

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:** Building a Mathematical Community while Working with numbers within 20

**North Carolina Content State Standards:**

**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 (only up to 20 at this point), on a number line diagram.

**NC.2.OA.2** Demonstrate fluency with addition and subtraction, within 20, using mental strategies.

**NC.2.OA.3** Determine whether a group of objects, within 20, has an odd or even number of members by:

- Pairing objects, then counting them by 2s.
- Determining whether objects can be placed into two equal groups.
- Writing an equation to express an even number as a sum of two equal addends.

**Math Language:**

- |                  |               |                    |              |
|------------------|---------------|--------------------|--------------|
| • Number Line    | • Subtraction | • Equal            | • Total      |
| • Equal Distance | • Subtract    | • Addends/Partners | • Make a Ten |
| • Point          | • Difference  | • Double/Doubles   | • Value      |
| • Measure        | • Length      | • Equation         | • Quantity   |
| • Unit           | • Pair        | • Number Sentence  | • Amount     |
| • Addition       | • Even        | • Count All        |              |
| • Add            | • Odd         | • Count On         |              |
| • Sum            | • Group       | • Teen Numbers     |              |

**Unit Overview:**

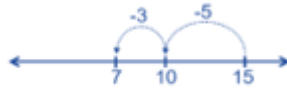
The focus of this unit is on building fluency with addition and subtraction within 20, as well as odd and even numbers. It will serve to develop our classroom mathematics community by establishing routines. Students will have opportunities to engage in discourse (mathematical talk), which includes sharing their thinking, listening to the ideas of others, and asking questions to clarify their own understanding. We will build a respectful community that allows for productive struggle while representing sums and differences up to 20 on a number line, sharing strategies of addition and subtraction, and exploring odd and even numbers.

Additionally, this unit will help foster a growth mindset in which all students can be mathematicians and learn mathematics at the highest levels. People with a fixed mindset think you are either smart or not. Those with a growth mindset believe you learn and develop abilities by perseverance, dedication, and hard work. We believe in helping students develop a growth mindset and becoming great mathematicians.

**Skills/Strategies:**

- Use a number line to find sums and differences (add and subtract)

Example:  
 $15 - 8$



Here, the student first subtracts 5 to get to 10, then he subtracts the remaining 3.

- Demonstrate fluency when adding and subtracting using mental strategies within 20
  - Counting On
    - $15 + 2 = \underline{\quad}$ ; I can hold 15 in my head and count up two more by holding up one finger and saying 16, then holding up another finger and saying 17. I know that 15 plus 2 is 17.
    - Another example:

Example:  $15 + \underline{\quad} = 18$

"I put 15 in my head and counted on until I got to 18. I said 3 numbers so I know the missing part is 3."







- Making a Ten
  - If I have the problem  $9 + 6 = \underline{\quad}$ , I would first decompose the 6 into 1 and 5. Then I could add  $9 + 1 = 10$  and add 5 more to make 15.

$$\begin{array}{c} 9 + 6 \\ \quad \wedge \\ (9 + 1) + 5 \end{array}$$

- Think Addition
  - $10 - 2 = \square$
  - First, I think about 2 and what make 10?  $2 + \square = 10$ . Then, I know 8 and 2 make 10. So,  $10 - 2 = 8$ .
  - $2 + \square = 10$
- Doubles Plus One
  - $8 + 7 = \underline{\quad}$
  - I'm going to decompose/break up 8 into 7 and 1. Then I will add  $7 + 7$  because I know my double addition facts.  $7 + 7$  equals 14. Now I have 1 more left, so I add 1 more to get 15.

- Pair and count objects by 2s and then determine if the number is odd or even

	1	odd
	2	even
	3	odd
	4	even

## Video Support:

Video support can be found on The WCPSS Academics YouTube Channel (<http://tinyurl.com/WCPSSAcademicsYouTube>).

- [ES 2 Math Mental Strategy-Counting on](#)
- [ES 2 Math Mental Strategy-Making ten](#)
- [ES 2 Math Mental Strategy- Creating an easier problem](#)
- [ES 2 Math Mental Strategy-Using the relationship between addition and subtraction](#)
- [ES 2 Math Mental Strategy-Using doubles](#)

## Additional Resources:

- [NCDPI Additional Resources](#)
- Video: [Great Mathematicians Learn from their Mistakes](#)
- Video: [Great Mathematicians Listen and Learn from Each Other](#)
- Video: [Great Mathematicians Persevere when Things are Difficult](#)

### **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?