

# CAMP GoldieBlox

## MAKE A CHANGE WITH DATA!

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Data is a collection of facts, numbers, and observations. Data scientists are people who look for answers to problems, and they use data to find those conclusions. Data scientists examine the data, look for patterns, and then take action based on the knowledge they've learned.

Sometimes it's hard to make a decision. But decision-making gets a little bit easier when there is data to back it up. In this activity, we'll set a goal then track some data. We'll study how that data helps or hurts our goal, then take action based upon the results. Are you ready?



Afua Bruce is a computer engineer who uses technology and data to help communities, so they can make better decisions and improve their lives.

### FUN FACT:

Data science is used everywhere from predicting the weather to recruiting the best players onto sports teams to shipping packages on the fastest routes possible.



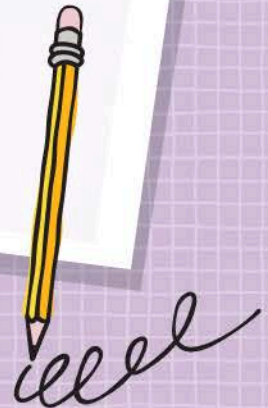


## YOU WILL NEED:

- Graph paper  
(or the printable  
chart on page 6)
- Colored pencils

## SAFETY FIRST!

Always ask  
an adult  
for  
permission  
and  
help.



## STEP 1:

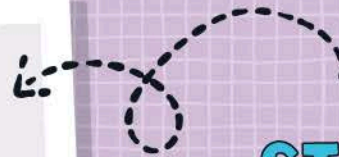
Data scientists first identify a problem. Ask yourself, how can my family be more environmentally-friendly at home? List some ideas.





## STEP 2:

Now create a graph so you can measure the data. On the vertical axis, include a measurable value such as minutes spent in the shower each day. On the horizontal axis, write the days of the week.



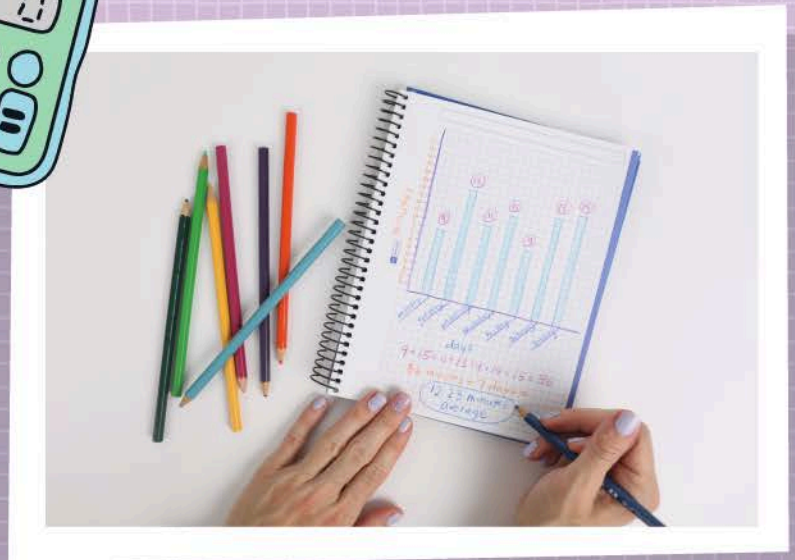
## STEP 3:

Track you and your family's data for one week.



## STEP 4:

After 7 days, analyze your results. Are there any patterns that you observe? Calculate the totals, and share your findings with family and friends.





## STEP 5:

Now it's time to propose a solution: how can you and your family reach your goal of being more environmentally friendly based on this data?

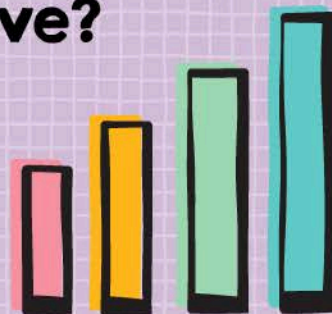
**"I'll set a timer for 5 minutes every time I shower!"**



## STEP 6:

Communicate your solution to the family and get everyone on board. Now measure your data for the next 7 days and see how it goes!

**Did your results improve?**





# THINK ABOUT IT!

You can use data to improve your personal life too. Some people record how many steps they walk per day. Others keep track of how much water they drink. Have you ever tracked how many hours you sleep or how long it takes you to finish your homework? Sometimes it's interesting to learn the actual numbers surrounding our daily lives. They can help us make better decisions about how we spend our time and what we need to do everyday to be happy and healthy.



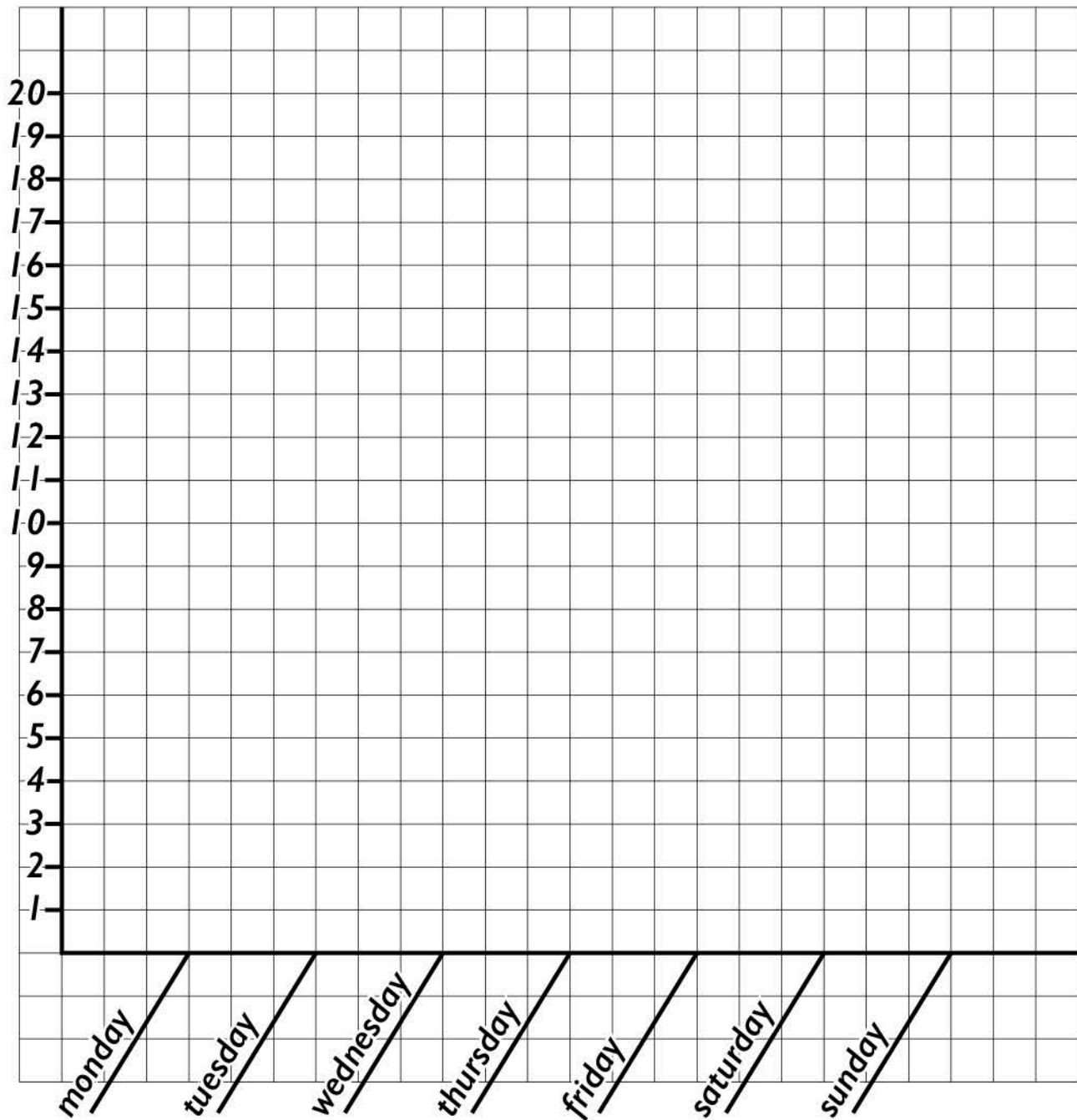
## LEARN MORE:

<http://datasciencekidsacademy.com/>

**Big Data**  
by Carla Mooney  
Nomad Press, 2018

**Code This!**  
by Jennifer Szymanski  
National Geographic Children's Books, 2019





**To figure out the average over one week, first add up your data:**

**-- + -- + -- + -- + -- + -- + -- = --**

**Then take that total and divide it by 7 days:**

**-- [divided by] 7 = ---**

**The answer is your weekly average.**