

# The Adventure of Willis the Walleye

**Objectives:** Student will be able to understand the various factors that can cause water pollution. Students will understand how pollution can affect aquatic life and the quality of the water.

**Materials:**

- Clear Container (2 Liter or larger)
- Light colored sponge in the shape of a fish tied to a dowel and weighted
- Light vegetation taped to back of tank
- Plastic insects and leaves
- Gravel for the bottom of the tank
- Small “log” for bottom of tank
- Pollutants
  - o Sediment – soil
  - o Manure – raisins or black beans
  - o Fertilizer – dry green kool-aid or jello
  - o Weed Killer – red kool-aid or jello
  - o Road Salt – table salt
  - o Litter – 3 oz paper cups or styrofoam bits
  - o Atmospheric Pollution – red water in a spray bottle
  - o Contaminated Industrial – cracked pipette ball (with shaft cut off) filled with stones & instant coffee sludge
  - o Used motor oil – maple syrup
- 5 gallon bucket
- strainer

**Overview:** Students investigate the different ways that humans have impacted aquatic habitats and how their actions affect water quality. Students will also learn ways they can help to keep streams healthy.

Have the students pair up (Journey card reader with the correct canister). Students should be in a semi-circle facing the container with Willis so everyone can see. The scenario is read by different students. Each step tells of Willis’s travels downstream, starting with his a clean river and then gradually adding more pollution. Different containers of pollutants are added by the students along Willis’s journey.

Introduce yourself and tell your audience that today’s activity is about water quality and water pollution. Water pollution is a very serious issue and can affect everyone’s lives.

**Question to pose prior to activity:**

1. How does water help our environment?
2. What sorts of things use water?
3. Is water important? Why?
4. What is pollution?
5. How does pollution affect humans?
6. How does water pollution affect aquatic life?

Sometimes we may be contributing to water pollution and don't even realize it. Other times, we realize it but don't do anything about it. Being aware is the first step to making a change.

This is my friend Willis. He is going to help us learn about pollution and how it affects the world he lives in.

(Get your container, water, & gravel ready)

Willis likes cooler water (holds more oxygen than warm water) .... Pour in water

Willis needs gravel or a rocky stream bottom where he can make a nest and care for his eggs ....add gravel

Willis also likes the parts of the stream that have shade from the trees and bushes on the shoreline. The shade keeps the water cool, with lots of oxygen, plus food fall from the vegetation for him to eat ....sprinkle in the insects and leaves.

**Activity:** You can use up to 18 participants. Nine students can each read one of the Journey cards. Nine students can each put in one pollutant as the Journey card is read.

**Wrap-Up:** Does this happen in real life? Could this have happened in a lake, in an ocean? What other animals and plants would be affected? Some towns and cities use river water for their drinking supply. It is a very costly process to purify water so we can drink it. The more contaminated the water, the more expensive it is to clean it. It is important for us to remember how many of the little things we do affect our water. We all need to protect it and be careful not to waste it. Pass out the worksheet for the kids to take with them. If there is time you can review the "Did you Know" facts about water pollution on the back.

**Clean-Up:** Empty the container of dirty water through a strainer into the pail. Flush the dirty water and put the garbage from the strainer into a garbage can. Rinse Willis thoroughly.