

Grade 3, Module 6: Collecting and Displaying Data



What is this module about? We build on Grade 2 concepts about data, graphing, and line plots. We focus on generating and analyzing different types of data.



What came before this module? Students extended and deepened understanding of fractions as equal parts of a whole, using area models and the number line.

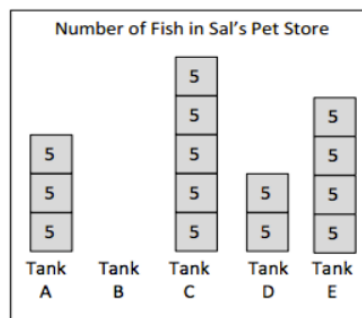


What comes after this module? In Module 7, students get intensive practice with word problems, as well as hands-on investigation experiences with geometry and perimeter.

How can you help at home?

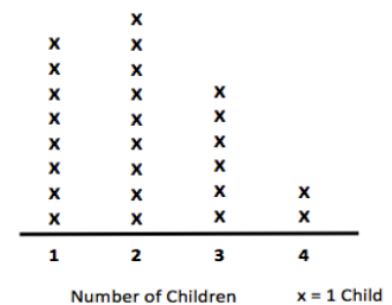
- Ask your child to help interpret the data when you see simple graphs and charts in books, newspapers, or product packaging.
- Continue to practice and encourage measurement around the house, especially with inches and parts of an inch.

A vertical tape diagram, similar to a bar graph



A line plot

Number of Children in Third-Grade Families



Key Words and Ideas in this Module

- **Axis:** vertical or horizontal scale in a graph
- **Bar graph:** graph generated from categorical data with bars to represent a quantity
- **Fraction:** numerical quantity that is not a whole number
- **Frequent:** most common measurement on a line plot
- **Line plot:** display of measurement data on a horizontal line
- **Measurement data:** e.g., length measurements of a collection of pencils
- **Picture graph:** graph generated from categorical data with graphs to represent a quantity
- **Scaled graphs:** bar or picture graph in which the scales uses units with a value greater than one
- **Survey:** a collection of data by asking a question and recording responses

Key Standards in this Module

- Represent and interpret data by drawing a scaled picture graph and a scaled bar graph to represent a data set with several categories and generating measurement data by measuring lengths using rulers marked with halves and fourths of an inch.

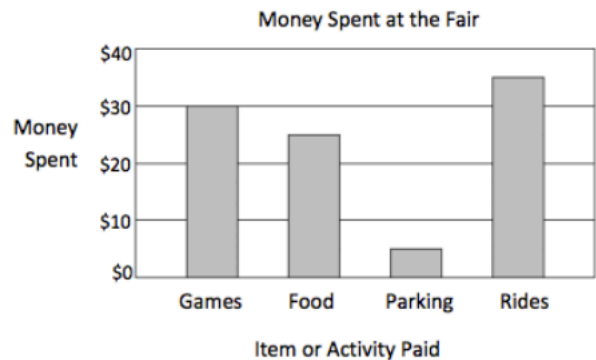
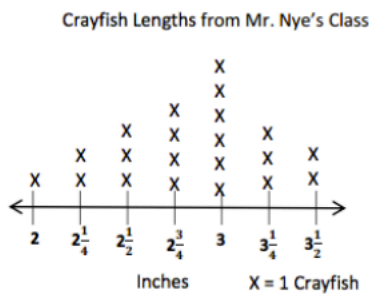


Spotlight on Math Skills

Displaying Data

Learning how to gather, record, and display data is an important group of mathematical skills that students will use their whole lives. Our work with data in this math program began in kindergarten with simple bar graphs of categorical data. Now, we gather more complex data, both categorical and measurement, and display it in more sophisticated ways. This module will also include a discussion of when either bar graphs or line plots are a good choice to display a particular set of data. Students will learn that bar graphs are used to compare things between different groups, and line plots are used to show frequency of data (how many times a certain thing happens) along a number line.

Students will learn when a line plot or bar graph is a more appropriate way to display data.



Sample problem from Module 6 (Lesson 6)

Using the line plot to the right, students answer various questions.

1. How many caterpillars did the class measure? How do you know?
2. Cara says that there are more caterpillars $3\frac{3}{4}$ centimeters long than caterpillars that are $3\frac{1}{4}$ and $4\frac{1}{4}$ centimeters long combined. Is she correct?

