
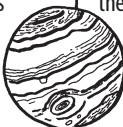









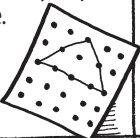









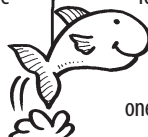







Note: Fill in the month and dates, and post this calendar on your refrigerator. Then, encourage your child to do an activity a day.

Daily Math & Science Calendar


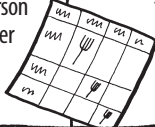

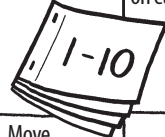

















(Beginning Edition)

MONTH						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
 <p>Start collecting pennies in a small jar.</p> <p>Predict how many you will have by the end of the month. Write down your estimate, and save it.</p>	<p>Find a picture of Jupiter in a book or online. Draw a picture of the planet. Be sure to include the stripes (cloud bands) and the Great Red Spot.</p> 	<p>Circle your birthday on a calendar.</p> <p>Count how many months, weeks, or days there are until the big day.</p> 	<p>Think of ways your family can make less trash (examples: reuse glass jars, tear paper towels in half). Tell your ideas to a parent.</p> 	<p>Practice writing numbers on white paper using a white (nonwashable) crayon. Then, paint over them with watercolors—the numbers will appear!</p> 		
<p>Roll a sheet of paper into a cone shape and tape it together. Put the small end to your ear and listen to sounds. Notice how everything sounds louder.</p> 	<p>Start a family engineering tradition and build gingerbread houses together. Use graham crackers and icing to form the walls and roof, and decorate it with candy.</p> 	<p>Draw pictures to solve math problems.</p> <p><i>Example:</i> Adam has 3 crackers, and Allison has 3 crackers. How many crackers do they have altogether?</p> 	<p>With a parent, take turns secretly pressing an object (coin, uncooked pasta) into play dough. Predict the item based on the print it left.</p> 	<p>Look for two-digit numbers wherever you go. Round them to the nearest 10. (A house number of 27 rounds up to 30.)</p> 	<p>Scoop up two cups of soil, spread it out on a piece of wax paper, and observe what you see besides dirt. <i>Examples:</i> twigs, pebbles, bugs.</p> 	
<p>Draw a grid of dots (5 rows of 5 dots). Connect the dots in different ways to make as many shapes as possible.</p> 	<p>Test your powers of observation next time you're in the grocery store. Can you find 3 people wearing blue or 5 carts with milk in them?</p> 	<p>"Write" a number between 1 and 100 in the air with your finger. Have someone guess what you wrote. Then, ask that person to write one for you to figure out.</p> 	<p>Make paint from packets of powdered drink mix. Stir each packet into $\frac{1}{2}$ cup of water. Watch the powder dissolve. Then, paint a picture.</p> 	<p>Create paper snowflakes. Fold squares of paper in half and in half again. Cut shapes along all four edges. When opened, they're symmetrical (each half is a mirror image of the other).</p> 	<p>Write the numbers 1–12 in the pockets of an egg carton. Toss in two beads and make an addition problem from the numbers they land in ($3 + 6 = 9$).</p> 	
<p>At the library, read a biography of a scientist like Marie Curie or Thomas Edison. Think about what you would like to discover one day!</p> 	<p>Go outside on a windy day, and make a list of three ways you know it's windy even though you can't see the wind. <i>Examples:</i> you feel it on your face, a tree or flag is blowing, you hear it.</p> 	<p>Sort your toy vehicles into groups of trucks, cars, and planes. Or sort your crayons by color (blues, greens, reds).</p> 	<p>Put two ice cubes in the sun—one on a white sheet of paper and the other on a black sheet of paper. Which one melts faster?</p> 	<p>Family engineering challenge! Use household objects to create a device that will move a toy from one room to another. The catch? The toy can't touch the floor.</p> 	<p>Take turns thinking of a habitat (a place where animals live). <i>Examples:</i> rain forest, ocean. What kinds of animals live in each one?</p>	
<p>Make a "square foot" by cutting a 1 ft. x 1 ft. square of paper. Predict what will fit inside it (a shoe, a toy truck) and test your ideas. What's the largest item that will fit?</p> 	<p>Soak a sponge in water for 10 seconds. Squeeze the sponge into a measuring cup to see how much water comes out. Try again, soaking the sponge for 1 minute.</p> 	<p>Count your toys as you put them away. Say the numbers out loud in a sentence: "I put eight blocks in the bin."</p> 	<p>List all the ways you can use water (drinking, swimming). Post your list on the refrigerator, and check off each way your family uses water today.</p> 	<p>Count the penny collection that you started at the beginning of the month. Did you save more or less than you predicted?</p> 		

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(Beginning Edition)

MONTH						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
 <p>Read <i>Happy Birthday, Moon</i> (Frank Asch) or <i>Owl at Home</i> (Arnold Lobel). What does the character think the moon is doing? What is really happening?</p>	<p>Graph your family's favorite meals.</p> 	<p>Draw a picture of a tree, and point out each of its parts to someone (roots, trunk, branches, leaves).</p> 	<p>Make a counting book.</p> 	<p>Pour $\frac{1}{4}$ cup of milk in a measuring cup. Then, pour in $\frac{1}{2}$ cup of cereal. How high does the mixture rise? Enjoy your cereal!</p> 		
<p>Each day this week, choose a different math word. Use it as often as possible. <i>Example:</i> "half" (I ate half of my sandwich).</p> 	<p>Guess how many bites it will take you to eat a hamburger or an apple. Count while you eat. How close was your estimate?</p> 	<p>Grow a garden in a recycled jar. Ask a parent to help you research terrariums in library books or online (try climatekids.nasa.gov/mini-garden/). Then, make one together.</p>	<p>Move a cotton ball by blowing at it through a straw. Do this on a table and then on a rug. Which surface works better?</p> 	<p>Spin a game spinner 20 times. Use tally marks to keep track of how often you get each color or number. Count the results.</p> 		
<p>Ask an adult to help you find your state flower and bird at statesymbolsusa.org. Look for them when you go out.</p> 	<p>Estimate how long it will take you to do five jumping jacks or to climb across the monkey bars. Have an adult time you.</p> 	<p>Take turns making up riddles by describing an object's color, shape, and texture. <i>Example:</i> I am orange and round, and I bounce. What am I? <i>Answer:</i> a basketball.</p> 	<p>Tell story problems about activities you do. "There are 12 people in the pool and 5 floats. How many more people than floats are there?" ($12 - 5 = 7$)</p>	<p>Ask family members to make "body shapes" with you. Lie on the floor, and twist into a circle, triangle, or square together.</p> 	<p>Create a math pattern, and have someone predict the next number. <i>Example:</i> 2, 4, 6, 8. Then, let him give you a pattern to figure out.</p>	
<p>Go on a math scavenger hunt around the house. Can you find 4 keys or 3 crayons?</p> 	<p>Using a refrigerator magnet, see how many objects you can find that the magnet will pick up. Try a paper clip, a key ring, a key, child-safe scissors, a coin, a toy car, and chalk.</p> 	<p>Make a play dough sculpture that includes all of the following solid shapes: sphere, cylinder, pyramid, cube, cone.</p>	<p>Draw a picture of the people in your house. Cut them out, and arrange them from shortest to tallest and oldest to youngest.</p> 	<p>Look at the pictures in Lois Ehlert's <i>Planting a Rainbow</i>. Cut pictures of flowers from a seed catalog to make your own rainbow book.</p> 		
<p>What could you use to measure your desk or the kitchen table? Try small items that are all the same length, such as dominoes.</p> 	<p>Take turns tossing a die and forming a play dough snake the number of inches rolled. (Use a ruler.) <i>Example:</i> Roll 2, and form a 2-inch snake. Play 5 rounds. Add to the snake each turn. The longest snake wins.</p>	<p>Who can find an object with the most wheels? <i>Examples:</i> a scooter (4), a tractor trailer (18). The least number of wheels? A unicycle (1), a bike (2).</p> 	<p>Toss five coins on the table. Count the heads and the tails that come up. Write an addition problem adding them together ($3 + 2 = 5$).</p> 	<p>Make a list of words that describe a thunderstorm (<i>crash, boom, bang</i>). Then, list words to describe a snowstorm (<i>soft, white</i>).</p> 		

How to Build Number Sense



Simple activities like playing games, taking a walk, and counting paper clips can all improve your child's number sense—his ability to use and understand numbers. Try these ideas for math fun and learning!

Step on the numbers

Have your youngster make “stepping stones” by writing the numbers 1–10 on separate sheets of construction paper. Let him spread the papers from one side of a room to the other, keeping the numbers in order. Can he walk from number to number? As he steps on each one, ask him to say it out loud. Then, have him step on the numbers in reverse order, counting backward as he goes. He'll practice connecting the numbers he sees with the numbers he says when he counts. *Variation:* Have him scatter the sheets around the room in random order. Then, he can crisscross the room to find and step on each one in order.

Collect a set

This game lets your child see the relationships among numbers, number words, and quantities. Help her make three sets of matching index cards with numbers on one set, number words on the second set, and pictures representing 1–10 on the third set. (Example: For the set of “2” cards, write “2” on one card, write “two” on another card, and draw 2 houses on a third card.) You'll have 30 cards total. To play, shuffle the cards, deal 5 per player, and spread the rest facedown into a “pond.” Take turns drawing a card from the pond and trying to make sets. If the card



matches a number in your hand, keep it and discard another card into the pond. If the card isn't a match, return it to the pond. When you complete a set, pick 3 new cards. Play until no more sets can be made. Who has the most?

Feed the animals

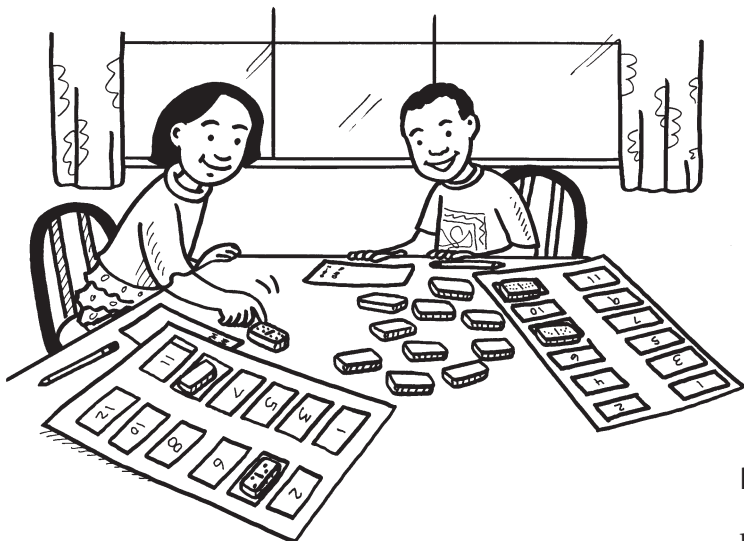
Let your youngster pretend he is a zookeeper in charge of feeding the animals. Have him gather a group of stuffed animals and put a paper plate or toy dish in front of each one. He should write the numbers 1–9 on separate slips of paper, mix them up, and place one in each dish. The number on the slip is how much the animal is supposed to “eat.” To feed each animal, he can count out pieces of dry pasta for each plate. After his stuffed animals finish their meal, he can collect the pasta, mix up the numbers, and feed them again.



Count the paper clips

Use paper clips for practice counting in different ways. First, let your youngster line up 20 paper clips in a row and count them one at a time (1, 2, 3, 4, ...). Next, ask her to line them up in two equal rows and skip-count by 2s (2, 4, 6, 8, ...). Then, have her make four stacks with 5 paper clips each and practice counting by 5s (5, 10, 15, 20). When she gets the hang of that, let her try skip-counting with 50 paper clips. She'll see that no matter how she rearranges the paper clips, the total quantity stays the same.

continued



Fill your parking lot

For this game, have each player draw 12 “parking spaces” (rectangles) on a sheet of paper and number them 1–12. Mix up a set of dominoes and place them facedown on the table. Let your child pick a domino, count the dots, and place it in her parking space for that number. *Example:* If her domino has 2 dots on one side and 3 dots on the other, she could either add the dots together and “park” it in space number 5 or subtract the smaller number from the larger one and park it in space number 1. Have your child write the number sentence that each domino makes ($2 + 3 = 5$ or $3 - 2 = 1$). Then, it’s your turn to pick a domino and park it on your board. Keep taking turns. If you get a domino that doesn’t match any of your open spaces, put it back, and your turn ends. The first person to fill all her parking spaces wins.

Grocery time

Build math into grocery unpacking with these ideas. First, let your child sort the groceries into groups. He might sort them by container (cans, boxes, bags) or by food groups (meat, vegetables, fruit). Next, have him count the objects in each group, write the number on a sticky note, and put it on the table in front of the items. Then, ask him to compare the numbers. Did you buy more boxes or cans? How many pieces of fruit did you get? He’ll practice sorting, writing numbers, counting, and comparing—and then he can help you put away the groceries! *Note:* Make sure perishables are refrigerated quickly.

Pick three

When you go for a walk or a drive, take along a small notebook and pencil for this place-value game. Have your youngster jot down two numbers that she spots (7 on a license plate, 6 on a mailbox). Then, ask her to write down the two-digit numbers they could make (76, 67). Which one is larger? Which one is smaller? She’ll see that a larger number in the 10s place makes a larger two-digit number. *Idea:* Let an older child try this with 3 numbers. She should gather 3 numbers and use them to make all the possible three-digit numbers. Have her put the numbers she makes in order from smallest to largest.



Quick number practice

The more your youngster explores numbers, the easier it will be to understand math concepts. Here are a few everyday suggestions:

- Work dot-to-dot puzzles to encourage counting and recognizing numbers.
- Read books about counting and other math concepts. Try books from “math authors” like Stuart J. Murphy, Marilyn Burns, and Greg Tang. You can ask your child’s teacher or a librarian for titles.



- Build in skip-counting throughout the day: “5, 10, 15 grapes for a snack” or “2, 4, 6 socks to make into pairs.”
- When waiting in line, ask your youngster “thinking questions” involving numbers. *Examples:* “Which line has more than 3 people waiting in it?” “We have 5 apples in a bag. What would 1 more be? One less?”