



Parent Tips

to Support 1st Grade Math Learning & to Have Fun At Home

Parents can help develop math skills no matter what their child's age by exploring the math in the world around them. First graders are developing a more complex understanding of number. They know that 6 can be 5 and 1, 3 and 3, etc. They know that all sets of 6, no matter what objects, are equivalent. And the last number counted is the number of the set. These big ideas underpin more efficient counting strategies such as counting on from the larger number. They are also developing the idea that "nothing" is represented by 0, and that any number in the system can be written with the digits 0-9.

give your child many chances to count and measure:

- Read a recipe and have your child measure the amounts for the ingredients. Use different measures such as teaspoons, cups, and pints.
- Using a calendar, count by 7's and then 1's to find the number of days until an upcoming event.
- Plan a meal you'd like to cook together, then make a shopping list for items that fit your budget.
- If you bring some vegetables home from the store, have your child count them, counting on from the number of vegetables you already have.
- Find creative ways to measure: how many paper clips long is this sheet of paper? How many hands high is the dog?
- Read *How Big is a Foot?* by Rolf Myller, about a creative apprentice who comes up with a more accurate way of measuring size.

find ways to practice number operations:

- Pick a number between 1 and 20 (or between any 2 numbers up to 100). Have your child guess the number, then you tell if your number was greater than or less than his guess. Have your child keep revising his guess until he guesses your number. Then trade roles.
- Count 8 pennies, then hide 4. Ask "How many are hidden?" Does she know there are 4?
- Go berry picking. Explore the berry patch with your child. Which color berries are ripe and good to pick? Have your child pick ten berries, then eat one. How many does he have left?

find ways to collect and organize information:

- Read weather charts, movie schedules, and other common numerical information you find in the news.
- When you're doing the laundry, have your child match all the pairs of socks. How many socks are there? How many pairs?
- Compare and organize tools, dishes, or other objects based on size, color, or weight.

some family games that use math skills:

- Dice, cards, and board games can help your child learn addition combinations.
- Dominoes helps practice counting by 5's.
- The card game "War" helps kids recognize which number is greater and which is less.
- Yahtzee
- Mancala
- Checkers and Chinese Checkers
- Any game that includes counting board steps, such as Chutes and Ladders



Parent Tips

to Support Kindergarten Math Learning & to Have Fun At Home

Kindergartners may easily compare sets of objects to know which is more, but may have difficulty figuring out how many they actually have. When they count they know *how many?* but may not know that the last number counted means the total quantity. At this age, kids are learning which set is more and may be able to sequence quantities from smallest to largest. But the question *how much more?* can be difficult. Many children are also fascinated with collecting and sorting objects.

give your child plenty of opportunities to count:

- Play number games during everyday activities, such as counting the number of steps, the number of trucks you see while driving, or counting the number of items going in the laundry.
- Read the calendar, and determine the number of days until an upcoming event.
- Young children can count the number of items that you bought at the store. If you buy multiples of 1 item (such as 10 cans of catfood), practice counting by 2's, 3's, or higher numbers
- Have your child count the change needed to pay for an item.
- Watch your child play to understand her mathematical knowledge. When your child counts, does she touch each object once? Is his voice in sync with his tag?
- Have your child distribute cookies or toys to family members, with each person getting an equal number

help your child recognize shapes and size relationships:

- At the grocery store, ask your child to find items that are triangles, circles, rectangles, and other shapes.
- Ask your child to recognize or stack the groceries you bought by container shape or organize by size.
- Organize a scavenger hunt where your child has to find objects of different shapes
- Make snowflakes using symmetry. Fold a square piece of paper in half diagonally to make a triangle, then fold in half 2 more times. Cut out small diamond or circular shapes from the edges, then unfold it. Experiment with different numbers of folds and shapes.

find ways to collect and organize information:

- Look around the house to find groups of 2 objects, like pairs of gloves or socks. Look for groups of 3's, 4's, and on up to 10's.
- Have your child help sort the laundry by various categories — by color, or by who an item belongs to.
- Take measurements for a project around the house.
- Using paper of different colors, make a paper chain with paper strips and tape. Encourage your child to create patterns by repeating colors and numbers of rings in a regular order. This can be done in connection with reading the calendar and counting down days to a special event.
- Collect objects in nature— leaves, rocks, shells and the like. When you get home, sort them by color, size, or type. How many different categories can you find? How many objects are in more than 1 category?

help your child develop reasoning skills:

- Help your child think about the permanence of a set. Put 6 pennies in a row, then change the arrangement. Ask "did the quantity change?"
- Kindergartners love repetition and patterning, which fosters mathematical thinking. Clapping patterns help your child discover sequences and predict what comes next.

some family games that use kindergarten math skills:

- Many card games require counting and score keeping.
- Dice games and dominos help kids learn to quickly recognize groups of dots from 2 to 12.
- Play board games that involve counting squares, such as Chutes and Ladders.
- Tic Tac Toe and Connect Four build recognition of rows of 3 and 4 counters.
- Tangrams, Mancala