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## Hands-On Activity: Generating a chart from a spreadsheet

TOTAL POINTS 2

1.



1 / 1 point

### Activity overview

So far, you have planned a project, identified the data you need, and collected the data. You then took the practical step of organizing data in a table to prepare for analysis. Now, you're ready for the most satisfying step of the data analysis project: **visualizing** your data!

For this activity, you will move your data to a spreadsheet and bring it to life in a chart. By the time you complete this activity, you will understand how to create a simple graphical representation of information. This is a skill data analysts use to make data easy to understand and interesting to look at. It's important for reports, presentations, infographics, and more.

#### What you will need



To get started, first determine what software you'd like to use. We suggest using Google Sheets or Microsoft Excel to create your chart.

Click the link to create a copy of the template. If you don't have a Google account, download the template directly from the attachment below. Save the spreadsheet with your preferred file naming convention, and store it in a folder to help you stay organized.

Link to template: [Data Chart Template](#)

OR

Download template:

Data chart template.xlsx



### Working with spreadsheets

Now that you have a template ready, you can start the activity:

#### Step 1: Open a spreadsheet

Open your spreadsheet in Google Sheets or Microsoft Excel.

#### Step 2: Familiarize yourself with the spreadsheet

If you are already familiar with spreadsheets, that's great! If spreadsheets are new to you, don't worry—they are just like the table you created in a previous activity.

To get familiar with spreadsheets, you should consider a spreadsheet's format:

- Each rectangular block is a **cell**.
- Each cell is meant for one data point, just like in the table you created previously.

Now, consider the cells that run across the top of the spreadsheet (horizontally) and along the left side of the spreadsheet (vertically):

- Cells are organized by columns and rows.
- Each column has a distinct letter, and each row has a distinct number.
- Each cell has a unique identifier composed of the column letter and row number. This identifier is like the cell's address.

You also have a chart embedded in the spreadsheet. However, the chart is blank, because it doesn't have any data yet. Next, you will add data!

### Step 3: Add your data

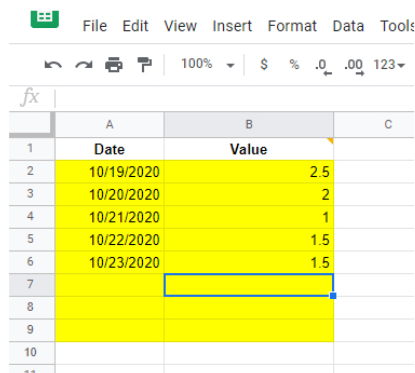
Now, you can add your own data to the spreadsheet. Notice that cell A1 contains the label "Date", and cell B1 contains the label "Value".

This lines up with the same structure you used in the table you created in a previous learning log entry. Just like your table, all the "date" parts of your data points go in the cells in column A, and the values you recorded on those dates go in the corresponding cells in column B. It should display like this:

Date	Value
10/19	2.5
10/20	2
10/21	1
10/22	1.5
10/23	1.5

Next, take all of the data that you previously recorded in your learning log and use it to populate the spreadsheet in the appropriate columns: Add the dates in column A, and the values in column B.

Once you finish adding your data to the spreadsheet, your table will display like this:



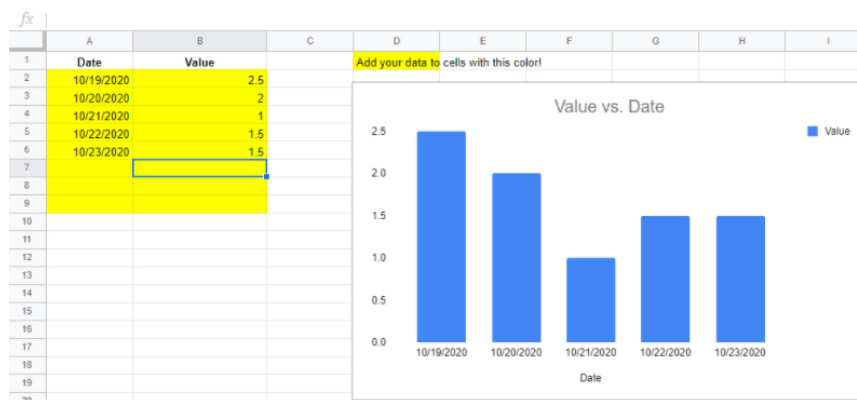
	A	B	C
1	Date	Value	
2	10/19/2020	2.5	
3	10/20/2020	2	
4	10/21/2020	1	
5	10/22/2020	1.5	
6	10/23/2020	1.5	
7			
8			
9			
10			

### Displaying a chart in a spreadsheet

Next, you will update the chart in your spreadsheet based on the data you entered.

### Step 4: Reviewing your chart

Now that you've entered your data into the Date and Value columns, your spreadsheet should display like this:

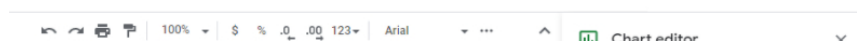


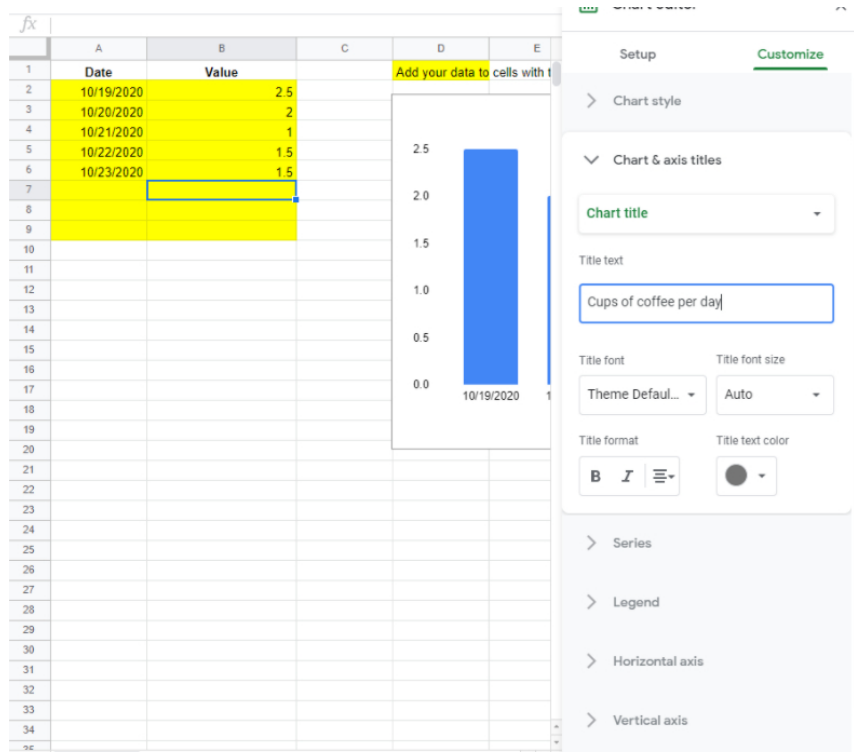
Did you notice what happened to the chart when you entered the data in the spreadsheet? The spreadsheet **visualized** the data for you by making it into a basic bar chart. There are many different ways to customize charts, but first you need to clean up your chart. Then, you can interpret the data visualization!

### Step 5: Cleaning up your chart

Now that you have a chart, it's time to clean it up. It's generally a good idea to tidy your chart by making it descriptive and aesthetically pleasing. Keep in mind that good data analysts are data storytellers!

To change the title of your chart, double click on the chart. You should find that a "Chart Editor" menu displays on the side of your screen. Click on "Chart & axis titles", and then enter the name of your chart in the "Title Text" box:





If you're using Microsoft Excel, you can double click on the title in the chart to edit directly.

Don't be afraid to play around with the options here: You can always download another copy of the template if you make a mistake you can't fix!

## Confirmation and reflection

After you added data to the spreadsheet, you cleaned up the chart. What step did you take to make the chart descriptive?

- ☐ Converting the bar chart to a pie chart
- ☐ Changing the color of the chart
- ☒ Adding a title to the chart
- ☐ Removing the dates from the chart

✓ **Correct**

To make your chart descriptive, you used the Chart Editor' menu and updated the chart title. Going forward, if you continue to collect data, you can use this spreadsheet to do so! The spreadsheet is a natural choice for storing your data, and practice with professional tools will help you develop your skills and continue to refine your data analyst's toolkit.

2. You have come a long way! You started recording your data manually, you loaded that data into a spreadsheet, and you visualized the data in a chart. Now, take a moment to examine your completed data visualization. In the text box below, write a 2-3 sentence (40-60 words) response to each of the following questions:

1 / 1 point

- How did you use a spreadsheet to help prepare your data?
- How did you format a chart to help you analyze your data?

I performed load the data to the spreadsheet and insert the data in the corresponding column. Then make the data visualization use the bar graph and then add a title to it

✓ **Correct**

Congratulations on completing this hands-on activity! A good response would include that spreadsheets help you organize data and charts make your data easier to understand. Beyond that, consider the following:

A spreadsheet helps you structure data in rows and columns, prepare data for analysis, and create custom data visualizations. To better analyze your data, you clean up your chart to make it more visually appealing and to clarify what data means by making your chart more descriptive. To do that, it's important to add chart titles and axis titles. Ultimately, this is an essential skill to master because clear, descriptive data visualizations help data analysts be great storytellers.