First Grade Add and Subtract Within 20 Parent Letter

Dear First Grade Family,

Focus of the Unit

Your first grader is becoming more familiar with basic addition and subtraction facts (numbers within 10) then will begin using that knowledge to add and subtract numbers within 20. Students will be encouraged to try new strategies and find what makes sense to them with various problems or in certain situations. This unit will build students' sense of numbers, combinations of numbers, and ultimately their computational fluency – conceptual understanding of methods used to add or subtract and efficient use of these methods to produce accurate answers.

Building Off Past Mathematics

Last year students learned to add and subtract within 10 primarily using objects and drawing pictures to count all quantities. Adding and subtracting was largely done through stories or situations with not a lot of emphasis on equations. Students had a lot of experience joining or putting groups together to add and separating or taking from a group to subtract.

This year, students have already been working on addition and subtraction within 10 using strategies previously learned and with more emphasis on equations and what these equations represent. These ideas will be extended through this unit along with moving students towards using new strategies that focus on number sense - what they know about numbers.

Strategies that Students Will Learn

Students will learn it is not necessary to represent (with objects or drawings) all items when adding or subtracting, but instead can begin with one number and count on. This can be done in various ways that includes continuing to use objects or drawings or counting on their fingers, etc.

Counting On

Holding 15 in her head, the student holds up one finger and says 16, then holds up another finger and says 17. The student knows that 15 + 2 is 17, since she counted on 2 using her fingers.

Students will learn the combinations of 10 and become so familiar with them they can determine what's needed to make a total of 10 fluently (often without using objects or fingers).
They will then begin using this knowledge of 10 to help them add and subtract larger numbers numerically instead of relying on objects or drawings.

Sam has 8 red marbles and 7 green marbles. How many marbles does Sam have in all?

Making 10 and Decomposing a Number

I know that 8 plus 2 is 10, so I broke up (decomposed) the 7 up into a 2 and a 5. First I added 8 and 2 to get 10, and then added the 5 to get 15.

$7 = 2 + 5$

$8 + 2 = 10$

$10 + 5 = 15$

As students become more fluent with addition and subtraction facts involving 10 and also basic facts within 10 (such as 4+3=7 and 3+3=6, etc.) they will learn to use these known facts as a strategy for solving other addition and subtraction situations.

There were 14 birds in the tree. 6 flew away. How many birds are in the tree now?

Using Known Facts

I thought '6 and what makes 14?'. I know that 6 plus 6 is 12 and two more is 14. That's 8 altogether. So, that means that 14 minus 6 is 8.

$6 + 8 = 14$

$14 - 6 = 8$

Ideas for Home Support

Build your child's automaticity with combinations of 10 using games. One example is playing the card game *Go Fish* with only number cards. Call it *Tens Go Fish* and instead of fishing for pairs that match, encourage your child to look at a number card, think what would go with it to make ten, and ask for that card. For example, if your child has a 3 number card, he or she would fish, or ask of partner, "Do you have a 7?" because 3 and 7 makes 10. Continue the game matching pairs of cards that equal ten.

Encourage your child to explain how he or she is thinking of addition and subtraction. Look for opportunities to relate math facts, especially if you see your child struggling to recall or determine totals when adding and subtracting.

Reading books is a great way to enhance learning! You may check out the following titles at your local library or you may find free online versions to support the learning in this unit.

- *What's New at the Zoo?* by Suzanne Slade; illustrated by Joan Waites
- *Animals on Board* by Stuart Murphy, illustrated by R.W. Alley
- *The Mission of Addition* by Brian Cleary; illustrated by Brian Gable

Thank you for serving as partners in your child's success as a mathematician!

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