



cyanoScope

MAPPING CYANOBACTERIA ONE SLIDE AT A TIME

What are cyanobacteria?

Cyanobacteria (sometimes referred to as blue-green algae) are tiny organisms that can be found in diverse environments ranging from deserts to oceans.

What is the problem?

Under the right conditions cyanobacteria can spread quickly, forming dense “blooms” on a waterbody’s surface. These blooms are a big problem because **many cyanobacteria species produce toxins that are dangerous to humans and wildlife.**

Potential negative impacts include:

- Skin irritations
- Illness
- Loss of plant and animal life
- Loss of aesthetic appeal
- Loss of recreational opportunities
- Reduction in property values



Participation Details

Collect

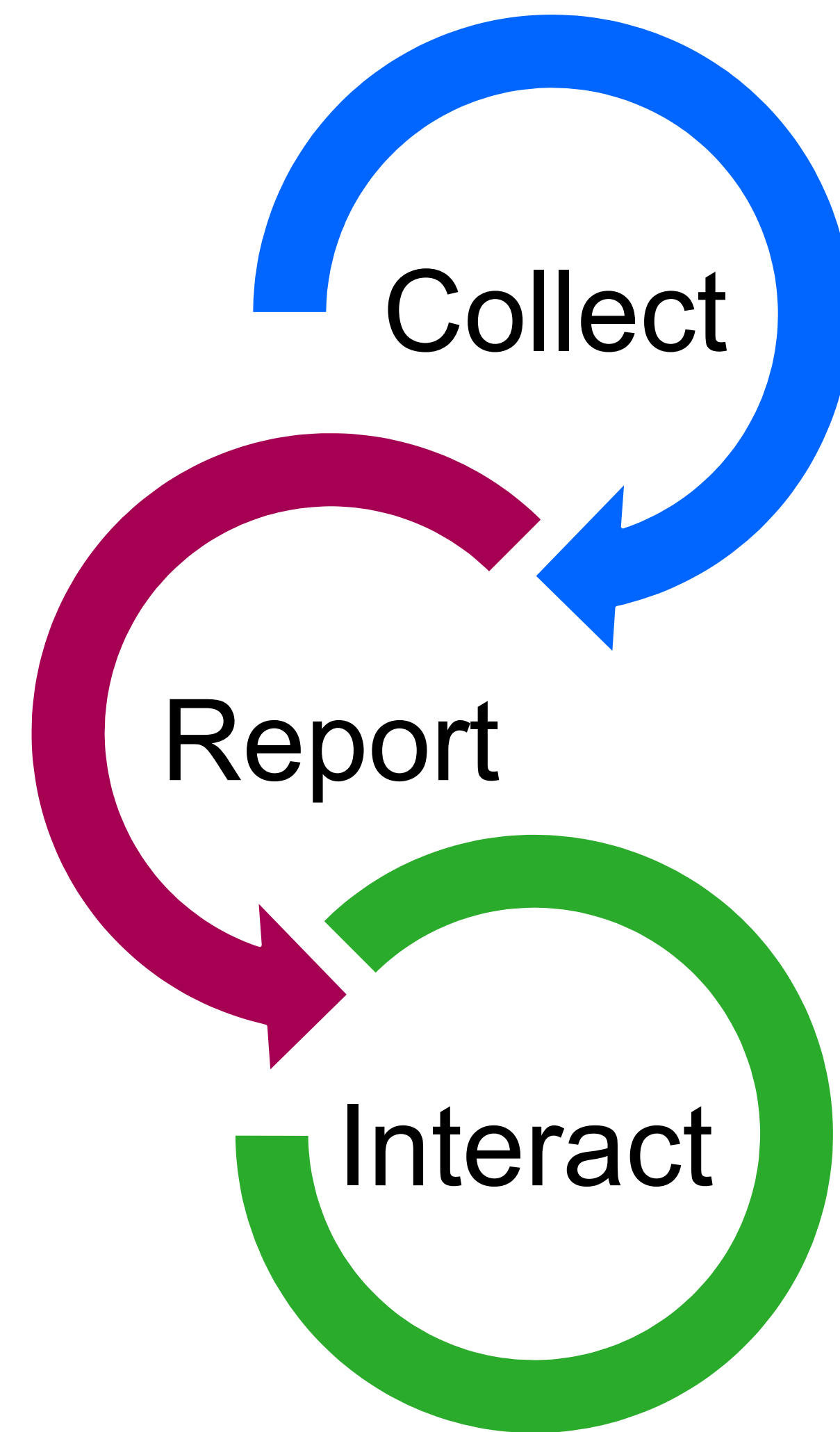
- Collect a water sample from your favorite lake or pond as you learned in training.
- Prepare your microscope slides.
- Now — hunt for cyanobacteria!

Report

- Upload your photos to the cyanoScope project on iNaturalist.
- Include basic information about where and when the sample was collected.

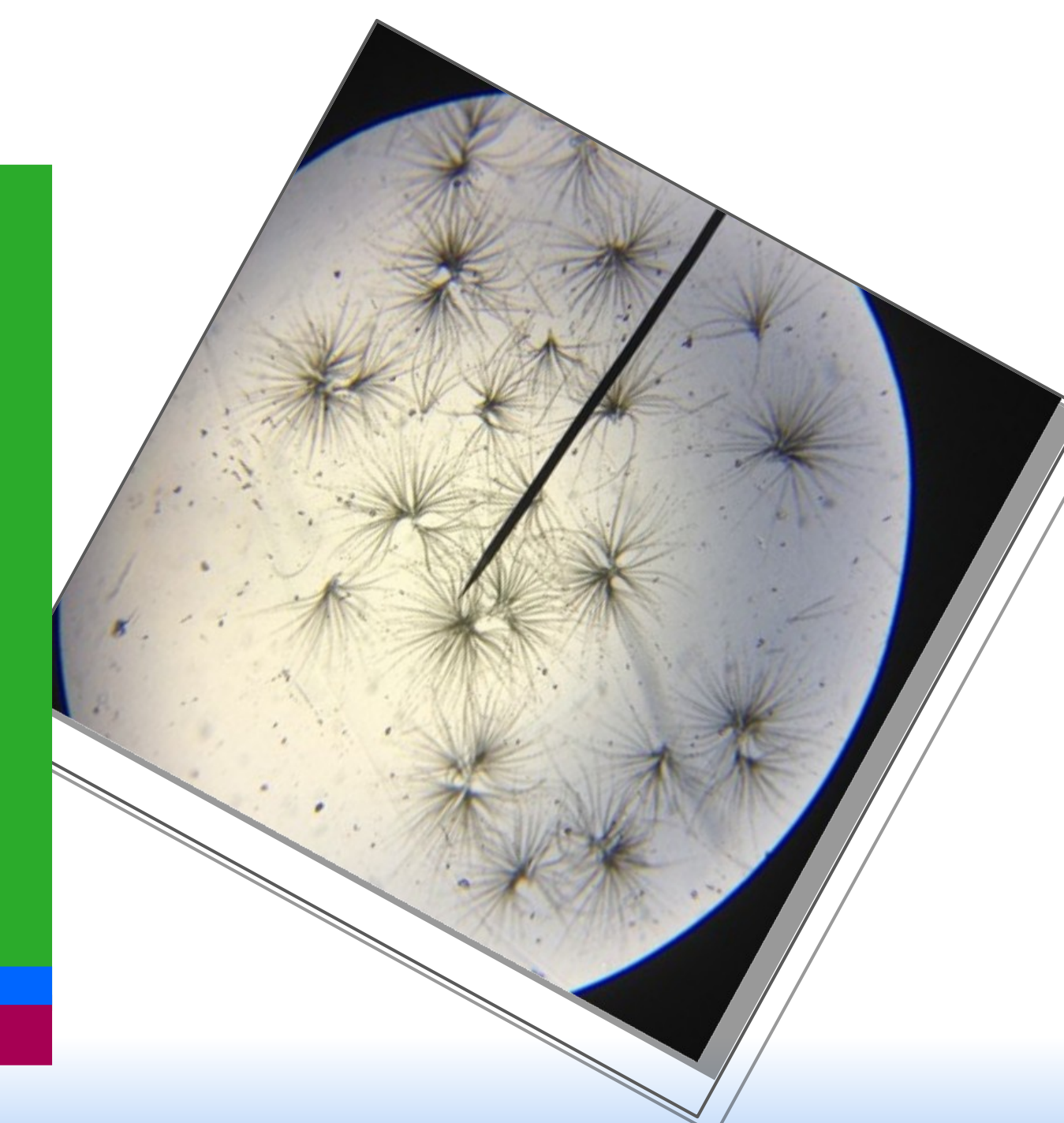
Interact

- Now the iNaturalist community can help identify the cyanobacteria.
- Get involved! Ask questions, submit your identifications, and learn about organisms that have been found near you.



Contact Us
info@cyanoscope.org

Visit us on the web:
www.iNaturalist.org/projects/cyanoscope
cyanoscope.org



The Kit

To participate in cyanoScope, you need to have the appropriate gear. The project will accept images submitted using any gear; however, we have spent a bit of effort considering which items would work well given each step of the project and the preferences of different participants (e.g. getting the images from the microscope to iNaturalist, field work vs. lab work, Android vs. iOS operating systems, etc.) As a result, we have put together kits that address all of these components. The kits include:



Digital microscope: These are economical, digital, have appropriate magnification, and come with fine focus.



Micro-to-USB Adapter: Connects the microscope directly to Android phones.



Wi-Fi Adapter: Fits directly onto the microscope's eyepiece and can connect to iOS and Android phones. You only need one adapter, so choose the one that is compatible with your phone's operating system.



Mechanical Stage: While these are not necessary, they GREATLY improve the usability of the microscope.



Slides, slide covers, and KimWipes: These supplies are required for using the microscope. If you will be working in the field, we suggest plastic slides instead of glass.



Plankton Net: A Students, 50 micron plankton net works very well for collecting samples.



250ml Amber Bottles: These are required for collecting the sample from the plankton net.



Cyanobacteria concentrator: These help improve the chances of getting cyanobacteria in the sample and thus increase the chance of capturing good images.

What is cyanoScope?

cyanoScope uses modern technologies and social media platforms to learn more about cyanobacteria.

By participating you will be helping scientists and water resource managers gain information on the occurrence and timing of cyanobacteria in lakes, ponds, and reservoirs.

Goals

- Public Outreach — Work with stakeholders to increase awareness of cyanobacteria.
- Crowdsourcing Identification — Use social media platforms to effectively and efficiently identify the cyanobacteria present in our waters.
- Scientific — Map the spatial distribution and seasonal occurrence of cyanobacteria in lakes, ponds, and reservoirs.