Grade 2 Unit 2
Becoming Fluent with Addition and Subtraction

Volume 1 Issue 2

References

Helpful Links:

www.gregtangmath.com

www.gamequarium.com/placevalue.html

www.gamequarium.org/dir/Gamequarium/Math/Addition.html

www.mathstories.com/

www.xtramath.org/

www.coolmath4kids.com/

Math Grade 2 Textbook Connection:

Ch. 3, Lessons 3.1-3.2
Ch. 4, Lesson 4.2

Textbook Online:

http://connected.mcgraw-hill.com/connected/login.do

Student User ID:
ccsd(student ID)
Password: cobbmath1

Dear Parents,

We hope your school year is off to a great start and you are seeing the deeper understanding of math concepts already this year. During this unit your child will be exploring addition and subtraction of two-digit numbers and will get to try many different strategies based on place value and understanding. Please keep in mind that while these strategies may be different from the way you are familiar with adding and subtracting, the purpose of these strategies is to build a strong foundation of place value when computing so students will eventually understand why the traditional methods of addition and subtraction work.

Concepts Students will Use and Understand

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Understand how addition and subtraction affect quantities and are related to each other.
- Know the multiple meanings for addition (combine, join, and count on) and subtraction (take away, remove, count back, and compare)
- Use the inverse operation to check that they have correctly solved the problem.
- Use strategies such as doubles, doubles plus and minus one, and make a ten to work on fluency. ***Fluently is accurately and efficiently.***

Vocabulary

Expanded Form: A multi-digit number is expressed in expanded form when it is written as a sum of single-digit multiples of powers of ten. For example, 643 = 600 + 40 + 3.
Base Ten Blocks: A manipulative used to build numbers and to help with addition and subtraction at the conceptual level.
Place Value: The value of a digit based on its place in a number.
Join: to put together (add)
Separate: to take apart (subtract)
Total: The number when sets are combined.
Sum: The total when numbers are added.
Inverse Operations: the inverse operations for addition is subtraction; the inverse operation for subtraction is addition.
Difference: The result when one number is subtracted from another.
Equation: A mathematical expression where one part is equal to the other part. Example: 50 + 26 = 70 + 6.

Try http://intermath.coe.uga.edu/dictnary/homepg.asp or http://www.amathsdictionaryforkids.com/ for further examples.

Symbols

+ addition

- subtraction

= equal

Example 1

Students are going to use their understanding of place value and expanded form from unit 1 to help them add and subtract within 100 fluently. The following is a common way students might add 2-digt numbers.

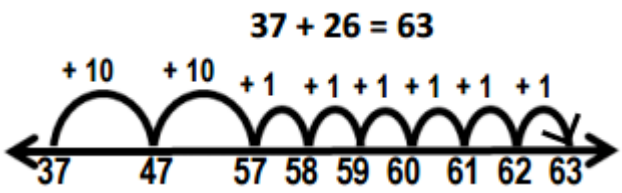
47 + 29
(40 + 7) + (20 + 9)
(40 + 20) + (7 + 9)
60 + 16
60 + 10 + 6 = 76

2nd grade students do not need to be able to use parenthesis and write their thoughts this detailed. They just need to be able to understand that they can group tens and group ones and the order does not matter.

Keep in mind that "naked" numbers are abstract and given a context can help students conceptualize the numbers more easily. Instead of using the numbers 47 and 29, say 47 acorns and 29 acorns.

Example 2

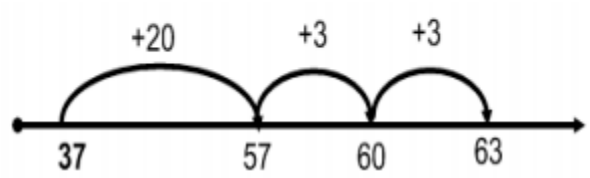
An *open number line* allows students to add or subtract in chunks and serves as a visual recording method to keep track of the computation. Students are encouraged to use this strategy in a way that makes sense to them – numbers may be broken apart in many different ways. This is 1 example of using an open number line to model addition.



Example 3

Students can also use an open number line to model adding up to find the difference between 63 and 37.

63 – 37 = 26



Example 4

Students start to work with two-step word problems using simple numbers. Promote students reading, thinking about and visualizing 1 sentence at a time.

Jose had 24 tickets after playing ski ball. He used 7 of tickets to buy a rubber ball and some more to buy an eraser. Jose has 9 tickets left. How many tickets did the eraser cost?

Activities at Home

- Put 100 counters (macaroni, buttons, etc.) into a container.
- Have your child write a story problem that has an answer of “58”. Let your child take out a handful (or more) of the counters and count them. Ask him to add up or subtract to find out how many marbles are left in the container.
- Ask your child to write a story problem that has an answer of “68”.
- Check out the websites from page 1.