



SECOND GRADE MATHEMATICS – Unit 2

Dear Parents,

During Unit 2, your child will use their understanding of addition and place value to develop fluency with addition and subtraction within 100. They will solve problems by applying their understanding of fact strategies and models for addition and subtraction. Your child will develop, discuss, and use efficient, accurate and generalizable methods to compute sums and differences of whole numbers to 1,000 using their understanding of place value and the properties of operations. They will select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds, leading them to understand why procedures work.

OPERATIONS AND ALGEBRAIC THINKING

Students need to:

- fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction
- represent whole-number sums and differences within 100 on a number line diagram
- explain why addition and subtraction strategies work, using place value and the properties of operations
- add up to four two-digit numbers using strategies based on place value and properties of operations
- use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem
- solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
- count within 1000; skip-count by 5s, 10s...
- draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph
- fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers

WAYS PARENTS CAN HELP

- Help your child use addition or subtraction to solve real world problems (e.g. adding a bill, calculating change from a purchase...) and have them explain why the addition or subtraction strategy they used worked.
- Create and solve word problems involving money. For example, if you have 2 quarters and 3 dimes, how many cents do you have?
- Practice counting a group of all nickels (skip counting by 5) and then all dimes (skip counting by 10)
- Use the ace through nine cards from one or two decks of playing cards to help practice single digit addition facts. Your child can simply turn over or pick the two cards to add together. You can also play a game where each partner picks two cards from their face down pile and adds them together. The player whose cards made the largest sum gets all four cards. Repeat. The player with the most cards at the end wins.

BACKGROUND INFORMATION AND EXAMPLES FOR PARENTS

Addition

<http://video.carrollk12.org/view/LAZARUSDECOMPOSINGADD>

<http://video.carrollk12.org/view/LAZARUSOPENNUMBERLINEADD>

<http://video.carrollk12.org/view/HEIMBASETENMODELSWITHADDITION>

Subtraction

<http://video.carrollk12.org/view/LAZARUSOPENNUMBERLINESUBT2>

<http://video.carrollk12.org/view/HEIMBASETENSUBT>

Using an Organizer for Word Problems

<http://video.carrollk12.org/view/PATRICKSOLVINGWORDPROBSUSINGORGANIZER>

<http://video.carrollk12.org/view/PATRICKWRITINGEQUATIONSWITHORGANIZER>

KEY VOCABULARY

Add	Fluent	Number Sentence
Addend	Fewer	Ones
Associative Property	Graph	Plus
Commutative Property	Inverse Operation	Scale
Data	Mentally	Strategy
Difference	Minuend	Subtract
Equal	Minus	Subtrahend
Equality	More	Sum
Equation	Number Line	Tens