Protocols

Instrument Construction: Transparency

Instructions to build a secchi disk or transparency tube for measuring water transparency.

Instrument Construction: Freshwater Macroinvertebrates

Instructions to build several nets for freshwater macroinvertebrate sampling.

Selecting and Documentating Your Hydrosphere Study Site

Instructions are provided on how to select, describe and map a site for hydrosphere protocols.

Sampling Procedures

Students are shown how to collect a water sample for testing.

Water Transparency Protocol

Students will first measure water transparency at their undisturbed study site using a transparency tube or Secchi disk.

Water Temperature Protocol

Students will measure the temperature of water.

Dissolved Oxygen Protocol

Students will measure dissolved oxygen in the water at their site using a dissolved oxygen test kit or probe.

DEACTIVATED PROTOCOL: The GLOBE Hydrosphere Protocol - Salinity Titration has been deactivated as of September 2023. To learn more about the Deactivation Process, please visit the GLOBE.gov website.

Electrical Conductivity Protocol

Students will measure electrical conductivity of water at freshwater hydrosphere study sites.

Salinity Protocol

Students will measure the salinity of a salty or brackish water sample using a hydrometer and thermometer.

pH Protocol

Students will measure the pH of water using either pH paper or a pH meter.

Alkalinity Protocol

Students will measure the alkalinity of water using an alkalinity test kit.

Nitrate Protocol

Students will measure the nitrate-nitrogen content of water using a nitrate test kit.

Freshwater Macroinvertebrate Protocol

Students will collect, identify, and count macroinvertebrates at freshwater hydrosphere sites.

Salinity Titration Protocol

Students will measure the salinity of saltwater using a salinity titration kit.

Mosquito Larvae Protocol

Students will sample, identify and count the number of mosquito larvae at the genus or species level in their study site or community.