



How to...

DID YOU KNOW?
The word "scientist" comes from the Latin word for knowledge.



Be a citizen scientist

Your observations can be helpful to researchers around the world.

Heading outside after dark and recording how many stars you can see with the light population in your area. Keeping track of how many eggs hatch in bird nests in your yard. Spending a day counting all the butterflies in a local park. What do these activities have in common? They're all examples of citizen science projects, in which professional scientists ask regular people (including kids like you!) to help them collect observations from all over the world so they can better understand animals, nature, and more. Read on to learn more about what a citizen scientist is and how you can get involved.

Learn about citizen science

Citizen science is when members of the public voluntarily participate in scientific studies by collecting data (like how many trees of a certain type there are in their neighborhood or what color the algae is in local lakes) or monitoring potential problems (like water quality or light pollution), and then report their findings back to groups doing research. This is important because it allows scientists to get lots of information from around the country and world, which helps them better understand whatever it is they're studying. Today most of these projects provide information and training on how to help on their websites and then have volunteers return to a website or app to upload their findings.



Count some butterflies.

Find a project

There are lots of different types of projects you can participate in. We've included some great ideas in the sidebar to the right, and there are many more you can consider. Ask an adult to help you visit tinyurl.com/TWJUS-CitizenScience where you can search for options. Start by selecting when or where you can gather data (such as at the beach, on a hike, or even at home) and then add in a category you're interested in (animals, physics, transportation). You can also choose to search by keyword if you have something specific you want to observe.

Once you have your search results, click through to the websites to find out more about whether you qualify to help and what you'll need to do.

Get set to collect data

Once you've found a research project, ask your parents to help you look through the website to see how to get started. In some cases, you might need to watch online videos to learn more about what the researchers want you to do. Or they might send you a packet of information to read or ask you to purchase a kit to help with your observations. Be sure to follow the instructions closely—now and then again once you're ready to start collecting data—to make sure your observations are accurate.

4 science projects that need helpers

Count birds

Plan ahead to join the Christmas Bird Count from December 14 to January 5. Groups of citizen scientists gather and count all the birds they see to help scientists learn more about migration patterns. Go to christmasbirdcount.org to find out more.



Take water samples

Visit monitorwater.org with your parents to order a kit that will teach you how to test water sources for pH, temperature, and turbidity. Enter your results on their website to help scientists better understand the state of the world's water.



Listen for frogs

Join FrogWatch USA to help monitor wetland frog populations. This will help scientists track populations and catch any rare or invasive species early. Learn more at frogwatch.nextfieldscope.org.



Spot stars

The online Galaxy Zoo project lets you look at NASA photos and classify them by shape so scientists can learn more about what exists in outer space—and you don't even need a telescope! Visit galaxyzoo.org with an adult to get started.

