Turbidity Field Lesson: “How Clear is Our River?”

1. Objective & Setup

Goal: Teach participants how to measure water clarity using a DIY Secchi disk and understand why turbidity matters.

You’ll Need:

- Black-white Secchi disk (20 cm) + marked rope
- Rope or measuring tape (marked in cm)
- Stopwatch (optional)
- Data sheet or post-worthy graphic template

Estimated Time: 10–15 minutes

2. Beginning Questions

1. **What do you think the term “turbidity” means?**
2. **Why might water clarity matter for fish, plants, or people in your community?**
3. **How would you expect river water visibility to change after heavy rain or nearby construction?**
4. **What does runoff bring to the river?**

3. Step-by-Step Activity

1. **Position & Prep**
   Stand on the shaded side of your canoe or bridge between ~10 AM–2 PM (best lighting)

2. **Lower & Raise the Disk**

- Lower it until it disappears—mark depth
- Raise it until it reappears—mark depth
  Average both readings = **Secchi depth** (cm)

3. **Record Data**
   - Time, GPS location, weather conditions
   - Observations (e.g., cloudy, green, sediment plume)

4. **Repeat (Optional)**
   Take 2–3 measurements to check accuracy

4. After the test.

1. **What was your Secchi depth reading (in cm)?**
2. **How might this turbidity level affect local aquatic life or drinking water safety?**
3. **What local factors could be causing this turbidity?**
4. **Who in your community should know about these water conditions?**
5. **Would you like to help organize a community water test day—or share your data with your town leaders?**

5. Why do this experiment

- High turbidity in river water significantly reduces sunlight penetration, which in turn suppresses plant photosynthesis and lowers dissolved oxygen levels—impacting aquatic ecosystems and complicating water treatment processes . Using a simple Secchi disk—just a disk, rope, and curiosity—anyone can measure turbidity with ease and accuracy. Asking locals questions like, “Have you seen the river get murky? What changed?” not only connects the science to real-life experiences but also helps gather stories that can drive local policy discussions forward.