**Tell Me About…**

|  |
| --- |
| **This is lesson four in a series of six lessons focused around developing a mathematical community at the beginning of the school year. While this lesson addresses standard NC.1.MD.4, its primary goal is for students to become comfortable talking with others, posing questions, and collecting data from one another. A secondary goal is to begin establishing norms for how students work together during math class.** |

**NC Mathematics Standards:**

**Represent and interpret data.**

**NC.1.MD.4** Organize, represent, and interpret data with up to three categories.

• Ask and answer questions about the total number of data points.

• Ask and answer questions about how many in each category.

• Ask and answer questions about how many more or less are in one category than in another.

**Standards for Mathematical Practice:**

1. Make sense of problems and persevere in solving them.

4. Model with mathematics.

6. Attend to precision.

**Student Outcomes:**

* I can create a question with 3 answer choices that I can ask my classmates.
* I can organize and count data that I collect.

**Math Language:**

* Data, organize, question, table, tally

**Materials:**

* Tell me about… recording sheet

**Advance Preparation**:

* Make copies of the Tell me about… recording sheet

**Launch:**

1. Introduce the word ***question.***

* *What is a question? Can you give me some examples of questions?*

1. Say to students that today we want to learn about the opinions of their classmates. For example, if I wanted to know which of 3 different pets they would prefer, I might ask

* *If you could have only 1 pet would, would you rather have a dog, a cat, or a fish? Ask students to think about their choice.*
* Then ask students to raise a hand if they would prefer a dog. Record that number with tallies on the chart. Repeat that process for cats and fish.
* Questions to ask to summarize could include:
  + *Which pet got the most votes? How do you know?*
  + *Which pet got the smallest number of votes? How do you know?*
  + *By doing this, what did we find out?*
  + *Why do you think I asked you to choose from three animals instead of asking what pet would you like to have?*

**Explore:**

1. Pair students up and have them talk and come up with their own question with 3 possible choices. If students are stuck you could suggest that they pick one of these topics and come up with their 3 choices:

* Favorite breakfast food
* Favorite dinner food
* Favorite type of cookie
* Favorite type of ice cream
* Favorite sport
* Favorite TV show
* Favorite board game

|  |  |
| --- | --- |
| **Observation** | **Questions to Ask** |
| Students have difficulty coming up with a question. | * *What would you like to know about your classmates?* * *If someone were going to ask you a question about yourself what would you want them to ask you?* |
| Students have difficulty coming up 3 possible choices. | * *How can we come up with 3 choices that your classmates are likely to choose?* |

1. Once students have told you their questions and 3 answer choices, they can complete part 1 of the Tell me about… activity sheet.
2. Ask students: *How can we keep track of who has answered our question?* Have students brainstorm possible ways to keep track. Remind students that they need to keep track of their data as well as who they have asked their question to.
3. Students should then spend time asking each other their questions. You could have students do this by having them all move around the room asking each other. The goal is for students to collect data from at least 12 classmates if possible.
4. As students collect data, observe them and ask questions to support them. Make sure students are keeping track of their data on the activity sheet. This provides teachers with a chance to informally assess their students, e.g. who interacts well with others in the class, who is keeping track of the data, who needs prompting to work independently, etc.

**Discuss:**

1. Bring students together on the carpet (they need their activity sheets).

|  |  |
| --- | --- |
| **Sample Questions** | **Possible Responses or Talk Frames** |
| * *What was something interesting you learned today about your classmates?* | * “An interesting fact that I learned was that my classmates \_\_\_\_\_\_.” |
| * *What does your data tell you about the class?* | * “I learned that my classmates’ favorite \_\_\_ is \_\_\_ and their least favorite \_\_\_ is \_\_\_\_.” |
| * *Did you have any trouble keeping track of who had answered your question? How did you keep track of your data?* | * “I had a hard time determining who I had asked until I started writing names down on my paper.” * “I wrote down names and their choice at the same time. That helped a lot.” |
| * *Why is it important when we collect information to be certain we ask the same person the question only once?* | * “If someone gets more votes than other people, our data won’t be right.” * “If we want to find out the class’s favorite and least favorite, everyone should only get one vote.” |
| * *Who would like to share your question and tell us about the results?* | * Responses will vary based on the question and data. |

1. Conclude the discussion by saying, *Think about what we did today. Can you help me finish this sentence? “Mathematicians are people who \_\_\_\_\_\_\_\_\_\_\_\_.”*

**Additional Activities:**

These activities can either be done by everyone in the class or as part of centers/math workshop.

**Tell me about…**

Students select another question and pose that question to either small group right then or to the class on another day. The teacher could have students create questions and choices and then the questions could be used as a Daily Math Routine over the next few weeks.

**Longer than or Shorter than (follow up)**

Version 1: Students pull a number card and make a tower of that many multi-link (pop) cubes. Students then make another tower that is either taller than or shorter than their first tower.

Version 2: Students pull two number cards. They then make a tower that is taller than the smallest number and shorter than OR equal to the largest number.

**Start with/Get to (follow up)**

Students pull a number card and make a pile or tower of that many multi-link (pop) cubes. Students then pull another number card and change their pile so that the new pile has as many multi-link (pop) cubes as the new number card. Students can record their start number and new number and how they changed it in their math journal. Example:

|  |  |  |
| --- | --- | --- |
| **Start number** | **New number** | **Change** |
| 3 | 5 | Put 2 more in |
| 8 | 7 | Took one out |
| 9 | 9 | No change |
| 2 | 8 | Put 6 more in |

**Evaluation of Student Understanding:**

**Informal Evaluation:**

* Observe and ask questions as students are creating their questions and collecting data. Notice who works well together, who takes the initiative to get started, who needs a bit more support to begin the activity.
* As students work ask students questions such as:
  + *What does your data tell you about your classmates?*
  + *How did you keep track of your data?*
* Also use the discussion as an opportunity to informally evaluate your students.

**Meeting the Needs of the Range of Learners:**

**Interventions:**

* As this was an introductory lesson, it is not expected that students do sophisticated data analysis. However, the discussion can include determining which choice had the largest amount of votes and the smallest amount of votes. Do not feel pressured to spend time on finding the total number of votes (addition) or the difference between votes for each choice (subtraction).

**Extensions:**

* For the discussion or the additional activities allow students the opportunity to determine the total number of votes (addition) or the difference between votes for each choice (subtraction).

**Possible Misconceptions/Suggestions:**

|  |  |
| --- | --- |
| **Possible Errors**  **and Misconceptions** | **Suggestions** |
| See the suggestions in the Explore phase. | |

**Special Notes:**

* This was an introductory lesson, with the intended goal of learning how to pose a question, collect data, and organize data in a table. This lesson can also be repeated later in the year when more time is spent on NC.1.MD.4.
* The Additional Activities can be completed as centers at various times during the year.

**Tell me about…**

**Part 1**

My question: What is your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?

My choices: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 2**

|  |  |
| --- | --- |
| **Choice** | **Number of Votes** |
|  |  |
|  |  |
|  |  |