



Family Friendly Math

GUIDE FOR KINDERGARTEN



A major focus for students in kindergarten will be recognizing quantities to 10 without counting (subitizing). This ability to subitize is crucial for students, as it allows them to understand how whole numbers can be combined in numerous ways. Another major focus for students in kindergarten will include building a strong conceptual foundation of addition and subtraction by exploring the relationship between these operations. Students need multiple opportunities with concrete and picture models to apply the concepts to mathematical and real-world situations.

Log on to the [SC Department of Education website](#), for the complete standards.

DATA, PROBABILITY, AND STATISTICAL REASONING

Kindergarten students begin to sort pictures and objects into categories, and answer questions about data organized in graphs. They study how to classify and display data. These **Steps to Success** include:



- Sort pictures or objects into 2 or more categories.
- Count the pictures or objects in each category.
- Observe data in t-chart, object graph, or picture graph.
- Answer questions about the data in the t-chart and/or graph.

MEASUREMENT, GEOMETRY, AND SPATIAL REASONING

Kindergarten students learn to identify and describe shapes. They learn to describe the positions of objects and compare the objects using precise language. They also learn to identify different coins. These **Steps to Success** include:



- Identify coins.
- Use comparison words like lighter/heavier or shorter/longer to describe objects
- Identify and describe triangles, squares, rectangles, circles, cubes, and spheres, including real-world examples.
- Describe positions of objects using terms such as below, above, beside, between, inside, outside, in front of, or behind.

NUMERICAL REASONING

Kindergarten students focus on counting and writing numbers as they build their number sense. They explore organizing and separating objects, as well as building numbers into tens. These **Steps to Success** include:



- Count by ones and tens to 100.
- Count backwards by ones from 10.
- Read, write, and represent numbers 0 to 20.
- Create, identify, and match concrete models of numbers 0-20 to numerals.
- Understand that when counting objects, the last number said tells the number of objects in a group. The number of objects is the same regardless of their arrangement or the order in which they are counted.
- Compare two groups of objects up to ten using more than, fewer than, or the same as.
- Use objects, pictures, and/or drawings to model the combining and breaking apart of numbers into a ten and some ones up to 19 ($11 = 1$ ten and 1 one, $12 = 1$ ten and 2 ones, etc.)
- Quickly recognize the number of objects in a group without counting.
- Explain how they recognized the number of objects without counting.
- Given a number up to 20, count out that many objects.

PATTERNS, ALGEBRA, AND FUNCTIONAL REASONING

Kindergarten students begin to make sense of amounts and patterns and to use written numbers to model concepts. By the end of the year, they will be able to add and subtract up to 10. These Steps to Success include:

- Add and subtract fluently up to 5 (e.g., $6-1=5$, $4+1=5$; $7-2=5$, $3+2=5$)
- Combine and break apart numbers up to 10 in different ways.
- Use objects or drawings to model number combinations created.
- Solve real-world problems by adding and subtracting up to 10, using objects and drawings.
- Recognize/Identify parts (addends) and whole (sum) in number sentences.
- Find sums and differences within 10 in real-world situations.
- Identify and describe simple repeating patterns like shapes, colors, and activities found in a shirt, drawing, or game.
- Extend and create simple repeating patterns.

ADDITIONAL INFORMATION

- The Khan Academy has activities to help master all the kindergarten through second-grade math skills: <https://www.khanacademy.org/math/early-math>.
- Public Broadcasting has fun on-line games, puzzles, and activities to use at home to teach math at <https://pbskids.org/games/math>
- For math games and activities, see <http://www.turtlediary.com/kindergarten-games.html>
- Check the children's section of your local library for picture books that use sorting and counting as a part of the story. There are also books that focus on math games.

HOW TO SUPPORT YOUR LEARNER AT HOME

Learning doesn't end at the school door. Your child needs you to succeed in Kindergarten. Work with your child at home, know what he is working on, and know whether he needs help with specific skills. Parents, your attitude toward mathematics is crucial in determining your child's achievement in mathematics. If you want your child to be successful in gaining these skills and knowledge, present a positive attitude toward math. Here are some suggestions for things to do at home to help your child learn:

Sort Laundry

Let your kindergartner sort the laundry. Sort it by types (socks, shirts, pants), by colors, or by a family member.

Count

Count, count, count to and with your child. Count fingers, steps, toys, cars, anything and everything. Connect the counting to the number of objects counted.

Sort Toys

Have your child sort toys by type: balls, blocks, model cars, and dolls. Ask if one group has more or has less. Is the pile of blocks bigger than the pile of cars?

Create Patterns

Create a repeating pattern with small toys or household items (pencil, pencil, pen, pencil, pencil, pen, etc.), and ask your child to describe the pattern and predict what will come next.

Do Puzzles

Print out from the Internet or buy "connect-the-dots" puzzles with a low number of dots (10 to 20.) Work with your child to connect the numbered dots to make the picture.

Identify Shapes

Practice identifying the shapes of objects. Get your child to fold a napkin into a triangle, a square, and then a rectangle. Look for cones and cubes around the house.

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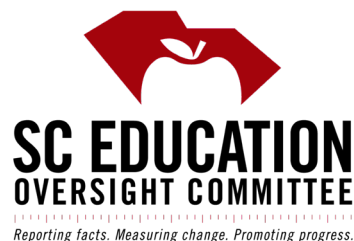
Practice

Practice giving your child one-step directions using terms like below, above, beside, between, inside, outside, in front of, or behind. (The ball is behind the chair. Can you bring the ball to me?)

Count and Compare

Ask your child questions that require counting and comparing. "How many chairs are in our house?" Listen to see if they understand that when counting, the last number spoken is the quantity counted. Do they continue to recount the group when you ask "How many?" Ask your kindergartner "Which chair is taller, this one or that one?" and "Which book is heavier?"

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The South Carolina Education Oversight Committee (EOC) is an independent, nonpartisan group of 18 educators, business people, and elected officials appointed by the legislature and governor. The EOC enacts the South Carolina Education Accountability Act of 1998, which sets standards for improving the state's K-12 educational system. The EOC reviews the state's education improvement process, assesses how schools are doing, and evaluates the standards schools must meet to build the education system needed to compete in this century.