Transparency Tube Transparency Protocol (for shallow or flowing waters) Field Guide

Task

Measure the transparency of your water sample.

What You Need

- ☐ *Hydrosphere Investigation Data Sheet*
- ☐ *Collecting Your Water Sample in a Bucket Field Guide*
- ☐ *Cloud Type and Contrail Type Protocol Field Guide*
- ☐ *Cloud Cover and Contrail Cover Protocol Field Guide*
- ☐ Transparency tube
- ☐ Cup or small bucket for pouring water into the tube
- ☐ *Latex gloves*
- ☐ Meter stick
- ☐ *GLOBE Cloud Chart*
- ☐ Pen or pencil

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. Put on gloves.
4. Collect a surface water sample. See *Collecting Your Water Sample in a Bucket Field Guide*.
5. Stand with your back to the sun so that the transparency tube is shaded.
6. Pour sample water slowly into the tube using the cup. Look straight down into the tube with your eye close to the tube opening. Stop adding water when you cannot see the pattern at the bottom of the tube.
7. Rotate the tube slowly as you look to make sure you cannot see any of the pattern.
8. Record the depth of water in the tube on your *Hydrosphere Investigation Data Sheet* to the nearest cm. **Note:** If you can still see the disk on the bottom of the tube after the tube is filled, record the depth as >120 cm.
9. Pour the water from the tube back into the sample bucket or mix up the remaining sample.
10. Repeat the measurement two more times with different observers using the same sample water.