Dear Parents,
We will begin our next unit of study in math soon. The information below will serve as an overview of the unit as you work to support your child at home. If you have any questions, please feel free to contact me. I appreciate your ongoing support.

Sincerely,
Your Child's Teacher

Unit Name: Adding and Subtracting within 100

North Carolina Content State Standards:

NC.2.OA.1 Represent and solve addition and subtraction word problems, within 100, with unknowns in all positions, by using representations and equations with a symbol for the unknown number to represent the problem, when solving:
- One-Step problems:
  - Add to/Take from - Start Unknown
  - Compare - Bigger Unknown
  - Compare - Smaller Unknown
- ~~Two-Step problems involving single digits:~~
  - ~~Add to/Take from Change Unknown~~
  - ~~Add to/Take From Result Unknown~~

NC.2.NBT.2 Count within ~~1,000~~ (100 at this point in the year); skip-count by 5s, 10s, and ~~100s~~.

NC.2.NBT.5 Demonstrate fluency with addition and subtraction, within 100, by:
- Flexibly using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Comparing addition and subtraction strategies, and explaining why they work.
- Selecting an appropriate strategy in order to efficiently compute sums and differences.

NC.2.NBT.6 Add up to three two-digit numbers using strategies based on place value and properties of operations.

NC.2.NBT.8 Mentally add 10 ~~or 100~~ to a given number [within]100 ~~900~~, and mentally subtract 10 ~~or 100~~ from a given number 100 ~~900~~.

NC.2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points and represent whole-number sums and differences, within 100, on a number line.

Math Language:

Partners/Addends	Add	Less	Solution
Number Line	Sum	Fewer	Comparison Bars
Hundreds Chart	Estimate	Subtraction	Add To
Base Ten Blocks	Digit	Subtract	Take From
Place Value	Compose	Difference	Start Unknown
Multiple	Decompose	Equation	Result Unknown
Skip Counting	Make a Ten	Put Together	Change Unknown
Ones	Expanded Form	Take Apart	Total
Tens	Expanded Method	Compare	Halfway
Hundreds	Quick Draw	Unknown	Place Value Strategies
Addition	More	Situation	Properties of Operations

Unit Overview:

This unit will focus on using place value understandings and **strategies** to add and subtract within 100, as well as adding up to three two-digit numbers. Application of addition and subtraction strategies will be taught through one-step word problems. Over time and with lots of practice, students are able to flexibly use strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, which leads to fluency with addition and subtraction. Students will think flexibly about numbers, see relationships between numbers, and deepen their understanding of place value. This process will continue to develop a strong number sense which is crucial in mathematics. I respectfully ask that the standard algorithms for addition and subtraction not be taught at home. Teaching the algorithm too early can keep students from progressing in their number sense development. Second graders need time to build number sense, so these standard algorithms will not be introduced until fourth grade.

In this unit, students will also fluently count within 100, skip-count by 5s and 10s, mentally add or subtract 10 from a number, and represent sums and differences within 100 on a number line.

Skills/Strategies:
- Skip count by 5's and 10's up to 100
- Use flexible strategies when adding and subtracting within 100; compare and explain the strategies used
- Use strategies based on place value or properties of operations to add three two-digit numbers
- Mentally add or subtract 10 to a given number within 100-900

Strategies that Students will Learn
You will begin to see several strategies for addition and subtraction. There are several models below to give you a good understanding of what your child will be doing in math.

Base Ten Blocks:
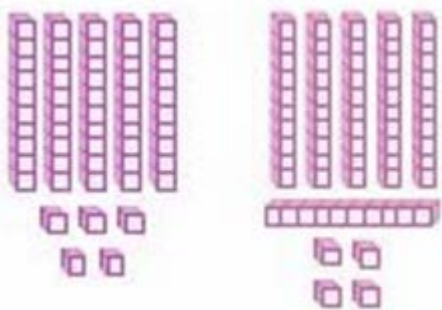
Base ten blocks are hands on manipulatives that help students understand place value. These manipulatives can be used to represent addition and subtraction. The blocks to the left show the problem 55 + 64. Students can easily count the tens, then count on the ones to determine the answer.

Decomposing Numbers: Your child may refer to this as breaking apart numbers into tens and ones to solve an addition or subtraction problem. This strategy allows students to break down numbers so that they are easier to work with.   In the example below, after breaking apart the numbers, your child can more easily add 30+80= 110 and 1+4= 5 and then 110+5=115.
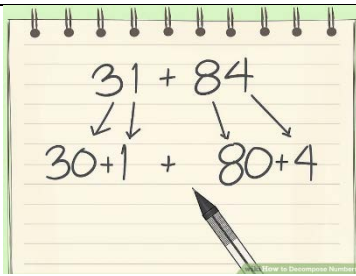
Another example: 55 + 64 cans be thought of as 50 + 5 and 64 could be thought of as 50 + 10 + 4. This strategy allows students to work with numbers that are "friendly" and manageable. The problem becomes 50 + 50 = 100; 100 + 10 = 110; 110 + 9 = 119.

Number Line: The open number line means that students can start at any number. This student started at 45 and jumped three tens on the number line to represent 30 and two jumps to represent 2.
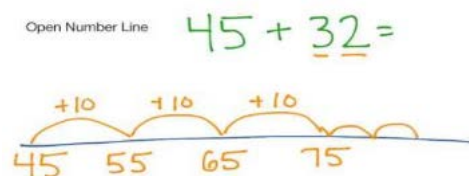
In this next example, the first number line shows how to solve 82 - 49 by counting up. This helps students to see the relationship between addition and subtraction, and the idea of a difference as a distance on the number line. The number line also allows students to be flexible in how they decompose numbers. Notice that on the second number line the problem (82-49) has been solved a different way, but both strategies show the correct answer.
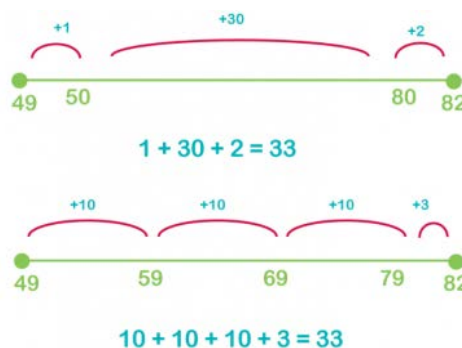
Other strategies will include: Place Value, Hundred Board, and Expanded Method.

Video Support:

Video support can be found on The WCPSS Academics YouTube Channel.
http://tinyurl.com/WCPSSAcademicsYouTube
- ES 2 Math Decomposing a number to make a ten for 2–digit addition
- ES 2 Math 2-digit addition using a number line
- ES 2 Math 2-digit subtraction using a number line

Additional Resources:
- NCDPI Additional Resources

Wake County Public Schools, Mathematics Unit Overview for Parents
This document should not replace on-going communication between teachers & parents.

- Please visit the Kahn Academy website at www.khanacademy.org for additional videos and activities. Look under the Early Math tab.
- Please visit the Learn Zillion website at www.learnzillion.com to find 2nd Grade math lessons and videos that align with Common Core Standards.

Questions to Ask When Helping Your Child with Math Homework

Keep in mind that homework in elementary schools is designed as practice. If your child is having problems, please let the classroom teacher know. When helping your child with his/her math homework, you don't have to know all the answers! Instead, we encourage you to ask probing questions so your child can work through the challenges independently. Some examples may include the following:

- What is the problem you're working on?
- What do the directions say?
- What do you already know that can help you solve the problem?
- What have you done so far and where are you stuck?
- Where can we find help in your notes?
- Are there manipulatives, pictures, or models that would help?
- Can you explain what you did in class today?
- Did your teacher work examples that you could use?
- Can you go onto another problem & come back to this one later?
- Can you mark this problem so you can ask the teacher for an explanation tomorrow?