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## FIRST GRADE MATHEMATICS – Unit 3

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Dear Parents,

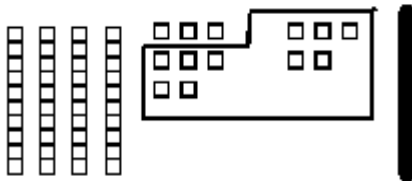
During Unit 3, your children will continue to solve problems, become more fluent with basic facts to 10, and work with two digit numbers, developing strategies for addition and subtraction. When we were children being taught to add and subtract two digit numbers, we used words such as “borrowing”, “trading”, “cross out” or “put a 1 in the tens place”. Our answers would look like this:

$$\begin{array}{r} 1 \\ 48 \\ + 5 \\ \hline 53 \end{array}$$

$$\begin{array}{r} 80 \\ - 30 \\ \hline 50 \end{array}$$

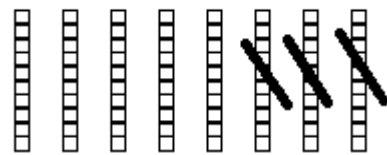
As your child learns to add and subtract, we will be focusing on place value and how to combine or take away parts of the number. Our instruction will rely heavily on drawing pictures to represent the numbers and operations. For your child, the problems above will look like this.

$48 + 5$



8 ones and 5 ones equals 13 ones  
13 ones equals 1 ten and 3 ones  
The total is 5 tens and 3 ones or 53

$80 - 30$



8 tens take away 3 tens  
Equals 5 tens  
5 tens equals 50

The pictures above allow us to “see” what is happening with the numbers as we add or subtract. Math work that your child brings home will look like these examples. We ask that you talk with your child about their pictures and encourage them to represent their math with pictures.

## NUMBER AND OPERATIONS IN BASE TEN

### *Your children need to:*

- Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. **(continued from previous units)**
- Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. **(continued from previous units)**
- Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. **(continued from previous units)**
- Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. **(continued from Unit 2)**
- Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ). **(continued from previous units)**

## WAYS PARENTS CAN HELP

- Practice stating the number that is ten more or ten less than a given number. Have your child explain how they found the answer.
- Practice solving addition problems that contain three addends and whose sum is less than 20. Have your child explain which strategy they used to solve the problem. (ex.  $3 + 5 + 3 = 11$  Your child might state that they added  $3 + 3$  first because it is a doubles fact and the  $6 + 5$  is a doubles +1 fact ( $5 + 5 + 1$ ).
- Use objects and/or drawings to represent and solve addition problems involving a 2 digit number and a 1 digit number.
- Use objects and/or drawings to represent and solve addition problems involving a 2 digit number and a 2 digit number.

## KEY VOCABULARY

add	number
addends	numeral
category	ones
compare	place value
compose	property
data	subtract
difference	strategy
digits	sum
equal	tens
equation	unknown
graph	