



A Parent's Guide to:

Kindergarten Mathematics Standards

Parents and schools
working together for
student achievement.

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There has been a lot of discussion about “academic standards” and student achievement over these past few years. Standards set the target or the end result of teaching and learning for students at each grade level in reading, math, and other subject areas. The mathematics standards have five different strands – Algebra, Geometry, Measurement, Number Sense, and Statistics and Probability. This comes as a surprise to many parents who are amazed to hear that their elementary child is learning Algebra or Geometry or Statistics – areas of math many parents were not taught until high school. Each of these strands provides instruction on specific skills that can be used to solve problems and gain information. These skills continue to build on each other from basic learning in the elementary years through more complex applications of knowledge in high school.

The following guide presents the “performance descriptors” or expectations for mathematics at the grade level and provides an explanation or example of the skills. Most importantly, this guide has some fun activities for you and your child to do at home. This guide is a start. If you want additional information about how your child is doing and what your child is learning at school, talk to your child’s teacher. For other learning at home ideas, visit the South Dakota Parent Resource Network online at www.sdprn.org or call toll free at 800-219-6247.

The Mathematics standards for Kindergarten have five different strands – Algebra, Geometry, Measurement, Number Sense, Statistics and Probability. Each strand could contain several proficiency statements. Each proficiency statement is printed in **bold** print followed by an explanation.

ALGEBRA

By the end of Kindergarten children will:

- **Recognize the plus and minus symbols.**

This means children. . .

- Can identify the “+” and “-” symbols and know what to do when a “+” sign or a “-” sign is placed between two numbers. ($3+4 = 7$ or $7-4 = 3$)
- Understand the use of + and – signs as applied or used in physical situations such as these: Mary had 2 crackers, and Steve had 2 crackers. How many crackers did they have together? ($2+2$).
Bob had 5 apples, and he ate 1 apple. How many does he have left? ($5-1$).

- **Compare, sort, and classify sets of objects based on one attribute.**

This means children. . .

- Sort items by size, shape, or color (size, shape, color are attributes or characteristics of items)

- **Extend two-part repeating patterns.**

This means children. . .

- Identify and continue repeating patterns of 2 parts using real objects. For example, green triangle, orange square, green triangle, (orange square), or tennis shoe, tennis shoe, sandal (sandal).

GEOMETRY

By the end of Kindergarten children –

- Identify and describe plane figures and find examples in the environment.

This means children. . .

- Recognize basic shapes such as circles, square, triangles, and rectangles and can identify these shapes in their environment.
- A plane figure is flat – a circle is a flat object different from a ball which would be defined as a solid object or sphere; a square (flat) is different from a cube (solid).

MEASUREMENT

By the end of Kindergarten children –

- **Estimate the length of concrete objects using nonstandard units.**

This means children. . .

- – Guess the length of an object by comparing it with another object. “A book is about ___ paper clips long.” Or “the kitchen table is about ___ books long.”

- **Compare and order length, height, and weight of concrete objects using non-standard units.**

This means children. . .

- – Use words such as longer or shorter (for length), taller or shorter (for height), or heavier or lighter (for weight). The baby is heavier than the doll. The ball is lighter than the desk.

- **Identify coins.**

This means children. . .

- – Know pennies, nickels, dimes, and quarters.

- **Tell time to the nearest hour and name the days of the week.**

This means children. . .

- – Know time to the nearest hour using both a regular clock and/or a digital clock
- – Name the days of the week.

NUMBER SENSE

By the end of Kindergarten children –

- **Solve addition and subtraction problems up to 10.**

This means children. . .

- Use numbers up to 10 in addition/subtraction problems with real objects. For example, 4 cookies + 3 cookies = 7 cookies. Mom needs 5 eggs to make the pudding. She has 2 eggs in the refrigerator. How many more eggs will she need to make the pudding? ($5-2=3$)

- **Read, write, count and sequence numerals to 20.**

This means children. . .

- Count up to 20 and backward from 10 to 1.
- Say the number before and after a given number from 0-20.
- Count a group of objects and write the correct number answer (10 pencils on the table – child will count pencils and then write 10)

- **Create one half of a whole.**

This means children. . .

- Split something into two equal parts – half of a cookie or half of an apple.

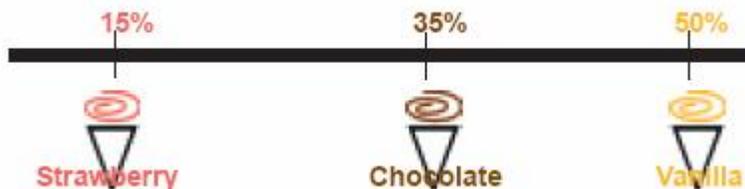
STATISTICS AND PROBABILITY

By the end of Kindergarten children –

- **Describe data represented in simple graphs (using real objects) and pictographs**

This means children. . .

- Understand information found on a graph. For example, more people like chocolate ice cream than like strawberry ice cream, but the most favorite ice cream flavor is vanilla.



LEARNING AT HOME!

- Math can be found in nature – count the number, sizes, and kinds of trees on your street; look at the various shapes and patterns in blooming flowers.
- Show patterns using colored blocks or M&Ms – point out red/blue/yellow/red/blue/yellow and ask your child to continue the pattern.
- Line up different colors of M&Ms to make a graph.
- Have your child help set the table – I have 2 spoons, but I need 5 for our family – how many more spoons do I need?
- Have your child search for and point out different shapes on his clothes or in the room. Help with the correct names for rectangle, triangle, circle, square, etc.
- Use comparative words such as longest/shortest, biggest/smallest, heaviest/lightest, holds more/less. Arrange family shoes in size by the door.
- Make a game of counting, even if your child already has good counting skills. Count everything, the number of stairs, steps to the bedroom.
- Use food items or sheets of paper to demonstrate what a whole unit is – cut a sandwich into halves and quarters, then put it back together.
- As you travel, play “Number Find.” Everyone be on the lookout for numbers on license plates, signs billboards, etc. Circle it on a grid like a Bingo card. The person who spots the number first gets to circle it. The first person to circle all the numbers on the grid wins.
- Have your child sort mail, clothes/laundry, or groceries by size, color or shape.
- When driving point out the shapes of road signs.

South Dakota Resource Network

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