

Curriculum Parent Overview (Grade 4)

MATHEMATICS

UNIT #2: GENERATING AND REPRESENTING MEASUREMENT DATA (MODELING WITH DATA)

CONTENT FOCUS:

Students record, organize, and represent data. They use line plots, other representations, and summary descriptions to model what their data show. Students represent, analyze and draw conclusions based on evidence from comparing two data sets.

UNIT FOCUS:

- Representing data: Students make and interpret line plots and work to represent two sets of data. Students may use two separate line plots or bar graphs, and think through how to help their audience compare the two graphs. Other students find ways to use a single graph to show both groups. Students also use line plots to represent measurement data, which includes fractions.
- Describing, summarizing, and comparing data: In this unit, students work on comparing data sets. Students do more than just list all the data values, but instead consider how to characterize each group. For example, “First graders are generally between 45 and 52 inches tall.” Students strengthen their skills in describing data and move toward summarizing data.
- Analyzing and interpreting data: Data are used to answer a question, to investigate an issue, or to provide information about something in the world that is of interest. After data have been collected, represented, and summarized, we have to decide what the data tells us.

MATHEMATICAL PRACTICES:

MP4: Model with mathematics.

MP3: Construct viable arguments and critique the reasoning of others.

CONNECTIONS TO PREVIOUS CONTENT:

This unit builds on the work students have done in Grade 3 where they worked with both categorical and numerical data. Students represented data by using line plots, bar graphs, and pictographs, and they carried out their own surveys and added and subtracted measurement data to answer questions and better understand the data. The work in this unit assumes students are able to develop a good survey question that results in useful data and describe concentrations of data. It is expected that most students can measure to the nearest $\frac{1}{2}$ -unit and compare data.

CONNECTIONS TO FUTURE CONTENT:

In Unit 6, students will use line plots to represent data sets of measurement that include a greater variety of fractions (eighths, fourths, and halves), as well as whole numbers, and solve addition and subtraction problems using information on line plots. In Grades 5 and 6, students continue to represent and analyze data in a number of ways in preparation for a study of measures of center and other statistics.

MATH AT HOME:

- Create a survey question as a family, and collect data from family and friends. Find ways to display the data in different ways and discuss any patterns you notice.

- Using individual bags of raisins, chips, fruit snacks, etc., collect data on how many food items are in each bag and create a line plot or bar graph to show the data. Ask questions like: Which had the highest number? The lowest number? Where is most of our data? Does any of the data seem far off from the others?
- Review the Math Words and Ideas videos for this unit on [SawvasRealize](#) site.