DATA COLLECTION

Data is the collection of information, such as facts or figures, that can be used to learn something new about a topic. After data is collected, it is sorted into graphs or charts and studied. In this activity, you will run a data experiment.

This week's activities: Collecting the Data – Displaying the Data

Collecting the Data

Suggested materials:

- Paper
- Ruler
- Pencils, crayons, markers
- LEGO or other similar building blocks

1. What do you want to find out? You could ask people their favourite pizza toppings. Or ask what types of books they like to read, such as mystery or adventure. There are so many questions you can ask.
2. When you decide on your question, make sure you write the answers people give you so you can create a graph to display the data you have collected. Ask two or more people so you can make a cool data display.

Displaying the Data

When you have the answers, decide how you want to display your data. You can use bar graphs (as shown here), pie charts or pictographs. For this activity, try using the bar graph version, either on paper or using LEGO blocks.

In Example 1, the bar graph on paper looks like the letter 'L'. The line that runs across the page is called the x-axis and this is where you put the data you collected. Write the answers you collected spaced out a bit (example: ham, olives, pepperoni).

Example 1

The line that runs upwards from the x-axis is known as the y-axis. Depending on the number of the answers you collected, write the numbers on the y-axis in ones, fives, tens (whatever works best to show how often each item occurs). Count the number of answers for each category and then draw a bar that matches the number of people who liked each topping. In the example, pepperoni was liked by eight people.
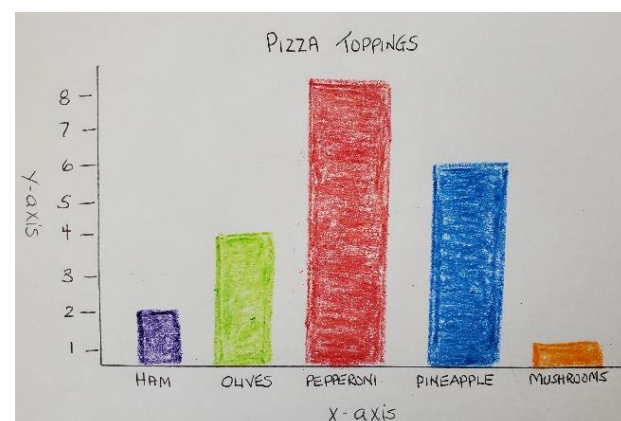
Example 2

Another way to make a bar graph is to use building blocks. In Example #2, blocks of assorted colours represent the number of items in each category or answer (for example, each yellow block represents one person who said their favourite pizza topping was pineapple. Here you can see there were eight people who like pineapple most).

After you have completed a couple of data collection questions, compare the graphs that you created, based on the answers. What differences or similarities do you see?

Links to eResources:

Check out our [eBooks](#) on these topics:
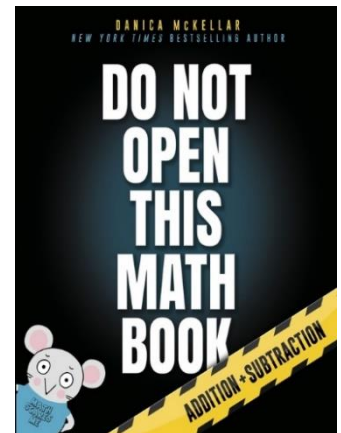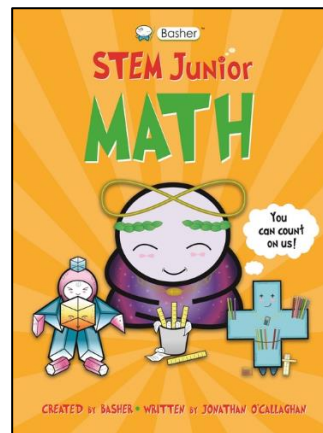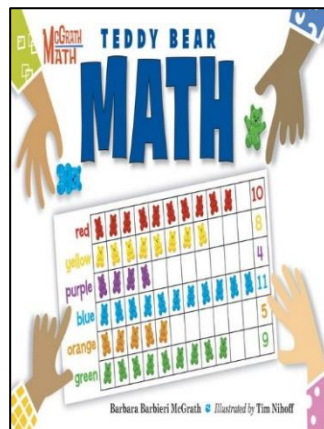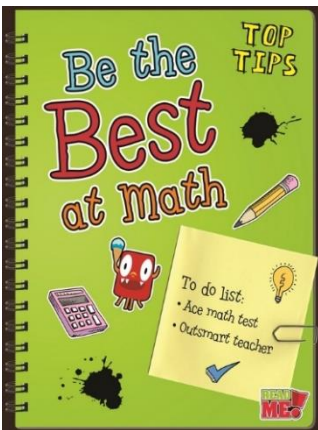
[Experiments](#) **|** [Science](#)

On **Hoopla Kids**, check out some of the interesting books about data and how to collect & display it, such as *Creating Data Visualizations* by Kristin Fontichiaro and *Should I Use Charts, Graphs or Drawings* by Baby Professor.[Experiments](#) **|** [Science](#)

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In the episodes *Undercover Olive* and *Bad Lemonade* of the series *Odd Squad* on **Summa Kids**, Olive and Otto learn about data collection and how to analyze it to help solve their current cases.

You can get a library card at hpl.ca/online-registration.

If you would like to share one or all your creations, please take a picture and post it to social media using the hashtag, #HPLmakesomething.

Hamilton Public Library
FREEDOM TO DISCOVER

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