



Math Tips

Whether it's mealtime, bathtime, or anytime in between, there are always ways to nurture our children's growing minds. This PDF has 32 brain building activities for children ages 2-5 that also build math skills. You can print or cut them out, put them on your fridge, or carry them around—whatever helps to remind you that brain building moments are all around you in the things you already do.



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Shape Shopper

At the grocery store with your child, see if you can find a cereal box that's a rectangle. Look at the box together and talk back and forth about its shape. How many sides does it have? Count them together. Are all of the sides the same length? You can measure them with your hands.

Ages 3-5

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Brainy Background

When you talk about shapes in everyday places, you're helping your child learn their names, like rectangles. He/She sees rectangles have four sides and the sides can be different lengths. Now turn the box sideways and discover together whether the box still has sides with two different lengths.

For more activities like these, check out the free Vroom mobile app!



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What's Inside

At the grocery store? Look together for a cereal box that has a picture of what's inside. Talk back and forth about the shapes of the cereal pieces. Do you see circles? Take turns pointing to the circles. Are there other shapes like squares? Take turns finding them too.

Ages 2-3

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Brainy Background

You're helping your child learn more about shapes by helping him/her notice and talk about the pictures of what's inside cereal boxes. Your child is also developing the skill of paying careful attention to details when he/she discovers which shapes are the same and which are different.

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Sandwich Shapes

Make two sandwiches from bread slices shaped like squares. Cut one sandwich in half to make two triangles, and cut the other into two rectangles. What differences does your child notice? Count the sides together and explain that a three-sided shape is a triangle and a four-sided shape is a rectangle.

Ages 2.5-4

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Brainy Background

You're helping your child learn about the features of triangles (three sides) and of rectangles (four sides with right angles). When your child understands these concepts, you can play a guessing game that helps him/her remember the features of these shapes, "I am thinking of a shape that has three sides. What is it?"

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Touch and Feel Shapes

Hold up a shirt that has a pattern with shapes on it. With your child, trace your fingers around the different shapes. Talk back and forth about the shapes you both notice on the shirt. Are there squares, circles, or triangles? Where else do you see these shapes around you?

Ages 2-4

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Brainy Background

A first step in helping your child learn about different shapes (squares, circles, and triangles) is helping him/her notice them on clothes or other familiar objects. When you and your child find all the shapes that are the same, you're helping your child sort what he/she knows into categories.

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Box Detective

Invite your child to look around for a box. Talk back and forth about what you notice. How many flat sides does it have? How many corners? Can you find the edges—the thin lines where the two flat sides come together? Encourage your child to look for other boxes and talk about their shapes too.

Ages 2-5

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Brainy Background

Your child is doing early math when he/she explores the properties of everyday objects, like boxes. He/She is thinking like a scientist—noticing details, like what's the same and different, and putting these ideas into words.

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Circle Searcher

With your child, find as many round, circular objects as you can: pebbles, the center of a flower, a puddle, or the wheels of a nearby car. How many different circles can you find? Talk back and forth about what's the same and different about each of the circles you find.

Ages 3-5

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Brainy Background

You're helping your child learn about his/her world and about math ideas by being Circle Searchers together. You're also strengthening his/her skills in paying careful attention and figuring out what's the same and what's different in what he/she sees.

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Shop by Size

As you and your child walk through the aisles of the grocery store, ask him/her to point to the biggest milk container. Now find the smallest. Can he/she find the biggest loaf of bread? The smallest? What's different about them? What is the same?

Ages 2-5-4

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Brainy Background

When you Shop by Size, you're helping your child understand math ideas—larger and smaller. Keep asking questions to strengthen his/her understanding of these concepts and spark his/her curiosity, like, "Which container has the most milk? The least? Which do you think is heavier? Which is lighter?"

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Mealtime Math

Making dinner? Take a moment for Mealtime Math. Take measuring cups and ask your child questions like, "Which one looks bigger, a $\frac{1}{4}$ cup or a $\frac{1}{2}$ cup? How many $\frac{1}{4}$ cups will fit into the $\frac{1}{2}$ cup?" Test out your child's guesses together by filling the cups with water. Talk about what you discover!

Ages 4-5

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Brainy Background

Your child is thinking like a scientist when he/she plays Mealtime Math by making a good guess (or hypothesis) about what he/she expects to find, testing it, and talking about the discoveries. This is also helping your child learn about measuring and fraction concepts like $\frac{1}{2}$ and $\frac{1}{4}$.

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Sock Size

Have your child grab three to four socks of different lengths. Ask him/her which one is longest and which is shortest. How does he/she know? Invite him/her to lay them out, starting with the shortest and ending with the longest. Then switch it up, and lay them out from longest to shortest!

Ages 3-5

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Brainy Background

Making comparisons and ordering objects by dimensions, like size, are important concepts in math and in science. This activity helps your child understand length and size. You can apply this concept to other things around—the length of your fingers or the size of your shoes.

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I Am Very, Very Tall

Are you waiting somewhere? Make the time pass by playing this game. Have your child stretch his/her hands over his/her head and say or sing, “I am very, very tall.” Then crouch down, and say or sing, “I am very, very small.” Go back and forth. Then you stretch high and ask your child, “What am I now—small or tall?”

Ages 2-4

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Brainy Background

Your child learns concepts like small and tall best by acting them out with his or her body. This song helps your child focus, use his/her memory to repeat and act out the words, follow directions, and not go on autopilot—important skills for learning and for life.

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Sort and Switch

Lay out three to four similar objects—such as boxes or plastic containers of different sizes. Ask your child to line them up from longest to shortest. Then line them up a different way—such as from widest to thinnest or biggest to smallest. Have a conversation about all the ways you can compare them!

Ages 3-5

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Brainy Background

Children of this age are learning that when you move an object around it is still the same object—an important understanding in children’s development. Your child is also learning that when he/she moves objects around, he/she can notice different properties—their length, width, and size.

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Rock On!

Invite your child to scoop up some rocks. Put these rocks in one pile and invite him/her to scoop up fewer rocks for a new pile. Ask your child how he/she knows there are fewer rocks in this new pile. Does he/she count them or look at the size of the pile? This can be tricky—if the rocks are bigger, the pile may look bigger but have fewer rocks!

Ages 4-5

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Brainy Background

Rock On helps your child learn to make comparisons between bigger and smaller numbers. This activity also promotes critical thinking skills. For example, a pile may look bigger, but counting shows that there are actually fewer rocks in the pile because the rocks are bigger.

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Bunches of Numbers

When you're at the grocery store, encourage your child to look for bananas. Ask him/her to find the biggest bunch. Hold them up and count the number of bananas out loud together, "One, two, three, four, five. There are five bananas." Ask your child how many would be left if you pulled off one banana? Hold the banana you pretend to pull off, count again.

Ages 2-5

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Brainy Background

You're promoting the skill of focus when your child searches for bananas and then counts the number in a bunch. Studies show that children are more likely to remember and understand numbers when you count them out loud together and then repeat the results: "There are five bananas!"

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Snack Math

Give your child a snack—four crackers and three pieces of cheese. Invite your child to count with you and ask questions like, "Are there the same number of crackers and pieces of cheese? What happens if you put one piece of cheese on each cracker? Is there anything left over?"

Ages 3-5

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Brainy Background

Your child is learning about math in this experience with you—counting the numbers of crackers and pieces of cheese, figuring out if the numbers of each type of object are the same or different, and whether one has more or less.

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Clothing Count

Are you and your child both wearing clothes with buttons or pockets (or something else that's the same)? Together with your child, count the buttons/pockets on his/her clothes and on yours. What are the numbers? Who has more—you or your child? Count again to make sure!

Ages 3-5

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Brainy Background

Children learn what numbers mean through real-life experiences counting objects—not by memorizing number names. To find out which is more or less, help your child see actual quantities of things—like the number of fingers that represent the buttons or pocket. If you say the results out loud, it's easier to remember.

For more activities like these, check out the free Vroom mobile app!



Household Counting

Gather different items like forks and spoons, then with your child, count out loud how many items you have all together. Invite your child to sort them into groups (forks and spoons) and count the numbers in each group out loud. Ask him/her questions like, “Are there more spoons or forks? What is the smallest number of items?”

Ages 3-5

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Brainy Background

Your child is learning about creating categories and how numbers can represent quantities of things, such as more or less. Children tend to focus on more rather than less so it may help if you make one line of forks and one line of spoons above it so he/she can see which line has more and which has less.

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Leaf Learning

Encourage your child to gather a pile of different leaves. Together, count all of them out loud and then sort them by color. How many groups are there? Count the number of groups together. How many leaves are in each group? Count these too! Which pile has the most leaves and which has the fewest?

Ages 3-5

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Brainy Background

You're helping your child learn the skill of focus—paying attention to the details of the leaves to sort them in piles. You're also promoting the math concepts of most and least by saying the numbers out loud and showing your child how to figure out which pile has the most and the fewest leaves.

For more activities like these, check out the free Vroom mobile app!



Shelf Searcher

Invite your child to find the shelf that holds a favorite snack. Ask your child to point to the shelf above that snack and the shelf below it. What are on those shelves? Use words like “top,” “bottom,” and “in the middle” as you and your child talk about what you see on each of the shelves.

Ages 1.5-3

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Brainy Background

It may seem like everyday shopping, but you're helping your child learn to focus, to pay attention to details, and to learn words that describe spatial relationships, like “top,” “bottom,” and “in the middle.” Children learn these concepts best while they are engaged in meaningful and fun activities.

For more activities like these, check out the free Vroom mobile app!



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From Top to Bottom

Encourage your child to explore height by asking questions and inviting him/her to find answers by testing them. Ask him/her to guess which is higher and harder to reach: the bottom of the refrigerator? The sink's faucet? A cabinet door? Have a back and forth conversation about what he/she discovers.

Ages 2-4

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Brainy Background

Children can really understand the meaning of spatial relationships like height when they use their own bodies as a measuring tool. This applies to their own growth too. Your child may really like you to find a place to mark how tall he/she is and how his/her height changes over time.

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Front and Center

Putting on a jacket takes practice. Show your child how the front of the jacket ends up on his/her front. How might he/she put a jacket on the floor to put it on the right way? With the front or back face up? With the bottom toward him/her or away? Invite him/her to test these ideas.

Ages 2.5-5

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Brainy Background

You're helping your child learn to think like a scientist by making and testing predictions or guesses of what might happen. When you encourage your child, keep trying even when he/she isn't right, you're helping him/her take on challenges as he/she learns what "front" and "back" really mean.

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Side Switching

Invite your child to find a rectangular object (remember, squares are a special kind of rectangle)—like a magazine or box. Together, talk about what you notice. Which side is on top, facing up? If he/she rolls it on its side, now which way is that first side facing? How many times can he/she roll it before the top is facing up again?

Ages 2-4

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Brainy Background

This is a science experiment! Your child will need to pay careful attention to what the top of the object looks like and count how many times he/she can roll the object over until the top is facing up again. This experiment involves learning about spatial ideas like up, down, side, top, and back.

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Matching Half

Invite your child to find a leaf and fold it in half. Do the edges line up? If they do, that means the leaf is symmetrical—one half looks just like the other half. Together, search for different types of leaves and see which ones are symmetrical.

Ages 4-5

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Brainy Background

The idea of “symmetrical” is complex, but your child will learn it best through real experiences where he/she pays careful attention to details to determine if the halves of leaves are exactly the same or different. This activity promotes curiosity and a desire to learn more about the world.

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Store Shapes

Invite your child to look for a group of cans stacked in rows at the store. Ask him/her questions like, “Are the cans touching each other? Are the cans in the second row lined up so they are right above the ones below, or they different? Does it look like there are more cans on one of the rows than the other?”

Ages 3-5

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Brainy Background

You’re helping your child learn the skill of making connections, looking for what’s the same and what’s different in the things all around him/her. You’re also promoting the skills of focus, remembering, and communicating with this activity.

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Snack Stack

With your child, make a Snack Stack tower. You might stack a piece of banana on top of a piece of apple, then another piece of banana and another apple piece on top. Help your child figure out the pattern and what comes next. Then invite him/her to make his/her own Snack Stack pattern.

Ages 3-5

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Brainy Background

So much about learning—in math, in science, and in language—involves recognizing and analyzing patterns. This activity promotes the skill of making connections between what your child knows and what he/she is learning in order to figure out what might come next.

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Stripe Sets

Find a shirt or other clothing with a repeating pattern—like stripes of different colors. Encourage your child to name the colors and invite him/her to figure out the pattern itself. You can ask, “How many different color stripes are grouped together before the same group of colors repeats again?”

Ages 3-5

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Brainy Background

Think of Stripe Sets as helping your child to figure out a “code”—to see the connections among objects (in this case stripes) in a pattern. It promotes the skills of focus, self-control, making connections, and critical thinking. What other ways can you help your child find and talk about patterns?

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What Comes Next?

Grab some items to use in making patterns—like colored socks or spoons/forks. Start with one item (a white sock or spoon), then the other (a black sock or fork). Repeat the pattern, then ask your child what comes next. Mix it up with a different pattern or your child leads and you answer “what comes next?”

Ages 3-5

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Brainy Background

When you play this game with your child, you are supporting his/her skill in recognizing patterns. Not only is this critical to math, but it also helps your child see the connections between what he/she knows and what he/she is learning in order to figure out what might come next.

For more activities like these, check out the free Vroom mobile app!



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Row Connections

Invite your child to look at something with rows—a pinecone, a pineapple, an ear of corn or a raspberry. What do you and he/she notice about the rows—do they go in the same direction or a different direction? Are they on top of each other or not? Talk back and forth about the patterns you find.

Ages 2.5-5

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Brainy Background

Looking closely at what you find around you helps your child recognize patterns. Understanding patterns and thinking about what comes next are critical to learning math. This activity will also help your child learn to focus and pay careful attention as well as to appreciate the beauty all around.

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Equal Share

Shopping? Toss an even number (two, four, or six) of fruits, juice boxes or other packages into the cart. Ask your child, “If the two of us share these equally—that is, get the exact same number—how many do we each get?” See if he/she can figure out how to answer. Hint: he/she could divide them in two piles and count.

Ages 4-5

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Brainy Background

Sharing introduces your child to important ideas in math—like division and fractions. When you encourage your child to figure out HOW to solve a problem (and don’t solve it for him/her but give hints if he/she has trouble), you’re helping your child learn the skill of taking on challenges.

For more activities like these, check out the free Vroom mobile app!

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Fair Share

Place 10 raisins, pretzels, or other small snacks on the table. Ask your child, “Can you divide these into two piles so we each get the same or an equal number?” Count each pile when your child finishes and encourage him/her to keep working until the number is the same in both piles!

Ages 3-5

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Brainy Background

Your child is learning about the “same,” “equal,” and “dividing.” If you use these words with your child in everyday activities, they will become familiar words when he/she hears them in school. Your child is also learning about being fair and sharing—important ideas in getting along with others.

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Sock Divide

Take out four pairs of socks. Ask your child, “If we each take one sock from each of the pairs, how many socks will each of us get?” Encourage your child to count the number in each pile and then the total. You can summarize your child’s findings, “We each got four socks and there are eight socks all together.”

Ages 3-5

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Brainy Background

Think about all the math ideas in this activity! Your child is learning about pairs, about equal numbers, and about totals—all foundational to understanding division. You’re also helping your child feel confident in taking on challenges when he/she figures out how to solve this math problem.

For more activities like these, check out the free Vroom mobile app!



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One for Me/One for You

Make a small pile of similar objects—like things your child plays with. Ask your child to divide the pile into two with the same or an equal number of objects. You may want to give him/her hints—like putting one object in the first pile, then another in the second pile. Are there any objects left over?

Ages 3-5-5

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Brainy Background

You're helping your child learn about dividing objects into equal or unequal parts. Giving your child helpful hints so he/she can figure out how to solve the problem for himself/herself is very important because it helps your child become confident that he/she can take on challenges.

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Mealtime Calculations

Invite your child to count how many people will be eating a meal together. Then grab a handful of forks. Ask your child to count how many forks you took out. Are there enough forks for each person to have one, are there too many, or not enough? Figure out how many to add or take away to get the right amount!

Ages 3-5

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Brainy Background

Mealtime is a perfect time for you to talk about math ideas in everyday fun ways. You can have your child count out forks or take some food to cut in equal pieces so everyone gets about the same amount. What other ideas can you think of for Mealtime Calculations?

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