Grade 3 Unit 1
Numbers and Operations in Base Ten

Volume 1 Issue 1

References

Helpful Links:

http://funschool.kaboose.com/formula-fusion/games/game_addition_attack.html

Math Facts Interactive Game
http://www.playkidsgames.com/games/mathfact/mathFact.html

http://www.aplusmath.com/Flashcards/Flashcard_Creator.html

http://www.fun4thebrain.com/addition.html

http://www.fun4thebrain.com/subtraction.html

http://www.sheppardsoftware.com/math.htm#placevalue

Georgia Math Grade 3 Textbook Connection:
Ch. 1: Lessons 1-6

Ch. 2: Lessons 1,4,5,6,9

Ch. 3: Lessons 1 -4

Textbook Online:

connected.mcgraw-hill.com

Ask your teacher for the online passcode.

Dear Parents

Welcome to the new school year! We are eager to work with you and your students as we learn new mathematical concepts. Your student's math class is calling for students to be actively engaged in doing math in order to learn math. In the classroom, students will frequently work on tasks and activities to discover and apply mathematical thinking. Students will be expected to explain or justify their answers and to write clearly and properly. Your students will receive a consumable My Math textbook and online access from their teacher.

Concepts Students will Use and Understand

- Estimate sum and/or difference of numbers
- Apply estimation to solve problems, and determine when it is necessary or appropriate to apply estimation strategies
- Add and subtract numbers within 1000 fluently, accurately, efficiently (using a reasonable amount of steps and time), and flexibly using a variety of strategies BEYOND the standard algorithm
- Add and subtract both vertically and horizontally and apply the commutative and associative properties.
- Understand how to use an inverse operation to verify computation accuracy.
- Demonstrate place value understanding beyond algorithms or procedure for rounding.
- Round numbers to the nearest 10s and 100s
- Solve 2-step word problems with addition and subtraction

Vocabulary

Addend: a number being added. In 5 + 9 = 14, 5 and 9 are addends and 14 is the sum.
Associative Property of Addition: when there are three addends, the sum does not change regardless of which two numbers you group together first.
Commutative Property of Addition: the order in which two numbers are added does not change the sum. As in: 9 + 7 = 16 and 7 + 9 = 16
Difference: the answer obtained when you subtract two numbers
Operations: addition, subtraction, multiplication and division
Sum: the answer obtained when you add two numbers
Inverses: operations that undo each other, such as addition and subtraction
Try http://intermath.coe.uga.edu/dictnary/homepg.asp or http://www.amathsdictionaryforkids.com/ for further examples.

Symbols

+ addition
- subtraction
× or • multiplication
÷ division

Examples 1

248 + 345 =
500 + 80 + 13
500 + 80 = 580
580 + 13 = 593

$$\begin{array}{r} 248 \\ +345 \\ \hline 500 \\ 80 \\ +\ 13 \\ \hline 593 \end{array}$$

Here, two students used the *partial sums* strategy and recorded their thinking in two different ways. Breaking apart the numbers helps make it easier to compute.

Example 2

326 + 247 =
(326 – 3) + (247 + 3) =
323 + 250 = 573

This example shows how a student could use *compensation* to solve an addition problem.

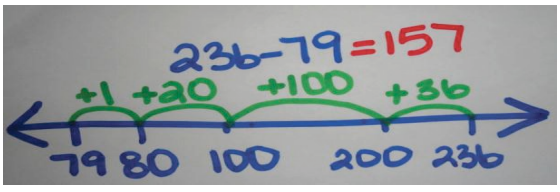
Example 3

216 + 149 =

216 + (100 + 40 + 9)
216 + 100 = 316
316 + 40 = 356
356 + 9 = 356 + (4 + 5)
356 + 4 = 360 + 5 = 365

Third graders can also use the strategy adding up in chunks. One number is kept whole and the second number is broken into easy-to-use chunks.

Example 4



This third grader used an *open number line* by adding up in chunks. He started at 79 and counting up to 236 in order to subtract.

1 + 20 + 100 + 36 = 157

Students are encouraged to use this strategy in a way that makes sense to them.

Example 5

There are 178 fourth graders and 225 fifth graders on the playground. What is the total number of students on the playground?

Home Activities:

Copy a license plate number as you are traveling or watching cars go by. Ask your child to read the license plate as a number (excluding the letters). For example, if the license were 62ab315, the number would be sixty-two thousand three hundred fifteen. Find other license plates and let your child read their numbers. Is the new number less than, greater than, or equal to your first license plate? Ask your child to estimate the difference between your first number and another license plate. Is it about 10, 100, 1,000, or 10,000 more or less? Find the license plate with the greatest and smallest number on it.

Play the game "What's the Difference?" The object is to make the smallest difference (answer in a subtraction problem). You will need at least two players and playing cards (Ace =1) through 10 (10=0). Place the deck face down. A player draws a card from the deck and places it face up. Each player selects a space on his game board and writes the number of the card on that space. Game boards can be drawn on paper as shown below:

Players draw five more cards to fill in their game cards. As shown below:

Player 1	**Player 2**
522	657
367	232

Players complete the subtraction. The player with the smallest difference is the winner for the round and scores 1 point. In the event of a tie, each player receives 1 point. Any negative difference causes that player to strike out for that round. The winner of the game is the player with the most points after a set number of rounds or a set time limit.