



Stream Health

How do you know if a stream is healthy?

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BEST FOR GRADES

2-6

ESTIMATED TIME

5-10 Minutes

You Will Need

- A thermometer
- A clear cup or secchi disk*
- Waterproof shoes
- A container to hold small creatures.
Ice cube trays work well!



You can make a Secchi disk with a white paper plate and black tape or with a white lid and a black permanent marker.

Directions

Watch the Stream Health Video from <https://science-u.org/> and then investigate the health of a stream near you!

1. Print the Stream Health Chart
2. To check the temperature of your stream, first try it with your hand.
3. Next, use your thermometer to get an accurate temperature. We used a floating thermometer designed for a pool.
4. Next, you want to look at the water itself. How would you describe it?
5. You can make a simple secchi disk with your clear cup and a waterproof marker. Or you can make something a little bigger depending what you have on hand.
6. Put your secchi disk in the water. Can you still see the pattern? Does the white still look bright white?
 - 6.1 Make observations of the living things in and around your stream.
 - 6.2 Do you see any signs of animals living around the water?
 - 6.3 What kinds of plants do you notice near your stream?
7. Do you notice anything in the water? Scoop out some water into a container or ice cube tray. What do you observe?
8. Do you think your stream is healthy?
9. See the First Investigation of Stream Health (F.I.S.H.) to learn more.





STREAM HEALTH CHART

by Dr. Watt R. Shedd, Stream Doctor

MY STREAM HEALTH CHART

MY NAME: _____

Mark an **X** under **HEALTHY** or **UNHEALTHY** after answering each question.

Question	Answer	Unhealthy?	Healthy?
WATER TEMPERATURE: Is your stream warmer or colder than the air?			
WATER CLARITY: Is the water in your stream clear? Does it have a color? What color?			
STREAM BOTTOM: What is on the bottom of your stream? Do you see rocks, mud, or both?			
MACROINVERTEBRATES: How many bugs did you find? How many different kinds of bugs did you find?			
PLANTS: Which of these best describes the plants around your stream?	<i>(check one)</i> <input type="radio"/> mostly trees and shrubs <input type="radio"/> mostly flowers and tall grasses <input type="radio"/> mostly mowed or lawn grasses <input type="radio"/> mostly bare soil		
Which of these best describes the plants on your stream's banks?	<i>(check one)</i> <input type="radio"/> mostly trees and shrubs <input type="radio"/> mostly flowers and tall grasses <input type="radio"/> mostly mowed or lawn grasses <input type="radio"/> mostly bare soil		
WILDLIFE: Did you see any wildlife near your stream? What kinds?			
Did you discover any signs of wildlife near your stream? What did you find?			



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Stream Health Discovery Questions & Keywords

Discovery Questions

Why is it important to pay attention to the health of streams in our area?

What are some ways we can monitor stream health?

What are some ways we can monitor and help restore streams in our area?

Keywords

Clarity

A measure of how far light goes down through water.

Macroinvertebrate

Small organisms without a backbone.

Sediment

Minerals and debris that settles at the bottom of water.

Secchi Disk

The black and white pattern of a secchi disk is used to measure transparency of water.

Riparian Buffer

Area next to a stream that acts as a border between the stream and human activity.

Potable

Safe and clean to drink.

Why is stream health important?

Stream health is important to clean water, recharging groundwater that supplies local wells and reservoirs. Agricultural industry depends on the health of water and riparian buffers.

Healthy streams protect from floods and provide habitats for native species which keep the ecosystem balanced.



Stream Health

Discovery question answer key for parents and teachers.

Why is it important to pay attention to the health of streams in our area?

Although water may seem to be all around us, potable water (water that is safe and clean to drink) is only a very small percentage of the water on earth. Many water sources are polluted from human actions such as industry, agricultural practices, and suburban lawn care. Protecting our water sources is not only important for humans, but also for other organisms we share our ecosystem with.

What are some ways we can monitor stream health?

We can monitor stream health with simple observations of the area, taking the temperature of the stream, and by using a secchi disk to test for transparency and water purity. We can observe vegetation around the stream and look for signs of healthy wildlife in the area. Noticing signs of wildlife such as scat or footprints, tells us that the area is healthy enough to support an active ecosystem.

What are some ways we can monitor and help restore streams in our area?

Becoming a citizen scientist through programs like First Investigation of Stream Health (F.I.S.H.) is a great way to get involved. You can go to the F.I.S.H. website to get started.
<https://extension.psu.edu/first-investigation-of-stream-health-fish-protocol>