Standards Guide for Parents
1st Grade

Mathematics

This guide provides a summary of what your child will learn by the end of first grade in mathematics in the state of Kansas. This guide will also give some examples of the mathematics in first grade so you can assist your child. To view the standards in their entirety, please go to: http://community.ksde.org/Default.aspx?tabid=5276 .

The Mathematics Standards are divided into two sections. The first section is the same for every grade level from Prekindergarten to 12th Grade and is described below. They address *how* mathematics is to be taught and *how* the students are to engage with the mathematics. The second section outlines the content to be taught at each grade level. They are *what* students will learn.

Standards for Mathematical Practice · 1st

1. Making sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning.

Your child will be taught skills that will encourage critical thinking and problem solving. Some examples include:

➢ Teachers will encourage students to use mental math as well as manipulatives.
➢ Students will build upon their "counting on" strategies learned in Kindergarten but with larger numbers. For 40 + 20, students will start at 40 and skip up 10 and then 10 more.
➢ Vocabulary building is a focus. Students will understand that a square is a special rectangle because all the sides are *equal*.
➢ Teachers will begin to expect students to create equations to represent situations.
➢ Students will be exploring when to use ten frames and when to use the number line for different problems.
➢ Commutative property will be used so students can see that 4 + 7 and 7 + 4 equal the same total.
➢ Teachers will explore student understanding through discussions.

Content Standards for Mathematics · 1st

The specific skills and content your child will be taught come from the content standards. The domains are listed with <u>some</u> examples of the mathematics at the 1st grade level.

Operations and Algebraic Thinking:
➢ Add and subtract with objects, pictures, or expressions within 20.
➢ Solve word problems with the unknown in different positions (? + 4 = 12; 8 + ? = 12)
➢ Understand that a problem can be made easier by using strategies. Example: 2 + 4 + 8 can be solved quickly by adding the 2 and 8 to make a 10 and then add the 4 for 14.

Number and Operations in Base Ten:
➢ Working with double-digit numbers and determining tens and ones.
➢ Understanding that 35 can be 3 tens and 5 ones but it can also be 2 tens and 15 ones OR 1 ten and 25 ones OR 35 ones. (This understanding will help with computation in later grades.)
➢ Mentally find 10 more or 10 less with any two-digit number.
➢ Compare numbers using the symbols <, >, =.

Measurement and Data:
➢ Tell and write time to the hour and half-hour on both analog and digital clocks.
➢ Group objects into categories and compare how many are in each category.

Geometry:
➢ Partition circles and rectangles into halves or fourths.

Kansas Additions:
Algebraic Patterning – look for patterns in shapes and numbers and be able to describe them.
Probability and Statistics – examine information and create a bar graph or pictograph.

Kansas College and Career Ready Standards
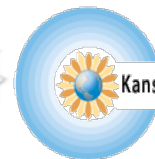
1st grade students begin to learn their facts and must base this learning on relationships and strategies. Strategies lead to better fluency with basic facts. You can help you child more fully develop fact fluency by using the following strategies:

- ❖ Encourage finding tens when adding numbers. Example: $8 + 5 = ?$. Take 2 from the 5 and put it with 8 to make 10. Then 10 with the remaining 3 makes a total of 13.
- ❖ Finding doubles is a strategy that many students find useful. Example: $6 + 7 = ?$. Find the "hidden double" of $6 + 6 = 12$ and then just add the one more from the 7 to get 13.

First grade students will explore the meaning of the equal sign. Have discussions with your child as to whether equations are true or false. Use problems similar to:

- ❖ $4 + 6 = 6 + 4$
- ❖ $8 = 8$
- ❖ $9 - 3 = 5 + 1$
- ❖ $7 = 8 - 1$

Word problems become more challenging for students because they will find not only unknown totals, but also unknown starts or unknown changes. Example: *I had some pencils in my box but dropped 3 of them in the hallway. I now have 7 pencils in my box. How many pencils did I have before I dropped some in the hallway?* (Start unknown)

Start	Change	Result
?	3	7

I had 10 pencils in my pencil box but dropped some in the hallway. Now I have 7 pencils in my box. How many did I drop in the hallway? (Change unknown)

Start	Change	Result
10	?	7

Attributes

First grade students are beginning to discover similarities and differences between shapes. Cut out two shapes (or find two shapes in a magazine) and have them tell you all of the attributes that are the same and all the attributes that are different.

Example: *The child is given a square and a rectangle. The child should note that both shapes have the same number of vertices (corners) and the same number of sides. They could also note that all the sides are straight and the angles are the same. The child should note that the square has all equal sides.*

*Squares are rectangles – but special rectangles.

Playing card games will encourage mental math and strategy work. Try these games:

- ❖ **Make Ten** – Remove all face cards and deal out 7 cards to each player. Place the rest of the cards in the middle of the table. Each player will take turns and ask for a card that can be added to another card already in their hand to make a ten. (Ex: if I have a 7 then I would ask if anyone had a 3 to make a ten). If the player makes a ten then those two cards are placed in front of the player. If not, then that player draws a card from the deck in the middle of the table. The first person to get rid of all their cards is the winner!
- ❖ **Catch a Double** – Remove all face cards and deal out the rest of the cards to all players. Each person places their cards face down in front of them. At a signal, all players turn over the top card. The player to say the correct double for their card, wins that hand and gets all the players cards. The player with the most cards wins!