

DATA KIDS

How fast can I clean up?



Data Kids: How fast can I clean up?

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Learn about data and charts while cleaning up

Overview

Our kids don't always like cleaning up, but maybe we can help with that. By timing how long it takes to clean-up each day, we can teach our kids how data can help us improve how we work — and give us more time to play.

I designed this activity so that learners ages five and up will be able to participate. Depending on age, some children may need supervision, while others can complete the steps independently. Family participation is encouraged.

Learning Objectives

- Learn to categorize items and collect data:
 - o Not very messy
 - o Messy
 - o Really messy
- Learn to time how long a task takes, and use that as data
- Practice observation and curiosity
- Learn to make a bar chart on paper

Supply List

- A messy room
- Pens and paper
- (Optional) a ruler if you care about straight lines
- (Optional) print this activity sheet
- Timer (most phones will have a stopwatch to track time)

Warm-up

Ready to begin? The most important part is to have fun—encourage curiosity and ask questions. Start with a conversation about the room’s messiness, and what a “clean” room looks like:

- How do you know if a room is messy?
- How fast do you think you can get it clean?
- How will you know when you’ve finished?

Instructions

- 1) Make a table that looks something like this:

Today’s date	How messy?	Minutes	and seconds

- 2) Take a moment to write down how messy you think the room is: really messy, messy, or not very messy?

Today’s date	How messy?	Minutes	and seconds
6/5/2020	Really messy		

3) Then, you can start a timer or a stopwatch. Ready...set...GO CLEAN.

4) When you've finished, write down your time in seconds.

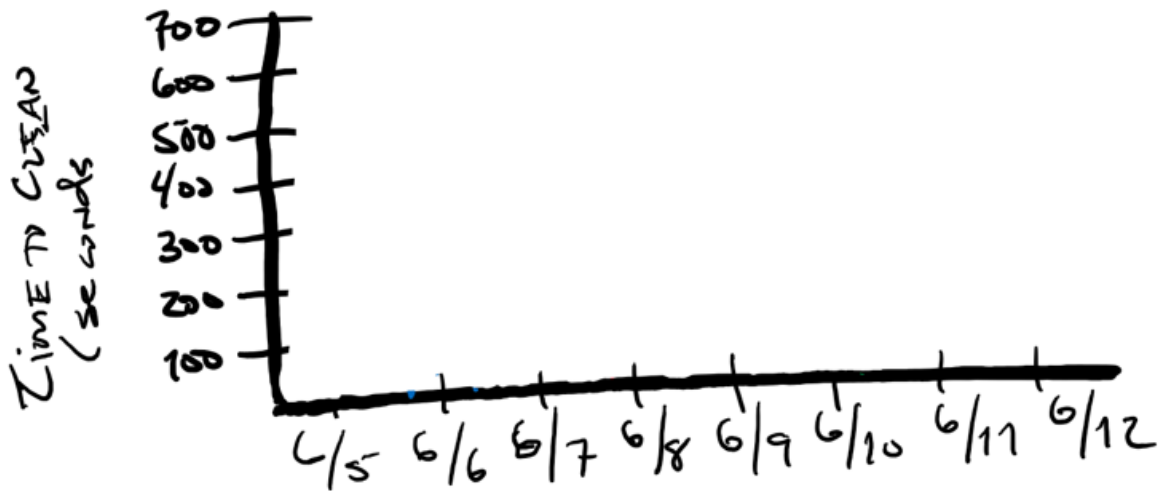
Today's date	How messy?	Time to clean in seconds
6/5/2020	Really messy	650

5) Do this for a few days, and you can get more data.

Today's date	How messy?	Time to clean in seconds
6/5/2020	Really messy	650
6/6/20	Messy	390
6/7/20	Not very messy	170
6/8/20	Really messy	650
6/9/20	Really messy	630
6/10/20	Not very messy	200

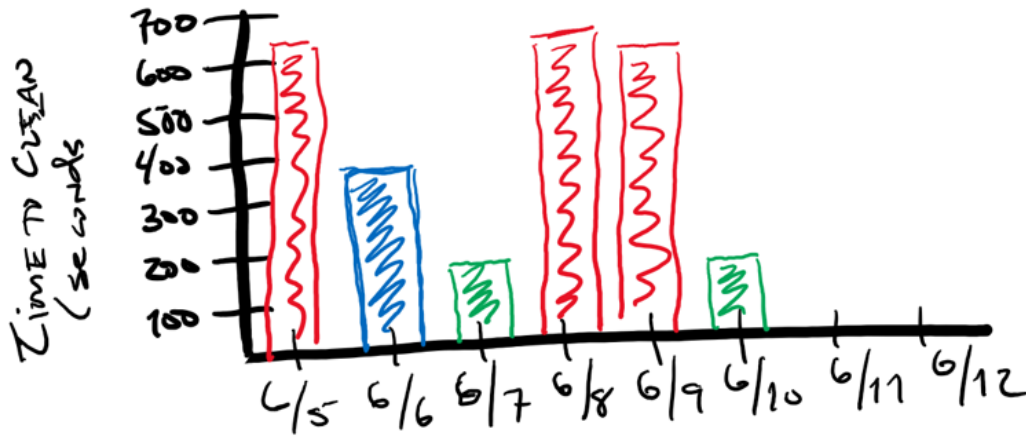
6) When you're ready, you can make a chart.

Start by drawing an x-axis (horizontal line) and a y-axis (vertical line). Label the x-axis "Days of the week" and the y-axis "Time to clean."



7) Pick three different colors: one you'll use for times the room was not very messy, one you'll use for times the room was messy, and one you'll use for times the room was really messy.

8) Using the correct colors, draw a bar for each day, so that the height of the bar matches the seconds in time it took to clean the room.



Learn from your data!

Does it take longer to clean a messier room?

Have you been cleaning faster each day? If so, what are you doing differently now that you're tracking your time? If not, what can you do to clean up faster?

How often is your room really messy? How often is it not very messy, or just messy? Can you make it easier for yourself by putting things away when you finish using them?

Keep collecting and learning from your data. See how often you can keep your room "not very messy," and see if you can clean faster each day.

Tableau Instructions

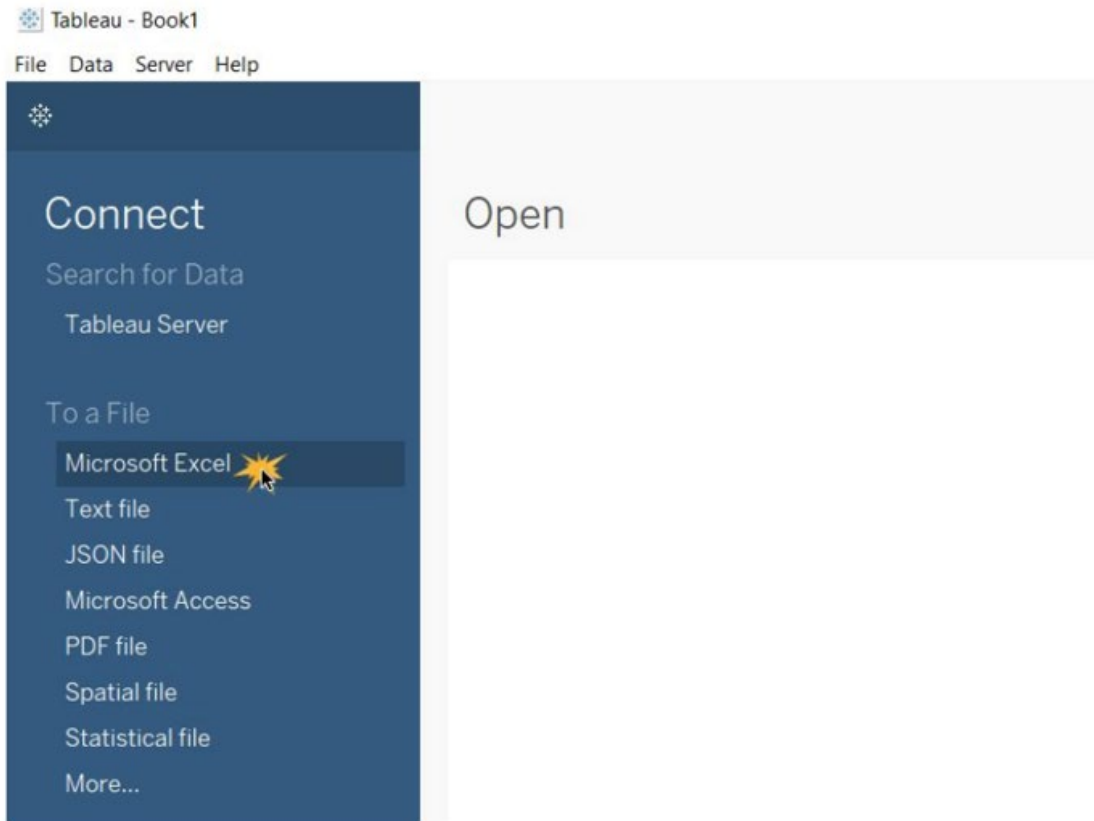
With the help of an adult, create your data table in Excel, and create your viz in Tableau. If you or your parents have Tableau Desktop, use it to make your viz. If not, then download [Tableau Public](#) for free today.

Here is an example of what your data table should look like in Excel:

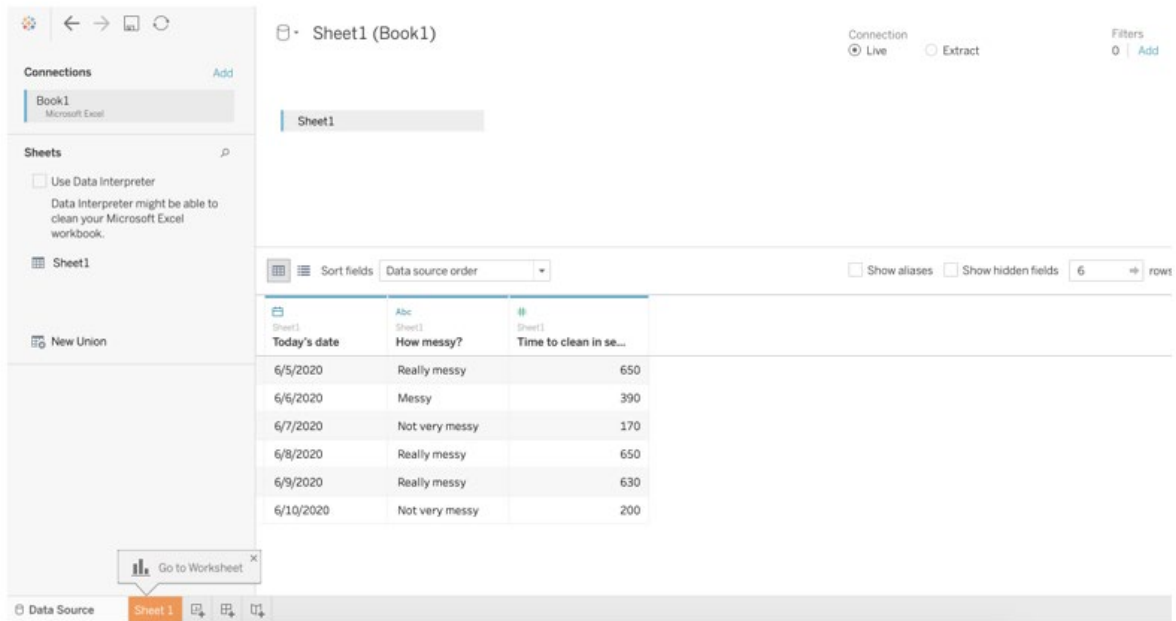
The screenshot shows the Microsoft Excel interface with the Home ribbon selected. The ribbon includes options for Paste, font settings (Calibri, size 12), bold, italic, underline, and alignment. The active cell is C10. Below the ribbon is a table with the following data:

	A	B	C	D	E	F
1	Today's Date	How messy?	Time to clean in seconds			
2	06/05/2020	Really messy	650			
3	06/06/2020	Messy	390			
4	06/07/2020	Not very messy	170			
5	06/08/2020	Really messy	650			
6	06/09/2020	Really messy	630			
7	06/10/2020	Not very messy	200			
8						
9						
10						
11						
12						

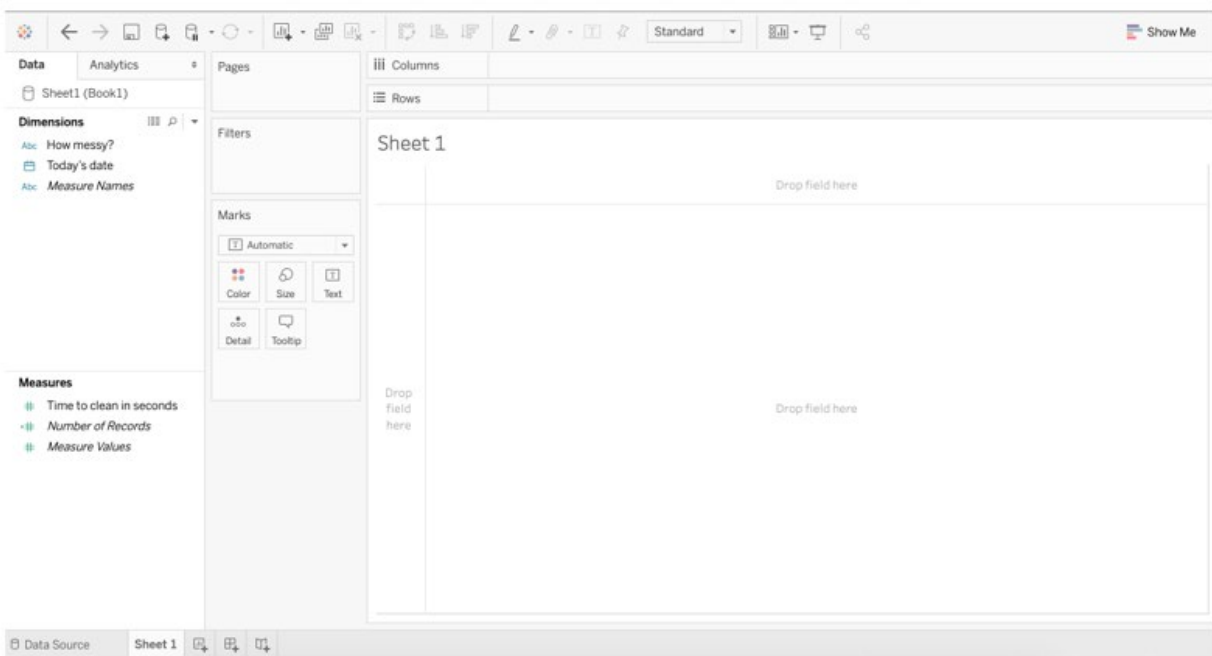
1. Open Tableau—Navigate to the left-hand pane, and open your saved Excel file.



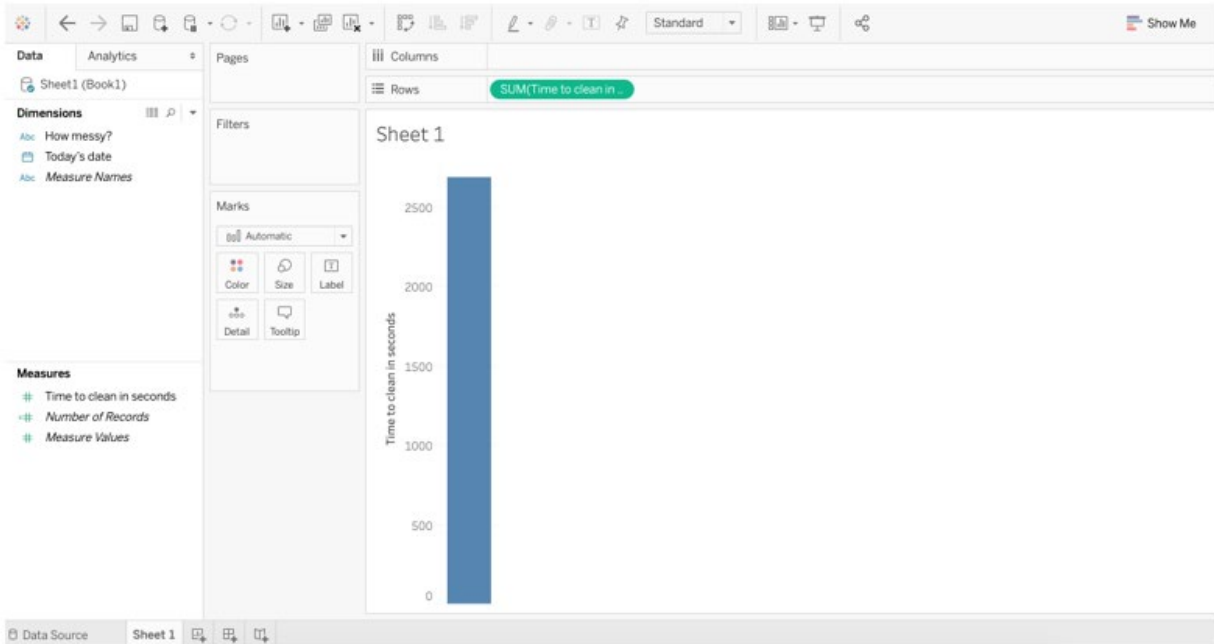
2. Once you open your saved Excel sheet, the “Data Source” pane will open. The worksheet should automatically open, and a sample of your data will be available. If it does not open automatically, drag the “Sheet 1” page (left-hand panel) to the center of the screen. There will be a prompt to “Drop Sheets Here.”



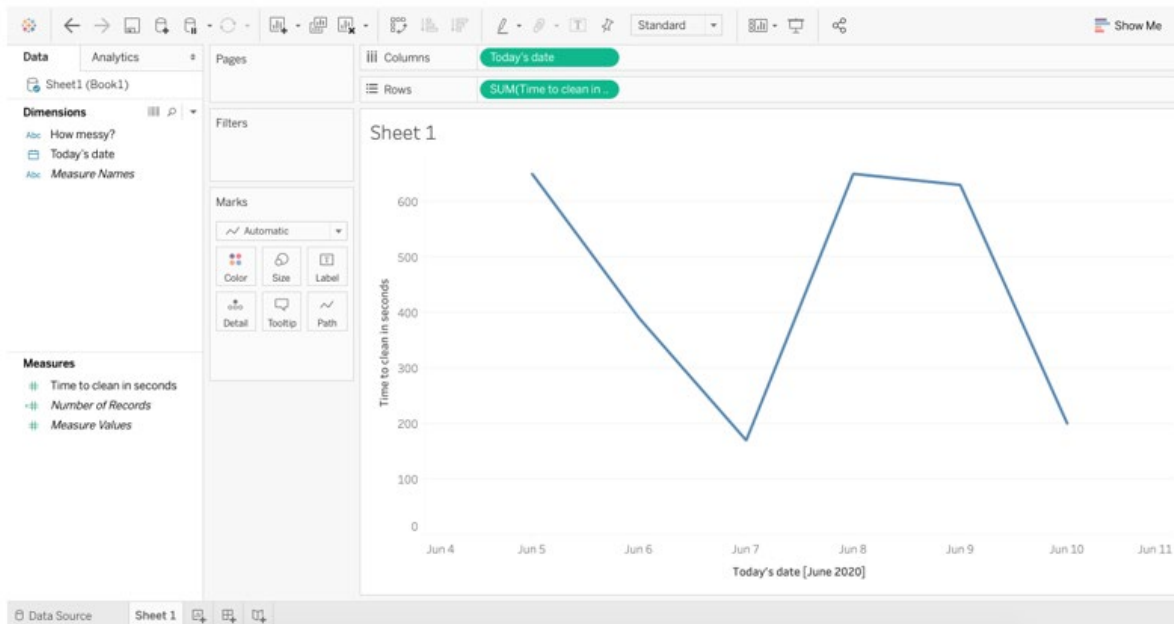
3. Select “Sheet 1” on the lower tab to open the Tableau Canvas, where you will build your viz. Look at the characteristics (Column headers) you recorded on the left side of the screen.



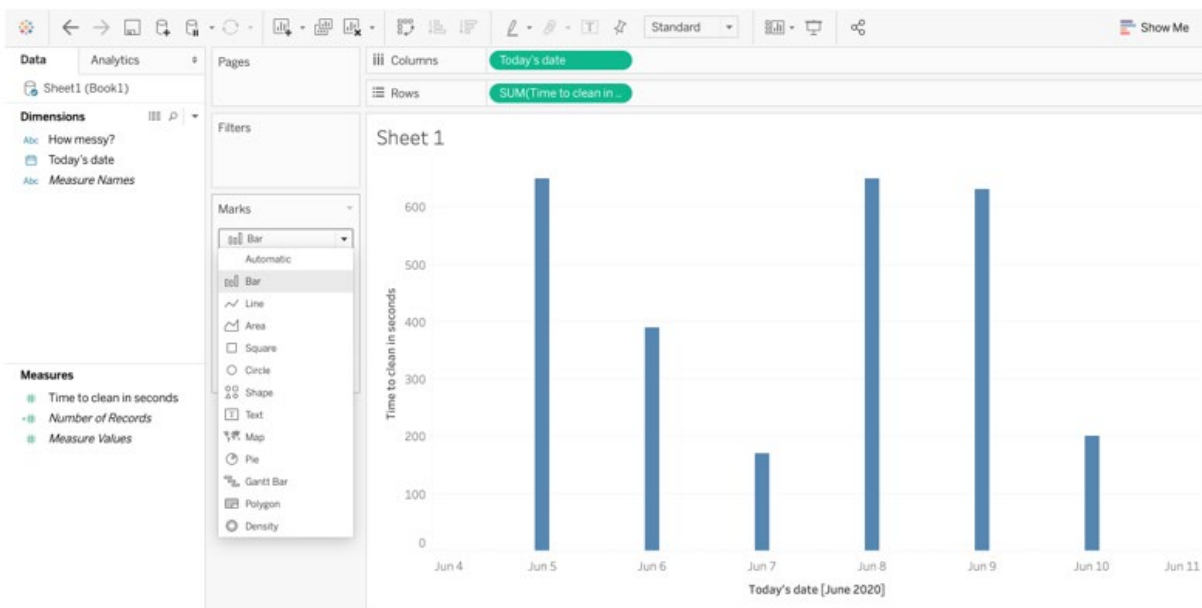
4. Select “Time to clean in seconds” and drag the data field to the rows toolbar. You just made your first bar chart in Tableau. Observe: What is it showing? (Hint: this is adding up across all days)



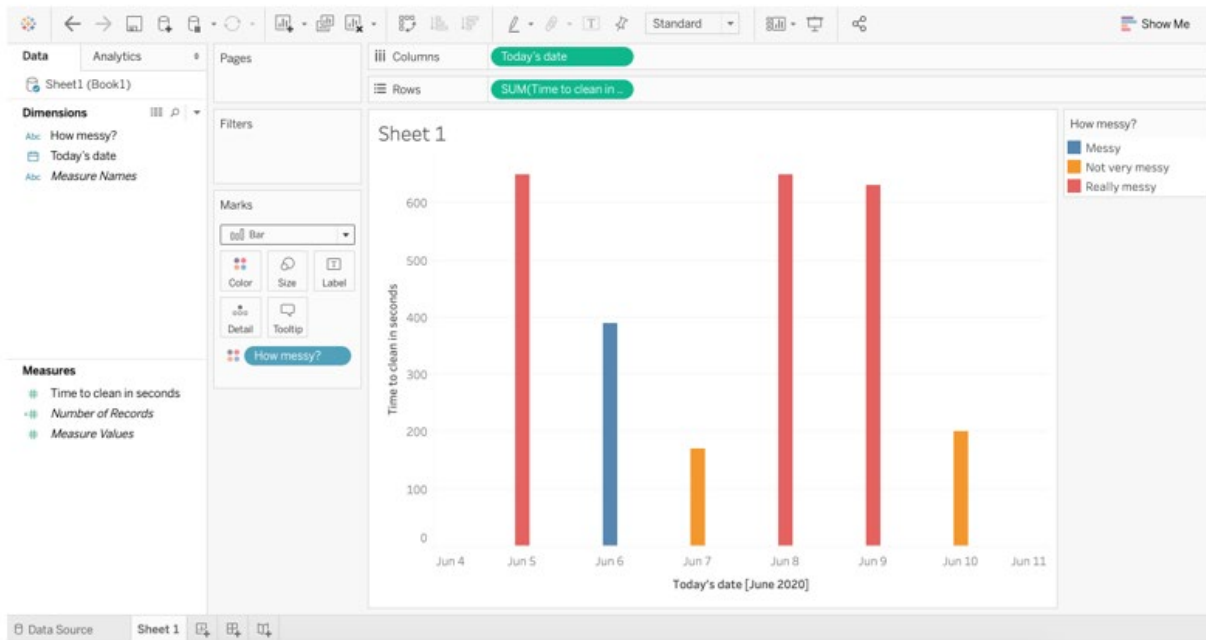
5. Select “Today’s date” and drag it to the columns toolbar. Right-click on “Today’s Date” and choose “Exact Date.” You have a line chart. But this isn’t quite what you need.



6. On the Marks card, click the drop-down that says “Automatic,” and select “Bar.” Now you have a bar chart again, but one bar for each day of the week. What do you notice about the height of the bars? What is it showing?



7. Drag “How Messy” to color on the Marks card. Observe: Are certain colors taller than other colors? What does this say about how long it takes to clean a messier room?



Congratulations, you've mastered a bar chart and cleaned your room!