

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 Math Community through Data

North Carolina Content State Standards:

NC.4.MD.4

Represent and interpret data using whole numbers.

- Collect data by asking a question that yields numerical data.
- Make a representation of data and interpret data in a frequency table, scaled bar graph, and/or line plot.
- Determine whether a survey question will yield categorical or numerical data.

Supporting Standards:

NC.4.NBT.4

Add and subtract multi-digit whole numbers up to and including 100,000 using the standard algorithm with place value understanding.

Note: The numbers in this unit should be limited to numbers up to 1,000.

Math Language:

- Data
- Bar Graph
- Categorical Data
- Numerical Data
- Line Plot
- Data
- Scale
- Frequency Table

Unit Overview:

This unit, which focuses on data, serves as a platform to help establish routines within the classroom math community. 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. Students will have ample time to practice collaboration and math discourse while forming questions and collecting and analyzing data.

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.

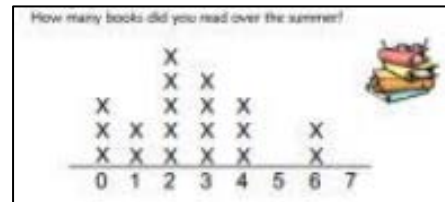
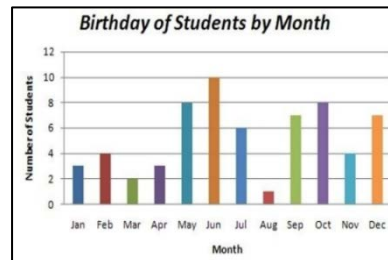
Skills/Strategies:

Students will be able to:

- Generate data by formulating a question(s)
- Determine whether a survey question will yield categorical data or numerical data
 - **Categorical data** represent characteristics such as a person's gender, hometown, or the types of movies they like.
 - **Numerical data** is data that is measurable, such as time, height, weight, amount, and so on.
- Collect and represent data (frequency tables, scaled bar graphs, and/or line plots)
- Analyze and interpret data given in a table or graph

- Apply knowledge of computation skills (within 1,000) when asking and answering questions about the data

Color Choices	Tally Marks	Frequency
Red		4
Blue		7
Yellow		5
Orange		2



Video Support:

- <https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-line-plots/v/introduction-to-line-plots>
- https://learnzillion.com/lesson_plans/8497-construct-and-interpret-a-line-plot/
- https://learnzillion.com/lesson_plans/5766-solve-problems-by-interpreting-data-on-a-line-plot/
- <https://www.turtlediary.com/video/frequency-charts.html>

Additional Resources:

- [NCDPI Additional Resources](#)
- Math Mindset: <https://www.youcubed.org/>

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?