

Kindergarten - Second Grade Mathematics Milestones

Kindergarten

- Count objects by ones and tens to tell how many there are.
- Add and subtract up to 10 or less using drawings and objects.
- Name geometric shapes.
- Add and subtract up to 5 quickly and accurately.
- Compare objects using words such as longer, shorter, bigger, and smaller.

First Grade

- Solve word problems by adding and subtracting.
- Know addition and subtraction facts up to 10.
- Tell and write time to hours and half-hours.
- Identify values of coins.
- Understand place value in 2-digit numbers for addition and subtraction.
- Identify the properties of common shapes and combine shapes to make new shapes.

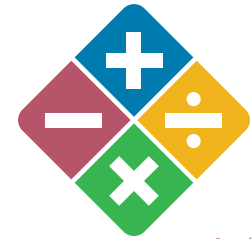
Second Grade

- Add and subtract within 20 quickly and accurately (math facts).
- Add and subtract 3-digit numbers using place value and regrouping and use to solve one- or two-step word problems.
- Analyze 2D and 3D shapes to build an understanding of area and volume.
- Divide shapes into equal sections to build a foundation for fractions.
- Tell time to the nearest 5 minutes.
- Solve word problems involving money.

Family Engagement

How to help your student succeed in mathematics:

- Make mathematics a part of your student's daily routine by:
 - » Counting
 - » Cooking
 - » Sorting
 - » Adding and subtracting
 - » Creating math stories to solve everyday problems
- Talk with the teacher about the problem-solving strategies and content your student is learning and practice those strategies at home.
- Visit the *math4life* website at: <https://wvde.us/math4life/> for information about:
 - » Resources for families
 - » Fostering success in mathematics
 - » Information about what your student should master in each grade level
 - » Activities to help with mathematics fluency and understanding
 - » Links to videos and children's books that assist with counting, identifying patterns, and recognizing shapes



West Virginia
math 4 life

*What Students
will Learn*

KINDERGARTEN - 2ND GRADE



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Mathematical Habits of Mind Thinking Skills for Life

MHM1: Make sense of problems and persevere to solve them.

Identify what the problem is asking and work until a solution is found.

MHM2: Reason abstractly and quantitatively.

Use reasoning to examine numbers and ideas.

MHM3: Construct viable arguments and critique the reasoning of others.

Use clear and precise language in discussions with others and to explain one's own reasoning.

MHM4: Model with Mathematics.

Represent problems in multiple ways using drawings, objects, charts, and equations.

MHM5: Use appropriate tools strategically.

Use math tools that will help solve a problem such as rulers, protractors, and drawings.

MHM6: Attend to precision.

Make sure the answer makes sense in the context of the problem.

MHM7: Look for and make use of structure.

Look for patterns and structure to gain understanding and speed in problem solving.
Ex. $4 + 7$ and $7 + 4$ both equal 11.

MHM8: Look for and express regularity in repeated reasoning.

Look for repeated patterns in calculations.

For additional information about Mathematical Habits of Mind go to <https://wvde.us/math4life>

Sample Problems for Kindergarten - Second Grade

Kindergarten: Counting and comparing

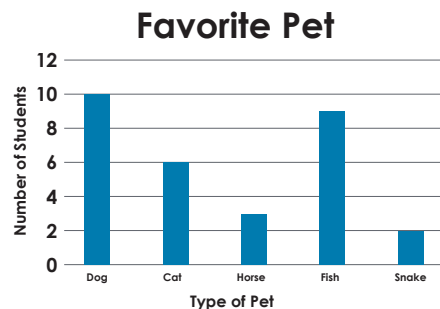
A student creates rows of squares and circles as shown. The teacher asks, "Which row has more?"



The student says, "I grouped 1 square with 1 circle. There are more squares than circles since I had 4 extra squares."

First Grade: Using models to solve problems

Students are given a graph with information. Students are expected to answer questions and explain how they arrived at the answer.

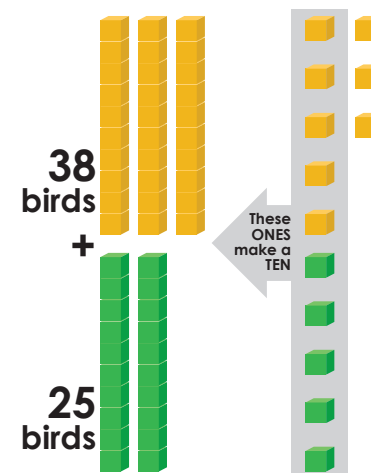


1. How many more students liked dogs than snakes? Student says, "Eight more students liked dogs than snakes."
2. How do you know? Student says, "I looked at the graph and saw that 10 liked dogs and 2 liked snakes, then I subtracted 2 from 10."
3. Can you write a math sentence that shows how you came up with your answer? Student writes $10 - 2 = 8$.

Second Grade: Solve word problems using a model for place value and addition with regrouping

There are 38 birds in the park. Suddenly, 25 more birds arrive. How many birds are there now?

The student draws the following to represent the problem.



Six-tens plus three ones is 63.

The student uses the visual to build a foundation for understanding regrouping, and later uses the standard algorithm shown below.

$$\begin{array}{r} 1 \\ 38 \\ +25 \\ \hline 63 \end{array}$$