



Heading Into the Field

For information on water quality and macroinvertebrates, refer to: A Citizen's Guide to Understanding and Monitoring Lakes and Streams, <http://water.usgs.gov/edu/waterproperties.html>

Description

Students should collect data that will help them answer their investigative questions and save their data so they can follow up in the classroom at a later date by utilizing AGFC Stream Team Guide for more citizen science tools.

<https://www.agfc.com/en/education/onthewater/streamteam/citizen-science-tools/>

Habitat, Water Chemistry, Macroinvertebrate, Physical Habitat, and Data Management BEFORE going to the Stream/Waterbody



- Timeframe 2-3 hours pending # of participants
- As many trips as possible to your class's site
- Materials
- Field equipment – available for checkout
- Water Quality and/or Macroinvertebrate lesson plans for the field
- Pencils
- Datasheets
- Gather and record data
- Make observations into a field journal
- Understand the importance of water quality monitoring
- Learn the appropriate techniques to sample water quality
- Perform in-stream water quality tests measuring for pH, turbidity, temperature, and dissolved oxygen
- Understand the important role macroinvertebrates play in the aquatic ecosystem
- Collect, record numbers of, and study macroinvertebrates

Preparation

If you do not already have gear available to use, you may be able to borrow equipment through AGFC or schedule a monitoring session with Native Expeditions staff. You will also need to make sure students have their datasheets, and remind them to be thinking about their investigative question while gathering data.

Visit the site ahead of time to determine safe spaces for students to work in shallow water and easy access to put up tables for macro tubs, trays, ID charts. It is very important to establish boundaries of safety for entering the water only with an ADULT. Each group will need to access appropriate spaces in the field to collect their necessary data. Create and share a site schedule and field-day plans that corresponds with weather without precipitation, with students ahead of time. Planning for bathrooms before you arrive and how to manage once onsite.

Keep it Organized and Establish Safety Protocols

1. Instruct students to be aware and careful while conducting their activities, make them aware of danger of slick rocks, snakes, ticks, and tall grass (chiggers).
2. Choose access sites to the stream or water that will cause the least disturbance, especially considering erosion of stream banks.
3. Remind students to be respectful of nature (do not remove plants, handle organisms carefully, return them as close to the location they were found as possible, etc.).
4. Tell them not to throw or stack rocks.
5. Remind students to make good observations working with their team category Datasheet recorder, macro collection, macro ID, water chemistry, photographer
6. Always have a First Aid Kit, Bug Spray, and Sunscreen with an ADULT who is CPR trained, confident and comfortable walking in streams with waders. Maximum of 4 students in the stream per ADULT.



• Activity

1. Students will work within field teams to gather data using AGFC Water Chemistry, Macroinvertebrate, and Data Management Citizen Science PDF Guides.



2. Remind student groups studying and collecting macroinvertebrate data to be sure to gather species from different habitats, such as pools and riffles, if possible.

3. Remind teams to safely store their datasheets and take pictures of all macros, datasheets, and water chemistry tests. Follow the AGFC Stream Team Citizen Scientist Data



Management, Analysis, and Reporting Guide for data set up and reporting.

4. Properly pack up water chemistry set in individualized boxes with instructions, rinsing out used water into an approved container (NOT BACK IN THE STREAM). Clean and rinse off all trays, tubs, kick nets and waders from mud, rocks, and debris.
5. Practice LEAVE NO TRACE - pack in in > pack it out. Don't leave anything behind that can pollute the waterway or impact wildlife negatively.

