



COMMUNITY SCIENCE CHALLENGE

Challenge Goal: To participate in Community Science Month! Get involved in science in your community. Learn about some of the Community Science projects in your area and participate.

What is Community Science?

Community Science, also known as Citizen Science, is a collaboration between trained scientists, volunteers, and community members to learn more about our natural world. These projects empower people to use science to gather data about the ecosystems in their local areas, and may connect with those outside of our communities or around the world. Community Science can advance many fields of science such as: ecology, astronomy, medicine, computer science, genetics, statistics, engineering, and more!

Four Features of Community Science

1. Anyone can participate.
2. Participants use the same protocol, or research steps, so scientists can compare high-quality data
3. Data can help scientists come to real conclusions
4. A wide community of scientists and volunteers work together and share data to which the public, as well as scientists, have access.

PROJECTS & IDEAS

Water & Weather

This spring, get outside and explore our local waterways! In this challenge guide, you'll find four different Community Science projects that focus on the ecology and energy of water.

Involvement Levels

We rated these four Community Science projects based on how much effort is needed to join each project. Looking for something quick to spend an afternoon on? Go for a project rated 1. Looking to really dive into a science community? Go for a project rated 5.

Stream Selfie	★				
Creek Critters	★	★			
NASA Globe Clouds	★	★	★	★	
FrogWatch	★	★	★	★	★

For more Community Science projects, check out these resources:

- SciStarter: Science we can do together.
- National Geographic: Citizen Science Projects



STREAM SELFIE



What's in YOUR water? We all have the right to know if the streams running through our backyards and neighborhood parks are safe. But there is an alarming lack of up-to-date information about water quality across the country. Stream Selfie is here to bridge that information gap.

Stream Selfie connects you with thousands of other citizen scientists to paint a picture of streams across America. Simply snap a pic of your local stream and share it here.

Your photo is step one in our effort to check the health of every stream in the country – far more streams than state and local agencies have the resources to check!

Thousands of people are working toward a common goal: clean water. Will you join us?

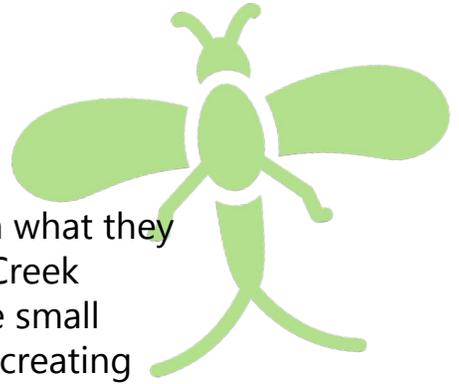
Stream Selfie is presented by The Izaak Walton League, a national nonprofit conservation group working to involve more Americans in conservation and outdoor recreation.

To participate:

1. Go to <https://scistarter.org/form/stream-selfie>
2. Create a SciStarter account
3. Stop by your local creek or stream and take a picture!
4. Provide information about the creek's location, ownership and condition.
5. Why does this stream matter to you?



CREEK CRITTERS



Check out the cool critters that live in your stream and learn what they tell you about stream health. Audubon Naturalist Society's Creek Critters® app walks you through finding and identifying the small organisms – or critters – that live in freshwater streams and creating stream health reports based on your findings.

You can submit your data and share it through IWLA's national monitoring database, the Clean Water Hub.

No prior training is required. The app is easy to use alone or with groups.

To participate:

1. Go to <https://anshome.org/creek-critters/>
2. Download the free Creek Critters app
3. Stop by your local creek or stream and follow the steps on the app to collect critters in shallow water over stones and rocks.
4. Use the app to identify the critters you find and they will tell you how healthy your local stream is!
5. What do macroinvertebrates teach us about our waterways?



NASA GLOBE CLOUDS

NASA needs your cloud observations to better understand the different types of clouds and the effects they have on Earth's climate. Clouds can change rapidly, so frequent observations from the same area over time are useful to track these changes.

NASA and other space agencies have a number of satellites orbiting the Earth and collecting data about clouds and the Earth's energy budget. Different cloud types interact with Earth's energy budget. Some clouds have a cooling effect and some have a warming effect. The overall impact of clouds is complicated which is why the more data you submit, the better.

The NASA GLOBE Clouds team at NASA Langley Research Center will compare your observations with satellite data for comparison purposes and will send you an email with the results. This process allows participants to engage in authentic science experiences through NASA missions.

You are an important part of the puzzle, providing a new perspective of the clouds that satellites do not have, looking up. We are excited to receive your cloud observations!

To participate:

1. Go to <https://www.globe.gov/web/s-cool/home/participate>
2. Create a GLOBE account and request access to satellite overpass times so that NASA can match the satellites to your location and observations.
3. Observe and report your observations to NASA.
4. They will send back a report that matches your observations to their scientific data!



FROG WATCH



FrogWatch USA is the Association of Zoos & Aquariums' community science program that provides individuals, groups, and families opportunities to learn about wetlands in their communities by reporting on the calls of local frogs and toads.

Frogs and toads also play an important role, serving as both prey and predator, in wetland ecosystems and are considered indicators of environmental health. Many previously abundant frog and toad populations have experienced dramatic population declines both in the United States and around the world and it's essential that scientists understand the scope, geographic scale, and cause of these declines.

Volunteers listen for frogs and toads during evenings from February through August and submit these observations to a national online database. Monitoring through FrogWatch USA can be an enriching experience that allows one to connect with nature and also contribute to amphibian conservation efforts.

To participate:

1. Go to <https://www.aza.org/frogwatch-usa-volunteers>
2. Become a volunteer by attending a training session online or in-person with a FrogWatch USA chapter.
3. Stop by your local creek or stream and follow the steps on the app to collect critters in shallow water over stones and rocks.
4. Find out which frogs and toads are in your area and when each can be heard calling. Learn to identify species by call, locate and register a wetland site, and collect and submit observations to the nationwide dataset.

