Spreadsheets are a big part of data analytics. This spreadsheet is one example of how an organized spreadsheet might look. Let's explore it further because it's a great example of the three main features of a spreadsheet: cells, rows, and columns. They'll be part of almost everything you do in a spreadsheet for making a simple grocery list to analyzing a complex dataset.

Speaking of keeping things in order,

* **columns** are organized **vertically** in a spreadsheet and are ordered by letter.
* And the **rows** are organized **horizontally** and are ordered by number.
* So, when you talk about a specific cell, you name it by combining the column letter and the row number where the cell is located.

For example, in this spreadsheet, the word row is in cell D3.

Let's get started in an actual spreadsheet. We'll start with some basic operations.

I'll click in cell A2 and type my first name like this. Then I'll click in cell B2 and type my last name.

you can use the **text wrapping feature**, which will set cells to automatically change their height to allow the text in the cell to fit.

To use this feature, select the cells, columns, or rows with text, then use the format menu to look at the text wrapping options.

It is automatically set to allow the text to overflow out of the cell.

But you **can wrap the text** instead, so all of the text is visible.

The **clip** option will cut off the text in the cell so only the text that fits is visible.

There it is. We've **added data**.

Now **let's label it**.

This is important for organization. Adding labels to the top of the columns will make it easier to reference and find data later on when you're doing analysis.

These **column labels** are usually called **attributes**.

* An attribute is a characteristic or quality of data used to label a column in a table.
* More commonly, attributes are referred to as column names, column labels, headers, or the header row.

Let's add some headers to our table. I'll click in cell A1 and type the words first name.

In cell B1 I'll type last name. We'll make these attributes bold, so they stand out more. Spreadsheets can get really big, so you want to make sure your data is clearly labeled and easy to find.

I can use my cursor to select the cells with the attributes. Then I'll click the bold icon to make them bold.

Looking good so far. Ready to add some more data? Let's start with some new attributes.

First, I'll add a column for the number of siblings by typing siblings in cell C1.

Then I'll add two more attributes in the next two columns. Let's go with favorite color and favorite dessert. I'll make them bold too. To fit the labels in the cells, I'll adjust the size of the columns just like before.

Now, keep in mind, there are more ways to adjust the size of the columns and rows. If you have questions about using spreadsheets, a quick search online will usually help you find what you need. We've also included a reading with more tips and information about spreadsheets. OK, let's get back to it.

Now, I can add my own data to the dataset. I'll type in how many siblings I have and my favorite color and dessert in the appropriate cells.

Next, I'll add data for two more people.

We now have three rows of data.

In a dataset, a **row** is also called an **observation**.

* An observation includes all of the attributes for something contained in a row of a data table.

In this case, row 3 is an observation of Willa Stein because we see all of her attributes in this row.

So now we know spreadsheets let you do lots of things with data.

You can store and organize data like we've done in this spreadsheet. But you can go even further and recognize existing data too.

Here, I'll show you how.

Let's say we want to organize our data by how many siblings each person has.

There's a simple way to do that.

1. First, we'll need to select all of our columns with data so that all of it is reorganized together.
2. Then we can go to our data menu. Here we have some options. Let's select sort range. This will let us choose how to organize the column.

Next, we'll choose A to Z, which will organize our numbers in order from smallest to largest. Now, we want to watch out for header row, which is the word siblings, the attribute for this column. We'll check this box. This makes sure the word siblings stays in place. Now we're ready to sort. Voila, we just reorganized our data by sorting it from the smallest number to the largest. As we go further, you discover lots of other ways to work with data in a spreadsheet, including functions and formulas.

Let's finish with a quick example of a formula.

* You can think of formulas as one way of manipulating data in a spreadsheet.
* Formulas are like a calculator, but more powerful.
* A formula is a set of instructions that performs a specific action using the data in a spreadsheet.
* To do this, the formula uses cell references for the values it's calculating.

Let me show you. Here we go.

1. We'll click in the next cell in the sibling’s column.
2. Then we'll type an equal sign.
3. All formulas begin with this symbol.
4. Next, we'll type in the cells we want to add together.
5. In this case, we'll type in C2 plus C3 plus C4.
6. Now we can press "Enter". There it is.

The formula has given us the total number of siblings represented in this dataset. We've just analyzed some data. We'll want to store the data for later use. In Google sheets, a spreadsheet is automatically saved in your Google Drive. For Excel and other spreadsheets, you'll save them as a file. Now you know some basics for using spreadsheets. Once you're used to these concepts, you'll be able to learn even more about spreadsheet tools. Feel free to re-watch this video and practice on your own. You can even make your own version of the spreadsheet with your own data. Bye for now.