Secchi Disk Transparency Protocol (for deep, still waters)
Field Guide

Task

Measure the transparency of your water sample.

What You Need

- ☐ *Hydrosphere Investigation Data Sheet*
- ☐ *Cloud Type and Contrail Type Protocol Field Guide*
- ☐ *Cloud Cover and Contrail Cover Protocol Field Guide*
- ☐ Secchi disk with rope attached
- ☐ *Protective gloves*
- ☐ Meter stick
- ☐ *GLOBE Cloud Chart*
- ☐ Pen or pencil
- ☐ Waterproof tape or marker
- ☐ Clothespins (optional)

In the Field

1. Fill in the top portion of the *Hydrosphere Investigation Data Sheet*.
2. Record the cloud and contrail types and cover (see the *Cloud Protocols* in the *Atmosphere Investigation*).
3. Mark the rope with waterproof tape or marker in 1 meter increments. Stand so that the Secchi disk will be shaded or use an umbrella or piece of cardboard to shade the area where the measurement will be made. Wear protective gloves.
4. All Secchi disk depths should be taken **from the water surface**.* If you cannot reach the water surface, establish a reference point from the observer to the water, marking the reference point with a clothespin or waterproof tape, and recording this distance on the data sheet. The reference point can be a railing, a person's hip, or the edge of a dock.
5. Lower the disk slowly into the water until it just disappears. Record the distance from the water surface to where the disk disappears **in meters to the nearest 0.1 m**.
6. Lower the disk another 0.1 m (10 cm) into the water, then raise the disk until it reappears. Record the distance from the water surface to where the disk reappears in **meters** to the nearest hundredth of a meter (0.01 m, which is 1 cm).
7. There should now be two Secchi disk depth distances **from the water surface**. Record both Secchi disk depths on your *Hydrosphere Investigation Data Sheet* to **the nearest 0.1 m**. If the depths differ by more than 0.1 m (10 cm), repeat the measurement and record the new measurements on your *Data Sheet*.
8. If your observation was from water surface, record "0" as the distance between the observer and the water surface. If your reference point was above the water surface, record this distance on the data sheet as metadata. Be sure that the Secchi disk depths entered are from the water surface. You may need to subtract the distance from the observer to the water to get correct measurements.
9. Repeat steps 5-8 two more times with different people observing.

*Protocol Change. Data prior to 2026 are not directly comparable.