

## **Fish Health Station**

This video is going to help guide you through the process of hosting the **Fish Health Station**.

The objectives of the Fish Health station are to:

- a. Understand how water quality and fish habitat interact to affect fish health.
- b. Identify basic parts and function of internal and external fish anatomy.
- c. Identify potential effects to fish anatomy from contaminants and/or disease.
- d. Predict and measure sub-lethal and lethal (predation) effects to fish based on water quality and habitat conditions.
- e. Explore actions that could be taken in the watershed to benefit fish health.

### **The bullet list / steps**

- When the students arrive, introduce yourself and the other station members by giving your name, career, and agency
  - Prompt students to explore how humans affect water quality and habitat in ways that affect fish health
  - State the goals and objectives of the Fish Health station
1. Show and discuss 3 videos that demonstrate the sub-lethal effects of contaminants to fish.
  2. Divide the students into 2 groups that will rotate between 2 substations
  3. Station 1 is a habitat study that focuses on the importance of habitat with regards to predator/prey relationships and survival of aquatic species.

Four fish tanks, each containing live fish, should be set up to represent the following four scenarios:

- An ideal, pristine, and complex habitat,
- A seemingly ideal habitat, that is “contaminated” (a fish biologist should determine the best non-lethal way to represent contaminated)
- A turbid habitat
- And one with very little to no habitat.

Students should make predictions before playing the role of a predator, trying to net or “eat” the fish, while other students time and record how quickly the fish is caught.

A discussion after this experiment should focus on a species perspective of possible environmental stressors that could compromise a fish's health in a watershed

4. Station 2 utilizes two fish dissection puzzles in conjunction with a fish health jeopardy game. This game encourages thoughtfulness about how contaminants and/or disease can affect various internal and external anatomy of a fish with a competitive incentive.

In conclusion, summarize the lessons learned at the Fish Health Station:

This activity blends and enhances the lessons from both the water quality and habitat sense stations in an effort to further understand direct and indirect impacts on fish health such as increased temp, decreased oxygen, exposure to chemicals, increased prevalence of bacteria, parasites and disease, decreased food supply and increased predation.