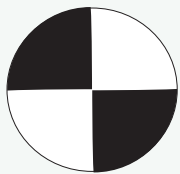


My Backyard Stream

Transparency Tube

Key Terms:



Secchi disk

a round, black and white disk at the bottom of the transparency tube, usually about 8-10 inches wide. To use a secchi disk on its own, you tie it to a rope and lower it into a body of water until the disk is barely visible. Then, you measure the distance along the rope to the water's surface. That length is recorded as the transparency of the water.



Bed

the bottom of a stream or river

What is a transparency tube?

A transparency tube is a tool used for measuring the water clarity of a stream. Water clarity is the clearness of the water (hence why it's called a transparency tube) and is an indicator of water quality.

Did you know that the use of transparency tubes is fairly recent?

Transparency tubes started being used in the mid-90s in shallow water where a secchi disk is unusable.

Did you know that the expectation of transparency measurements after a heavy rainfall is much different from regular measurements?

Normally, 60 cm (a full tube) is an expectation of clean streams free from excess sedimentation, but after a heavy rainfall, the measurements can be as low as 5–10 cm.



Safety: Before you get started make sure you are aware of your surroundings and traffic. Always be with an adult while exploring, be cautious of sharp objects that may be in the creek or on the streambank, and never enter a stream with high or fast-moving water.

Instructions

STEP 1



Find an open area of the stream. Hold the transparency tube parallel to the surface of the water.

Tip: Do this without disturbing the bed.

Let the tube fill. Once it is full, remove it from the water.

STEP 2



Hold the tube upright and look through the opening at the top to see if the secchi disk is visible at the bottom.

STEP 3



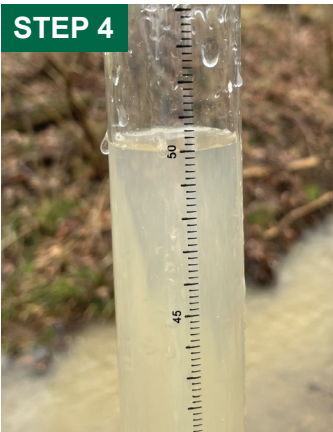
If the disk is not visible, find the hose and clamp on the side of the tube.

Slowly press both sides of the clamp to open it, releasing water from the tube.

Tip: while you are doing this, continue to monitor the visibility of the secchi disk from the top of the tube.



STEP 4



As soon as the disk is visible, release the clamp.

Note the water height using the measurements on the side of the tube and add it to the field sheet .

STEP 5

Once you have collected all the data on the My Backyard Stream chemistry field notetaking sheet, you can then submit your findings into the My Backyard Stream database!

To do this, visit watersheddata.com/Education/Back-YardStreamCode.aspx and click the "Citizen Scientist Data Submission" button.

Enter in the data you collected and submit.

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