Habitat Sense Station

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

The objectives of the Habitat Sense Station are to:

- Understand how fish use stream habitat to get food, water, shelter, and space.
- Learn how to survey stream habitat and quantify the different habitat components.
- Discuss the features of a stream and how land management can affect stream habitat.

The Bullet List

- When the students arrive, introduce yourself and the other station members including their name, career, and agency.
- Ask students “what is habitat?”, then ask what are the four components of habitat that living things need to survive? Those components are food, water, shelter, and space.
- State the goals and objectives of the Habitat Sense Station

    a. Have the students get into the stream and pretend they are fish. They will select a spot in the creek that they think will provide food, water, shelter, and space. Discuss how fish meet these four needs.
    b. Make sure they have space and remind them they need to stay in the same location throughout the exercise.
    c. Then an aquatic safe fluorescein solution is poured across the creek so that students can visually see the areas of varying flow velocities velocities.
    d. Next throw goldfish crackers or something else simulating food. Students will maintain their position and try to gather as much food as possible.
    e. You will ask them if their fish has shelter from predators and identify who will likely get eaten.

f. Have students count their catch and ask what contributed to good or poor habitat for their fish.

**After the Stream complexity exercise divide students into three groups.

1. The Habitat Unit exercise, will allow students to collect fish habitat data.
    a. Worksheet Data collected will include;
        i. water temperature in degrees Celsius
        ii. Identifying the features of habitat types such as pool, riffle, and glide
        iii. Estimating and measuring the length and widths of the habitat unit and finding the maximum depth, as well as pool tail-crest if it's a pool.
        iv. evaluating substrate size variations , what sizes they have in their reach, and uses for fish.
        v. They will evaluate if substrate is embedded and what that might mean for fish and macro-invertebrates.
    b. Students will count pieces of woody material and discuss the ways that wood contributes to stream complexity.
    c. Students will be provided a description of the various types of fish cover and asked to identify if they are present in the reach and identify dominant and subdominant cover types within their habitat unit.
    d. Students will evaluate if erosion is occurring and discuss how streambank cover and land management affects erosion.

3. Conclusion/outro

In conclusion, summarize the lessons learned at the Habitat Sense Station

Fish, like all aquatic species need complex habitat to meet their needs. The health of the watershed affects food availability; water quality, quantity and velocity, wood and other fish cover components. The preservation and restoration of natural stream functions benefits both fish and landowners.