InsightMath Texas

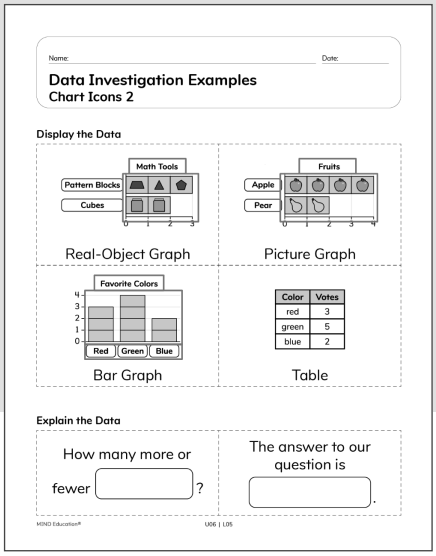
# Investigating Data

Family Guide | Grade 1 | Unit 6

**Your student is exploring how asking questions and using data to critically answer those questions help to make**

## Key Math Ideas

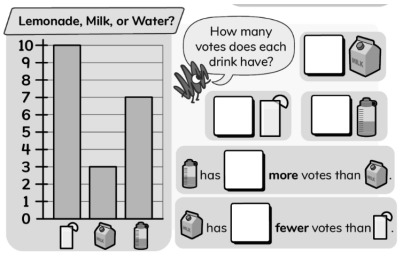
In Kindergarten, students explored data using real-object graphs and picture graphs to display data. In real-object graphs students use the physical objects to display the data while in picture graphs, students use pictures to represent the data. In this unit students continue to use these data displays and extend to also using bar-type graphs and tables to display data. Students compare data displays and, by the end of the unit, students discuss which would be best to display data for a specific situation. Through the unit students recognize what graphs help them compare data to see what category has more or fewer objects.




### → In the first part of the unit, your student will learn to

- describe how the same set of objects can be sorted into multiple categories based on different attributes;
- create and use real-object graphs, picture graphs, and tables to analyze data;
- analyze data in various ways, such as comparing categories and using addition or subtraction to find totals and find how many more or fewer in one category than another to make the categories equal.

### → In the middle part of the unit, your student will learn to




- identify, describe, and use the steps of the data investigation process (ask a question, collect the data, display the data and explain the data);
- collect and record data about their classmates;
- create and use tables, picture graphs, and bar-type graphs to represent the data collected;
- use addition and subtraction strategies to analyze the data, such as determining how many more/fewer one category has than another.

### → In the last part of the unit, your student will learn to

- use tally marks to collect and record data and then use that information to create bar-type graphs;
- plan and conduct a data investigation about student preferences and to help make decisions;
- make predictions about data and compare them to the results;
- describe how results for the same question might change in different situations or with data from different groups of people.

### Helpful Hint

In in this unit, your student will be introduced to and participate in the data investigation process. Students progress in their understanding of data starting with questions like “How do we sort data, collect data, and represent data?” to the question of “What do we do with data?”. Students explore how data can be used to learn about people and to help make decisions.

# Tips for Supporting Your Student at Home

## Questions to Ask Your Student

### → In the first half of the unit:

- What types of categories could you use to compare these objects?
- What information do you know from your graph or table?
- How many more are there in one category than in another?

### → In the second half of the unit:

- What question do you want to ask? Can we collect data to answer it?
- How will you collect and record the data?
- How do you want to represent the data?
- What do you predict your data will tell you?
- How does the actual data compare to your prediction?

| If... | Try... |
|---|---|
| your student has difficulty answering questions about how many more or how many fewer from data . . . | asking how much would be needed to make the categories show the same amount. |

### Student Strengths Spotlight

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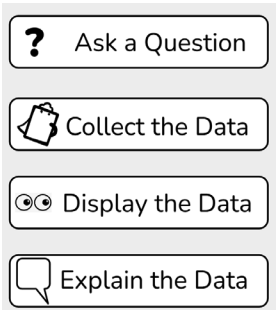
| **We try our best.** | While investigating data, students try their best to represent and analyze the data. |
| **We listen to other people's ideas.** | While planning a data investigation, students share ideas and listen to classmates' ideas while making predictions about data and comparing results to their predictions. |

## Try This Together!

- **Take a Nature Walk!** Before your walk, decide together on a question you want to answer, such as "What types of trees are in our neighborhood?" As you walk, use tally marks to collect the data for your question. When you get home, your student can make a picture graph or bar-type graph to display the data. Talk about what you notice and what you learned from the data and whether you can answer your question.
- **Learn More About Your Family and Friends!** Consider a topic to ask about and related categories, such as "Which do you prefer: apples, bananas, or oranges?" Your student can collect data by asking family and friends and then can choose a data display to represent the data. Compare the votes in each category to see which has more or fewer votes and how many more or fewer.
- **Conduct a Data Investigation Together!** Collect items from around the house or from outside, such as books, snacks, or nature items. Ask your student to sort the items and explain how they sorted, such as by size, topic, or color. Ask your student to create a data display based on the categories they made when sorting. Analyze the data with your student to figure out what the data helped them to learn. For example, ask, "Do you have more books about dinosaurs or books about trains? How many more?"




Steps of a data investigation