Scatter Plots and Two-Way Tables Family Letter

Dear Family,

In this module, ***Scatter Plots and Two-Way Tables***, students draw on their knowledge of linear functions and relative frequency to develop understanding of scatter plots and two-way tables. They will create and interpret scatter plots and two-way tables to continue to build skill and fluency with statistics.

What Did Students Learn Previously?

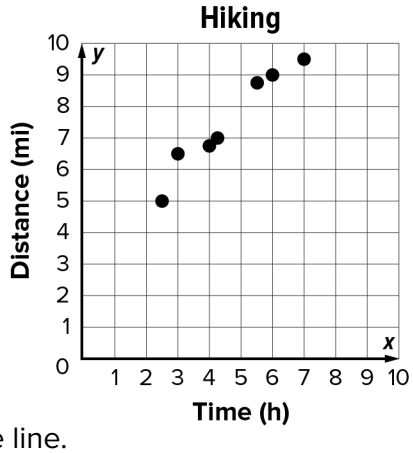
In previous grades and modules, students graphed on the coordinate plane and found the equation for a line in slope-intercept form. Students also learned to write and understand fraction-decimal-percent equivalencies and ratios, including finding the relative frequency of simple events.

What Will Students Learn in This Module?

Scatter Plots

- Students will learn that a **scatter plot** is a graph that shows the relationship between data for two variables, graphed as ordered pairs on the coordinate plane. For example, the hiking data shown in the table can be graphed to create the scatter plot.

Time (h), x	Distance (mi), y
2.5	5
3	6.5
4	6.75
4.25	7
5.5	8.75
6	9
7	9.5



Lines of Fit

- For data that approximate a linear relationship, students will informally draw lines that closely fit the set of data and informally assess the fit of the line.
- Students will understand how to write the equation of a line that fits a set of data.

Two-Way Tables

- Students will construct **two-way tables**, which are tables that show data between two different categories. One category is represented by rows, and the other category is represented by columns. They use this understanding find row and column **relative frequencies**.
- Students will expand on their understanding of **two-way tables** and **relative frequencies** to determine if a possible association exists between two categorical variables.

What Vocabulary Terms Will Students Use?

Term	Definition
bivariate data	Data with two variables, or pairs of numerical observations.
cluster	A collection of points that are close together in a scatter plot.
line of fit	A line that is very close to most of the data points in a scatter plot.
outlier	A data point that is distinctly separate from the rest of the data.
relative frequency	The ratio of the value of a subtotal to the value of the total
scatter plot	A graph that shows the relationship between bivariate data graphed as ordered pairs on a coordinate plane.
two-way table	A table that shows data from one sample that pertain to two different categories.

How You Can Provide Support

1. Support your child's understanding of scatter plots and two-way tables by asking them to solve problems involving scatter plots and two-way tables in everyday life.
   - *Gas Prices:* Have your child keep track of the price of a gallon of gasoline at a certain gas station over a two-week period. At the end of the two weeks, have your child create a scatter plot, draw a line of fit, and find the equation of the line.
2. Encourage your child to have a positive, growth-oriented attitude towards mathematics and their learning.
   - Encourage them to ask questions – both at home and in class. Sometimes, an answer to a question will generate more questions. That's how you know they are learning!
   - Encourage your child to embrace challenges and remind them that every challenge is an opportunity to learn something new.
   - Celebrate successes – both small and large.
3. Contact me to arrange a time to discuss the specifics of your child's performance and how we can work together to help them succeed in this module.

Sincerely,

_____ _____

(Teacher's Name) (Email/Phone)