

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: Creating Classroom Community through Data and Graphing**

**North Carolina Content State Standards:**

**NC.5.MD.2**

Represent and interpret data.

- Collect data by asking a question that yields data that changes over time.
- Make and interpret a representation of data using a line graph.
- Determine whether a survey question will yield categorical or numerical data, or data that changes over time.

**NC.5.G.1**

Graph points in the first quadrant of a coordinate plane, and identify and interpret the x and y coordinates to solve problems.

**NC.5.OA.3**

Generate two numerical patterns using two given rules.

- Identify apparent relationships between corresponding terms.
- Form ordered pairs consisting of corresponding terms from the two patterns.
- Graph the ordered pairs on a coordinate plane.

**Math Language:**

- |                 |                       |                    |                    |
|-----------------|-----------------------|--------------------|--------------------|
| • Data          | • Graphs              | • Categorical Data | • Numerical Data   |
| • Change        | • Increase            | • Decrease         | • X-Coordinate     |
| • Y-Coordinate  | • Line Graphs         | • Interpret        | • Ordered Pairs    |
| • X-axis        | • Y-axis              | • Data Tables      | • Patterns         |
| • Relationships | • Corresponding Terms | • Coordinate Grids | • Growing Patterns |

**Unit Overview:**

This unit, which focuses on building student understanding of data collection, 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. Students learn to collect data by asking questions, represent data that changes over time (i.e. rainfall, plant growth, temperature, etc.) using a line graph, and determine whether a survey question will yield categorical or numerical data. Additionally, students work to graph points in the first quadrant of a coordinate plane, using it to solve problems. At the end of the unit, students will work to generate two numerical patterns using two given rules, identifying relationships between terms.

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:

- Determine whether data is categorical data or numerical
  - **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.
- Ask questions that will yield data that changes over time, collect the data, represent it using a line graph, and answer questions about the data.
- Generate two numerical patterns using two given rules
- Form ordered pairs using corresponding terms in two numerical patterns
- Generate ordered pairs that show how a shape pattern grows from term to term
- Identify and interpret x and y coordinates
- Graph x and y points in the first quadrant of a coordinate plane to solve problems

**Video Support:**

No videos are referenced for this unit.

**Additional Resources:**

- [NCDPI Additional Resources](#)

**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?