Unit 4: Data Analysis

About this Unit

Students engage in all the phases of data analysis as they pose questions, collect and sort information, and make representations of data as a way of sharing their findings with others. They work with bar graphs, picture graphs, and line plots. They read and interpret a variety of representations of numerical and categorical data. Students are also assessed on fluency with the +10 addition combinations.

Sorting and Classifying Data

Students in Grade 2 are engaged in many sorting and classifying activities. Students sort people in their class into different groups based on observable characteristics, such as hair color or clothing. Students also sort pictures of make-believe creatures called Yekttis into groups based on one or more attributes, such as head shape, antennae, and eye color. Students consider similarities and differences and justify and explain their thinking.
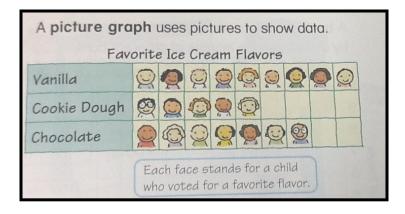
Collecting, Representing, and Describing Data

Students collect data by conducting surveys. They organize, represent, and describe their data using pictures, numbers, words, and equations. Students are able to discuss data and draw conclusions based on the information they gathered. They are able to use equations to show that the sum of different responses is equal to the number of people taking the survey.

9 are waring a watch and 17 are not waring watch

waring watch

not waring watch

Equation: $9 + 17 = 26$

people wearing a watch

people not wearing a watch

total number of people

Types of graphs students work with throughout this unit.

Picture Graph

A picture graph uses pictures to show data.

Favorite Ice Cream Flavors

| Vanilla |
| Cookie Dough |
| Chocolate |

Each face stands for a child who voted for a favorite flavor.
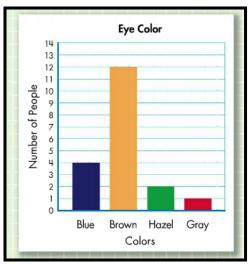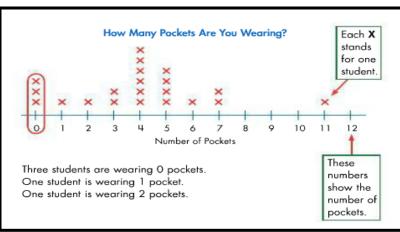
A picture graph is a visual method of displaying information (data) that uses a drawing or a picture to represent data.

Bar Graph

A bar graph is a graphical display that lets you compare quantities by comparing the lengths of different bars. Bar graphs can be horizontal or Vertical.

Eye Color

Number of People

Blue   Brown   Hazel   Gray

Colors

Line Plot

How Many Pockets Are You Wearing?

Each **X** stands for one student.

0 1 2 3 4 5 6 7 8 9 10 11 12

Number of Pockets

Three students are wearing 0 pockets.
One student is wearing 1 pocket.
One student is wearing 2 pockets.

These numbers show the number of pockets.

A line plot is a quick way to organize numerical data. The frequency of data is shown on a number line.

Helping Your Child at Home

- Sort objects around the house, such as toys, buttons, or rocks depending on one or more attributes. Then, find different ways to sort the same sets of objects.
- Use more than one attribute to sort objects (i.e., objects that are red, round, or both).
- Keep a weekly weather journal to graph, describe, and represent different types of weather.
- Take a family survey and make a graph based on the data.
- Talk about graphs found in newspapers, magazines, or the news.

Visit the following web sites:

- <u>Investigations</u> (http://investigations.terc.edu/library/Games_23.cfm)
Students can explore a variety of games leveled for Grade 2 and Grade 3 students focusing on data.

- <u>Bar Graphs</u> (http://www.bbc.co.uk/bitesize/ks2/maths/data)
These activities allow students to collect and display data using tally charts, bar graphs, and pictographs.

- <u>Bar Graph Sorter</u> (http://www.shodor.org/interactivate/activities/BarGraphSorter/)
Students create graphs by sorting objects into different categories.

- <u>Line Plots</u> (http://www.ixl.com/math/grade-2/interpret-line-plots)
Students view different line plots and interpret them in order to answer questions.