First Grade - Second Grade Mathematics Milestones

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
- Skip count by ones, twos, fives, and tens

Second Grade

- Add and subtract within 20 quickly and accurately (math facts)
- Add and subtract 3-digit numbers using models and drawings based on place value 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
- Count money
- Measure length using appropriate tools

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
- » Identifying shapes in everyday objects

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: wvde.us/math4life for information about:

- » Resources for families
- » Examples of 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

math4life
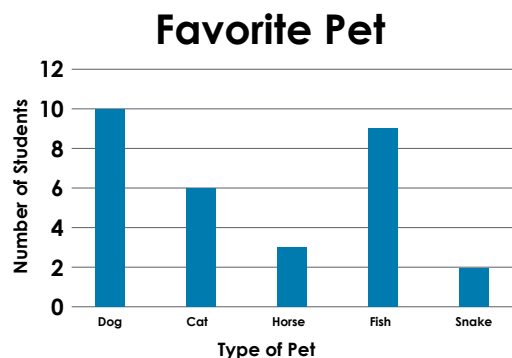UNITe with numeracy
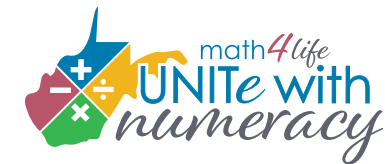
What Students Will Learn

1ST GRADE - 2ND GRADE

Sample Problems for First Grade - Second Grade

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.

Favorite Pet

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.
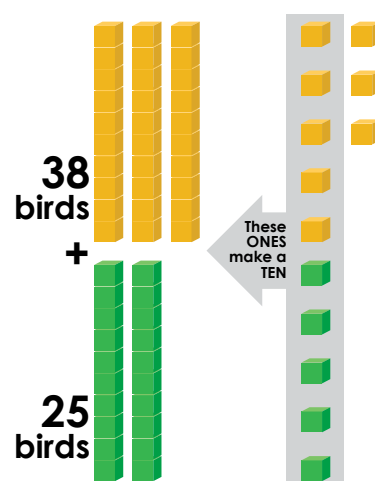
Eight ones plus five ones is thirteen ones or 1 ten and 3 ones.

Five tens plus one ten is six tens.

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 at right.

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

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 continue working until a solution is found.

MHM2: Reason abstractly and quantitatively.
Use reasoning to examine and connect numbers and ideas.

MHM3: Construct viable arguments and critique the reasoning of others.
Explore, explain, discuss, and share thinking and reasoning used to solve problems.

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 blocks, manipulatives, rulers, protractors, drawings, etc.

MHM6: Attend to precision.
Use clear and accurate language, units, calculations, and symbols to solve problems and check the reasonableness of answers.

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 to make generalizations and solve problems.