Encourage your youngster to think of follow-up questions the writer could have asked to get more information. Now pretend you're a famous person while she tries her hand at interviewing you!



TEAMWORK

Blindfold your youngster, and hand her about 3 feet of string. Give her directions for forming a square on the floor with the string. **Examples:** "Make a straight line. Stop. Turn 90 degrees." Trade roles—maybe she'll direct you to form a hexagon!



GRIT

Challenge each family member to choose one difficult thing to attempt. Maybe your child wants to improve his soccer dribbling skills. After a month, share your progress, and explain how you kept going if you felt discouraged.



COIN VALUES

Let your child divide up a handful of change so you each have the same number of change. Then, take turns suggesting trades. For instance, he might ask to trade 1 quarter, 2 nickels, and 1 penny for 3 dimes, 1 nickel, and 1 penny. Is that a fair trade? (Yes, because you each have 36 cents.)

