



The bigger the crayon, the more there is left to use

Here are Daphne's favorite crayons—they are different sizes because she uses some colors more than others.

Looking at Daphne's crayons is just like reading a bar chart! The bars can go up, down, or even sideways. A big bar means there is a lot of something. A short bar means there's not that much. You can compare the heights (or lengths) of the bars within a graph, too.

## Bar charts

show how much of something there is and make comparisons



In the jungle, the biggest bar helped reveal the banana thief



A stacked bar chart showed the aliens which spaceship had enough fuel to get home

An upside-down bar chart displayed the deepest diver in the polar bear plunge



## Your turn: eat a rainbow

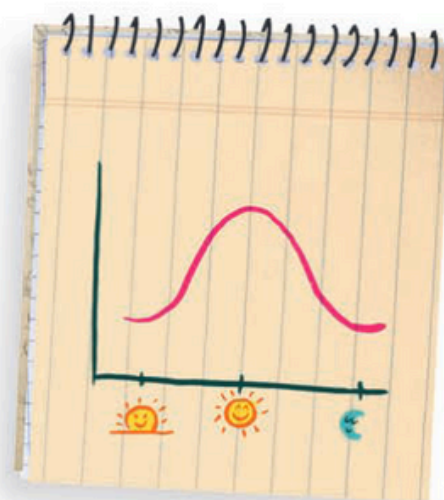
Write down everything you eat in a day, noting its primary color. At the end of the day, tally the foods by category: red, orange, yellow, green, blue/purple, and white/brown. Draw a bar chart to see how many you ate of each. What color did you eat the most? Were any missing from your day?



When Daphne was in the jungle, she was curious how the temperature changed from day to night.

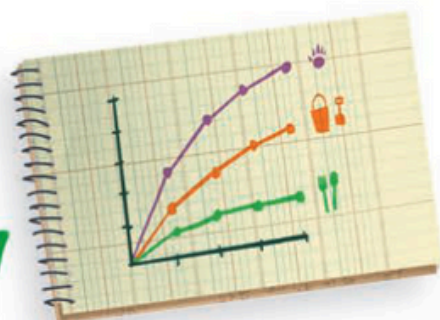
A line graph helped her understand this! The line started low in the morning, increased as it became warmer during the day, and decreased again as it cooled off in the evening.

A line graph tells the story of how things go up and down over hours, days, or even years.



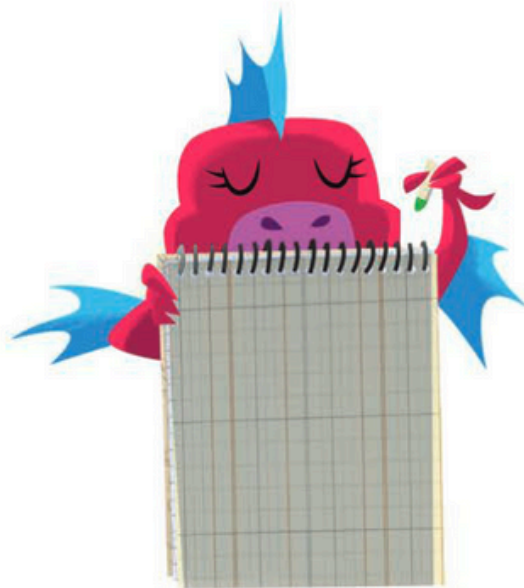
## Line graphs

show how things change over time



After digging tunnels with different tools, the gophers discovered that their claws worked best

Declan learned it would take two weeks to save enough dragon dollars to repair his scooter

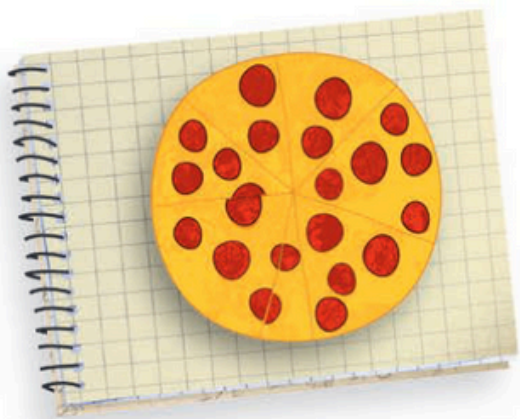


## Your turn: reading rhythm

Write down how many minutes you read every day for a week. Draw a dot for each day's total time on a graph and connect them with a line. What do you learn? Bonus: have a friend keep track, too, and then compare your results in one chart! Who read the most each day?







To celebrate Daphne's return, she and Declan ate a delicious pizza together with their parents.

A pie chart is like a pizza: you draw a circle to represent the total of something, and then you cut it into pieces to show the different portions, or amounts.

When you want to see if all of the pieces are about the same size or one slice is a lot bigger or smaller than the others, pie charts work well.

# Pie charts

show parts of a whole



A pie chart presented peacocks as the least popular pet in Pinegrove Peaks



## Your turn: activity pie

What do you do during a typical day? Estimate how much time you spend on various activities—like sleeping, learning at school, playing, eating, and doing homework—and then draw it in a pie chart! Which slice is the biggest? Smallest? Are there any that you wish were a different size?



While Daphne and the aliens were waiting for more fuel, they played marbles.

After rolling a handful on the planet's bumpy surface, they were everywhere—it looked just like a scatterplot! The rougher the path, the more marbles came to a stop in the same area, while smoother ground meant others rolled far.

Scatterplots are handy when you need to understand two things together and see if they follow a pattern.



## Scatterplots

show how two items relate and whether one changes when the other does



under the sea, Daphne proved that smaller crustaceans weren't quite as quick as the bigger ones



## Your turn: slumber number

Note how many hours you sleep every night for one week. Each morning, write down how you feel on a scale ranging from grumpy to great. Draw a scatterplot with sleep hours on one side and mood on the other. Place a dot for each day where your sleep and mood meet. Can you see a pattern? Is there an ideal amount of sleep that makes you feel your best?

