

Water POLLUTION Lab Intro



CHALLENGE

Find a pattern with the data collected to determine the health of your water source.



Key Concepts

- **Nitrates:** added by fertilizers and animal feces. Makes plants grow!
- **Phosphates:** added by fertilizers, feces, and detergents. Makes plants grow!
- **pH:** 0-6 = acid, 7 neutral, 8-14 = base
- **DO:** Oxygen in the water! Put there by PS
- **Turbidity:** suspended particles in water (FTU)

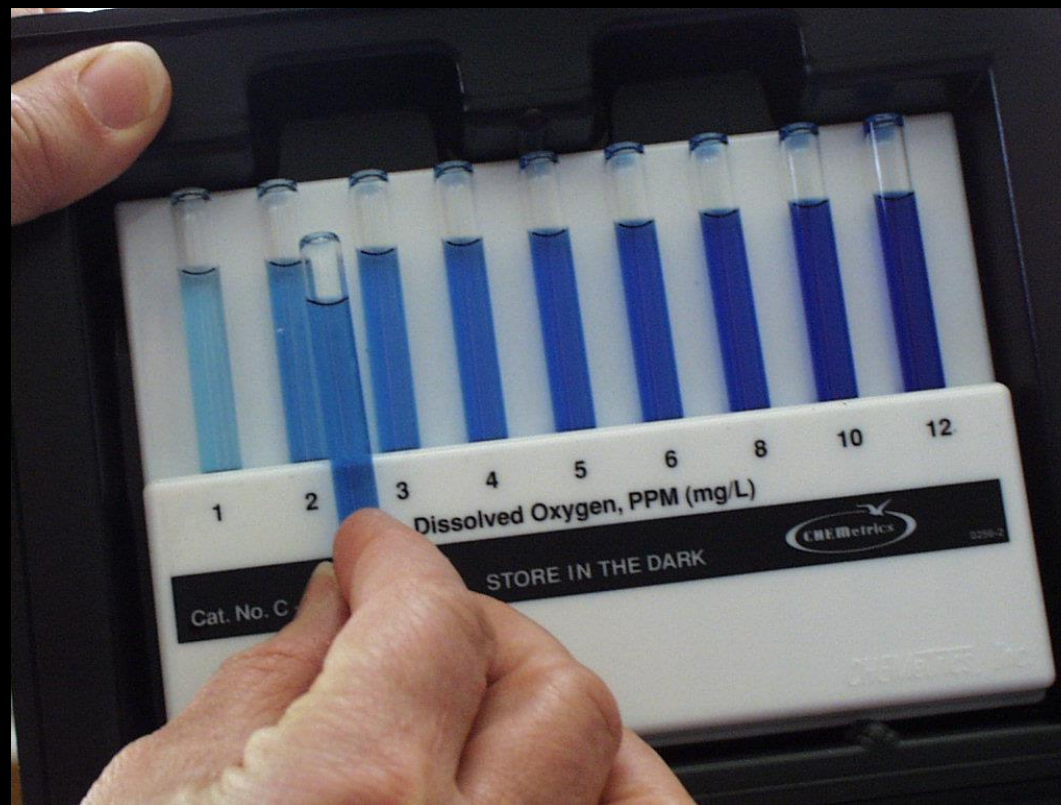
Station 1: Nitrates

- Snap tests...follow instructions and snap.
- Compare color of ampoule to the standards in the black box.



Station 2: Dissolved Oxygen

Follow instructions and snap



Station 3: PHOSPHATES

Follow procedures for snap test and snap.

Station 4: pH

- Measures acid 0-6/base 8-14/neutral 7.
- Take off cap of pH meter. Stick pH meter in water sample. Wait 30 seconds and record pH.
- Be careful to not break the glass electrode on tip of pH meter.



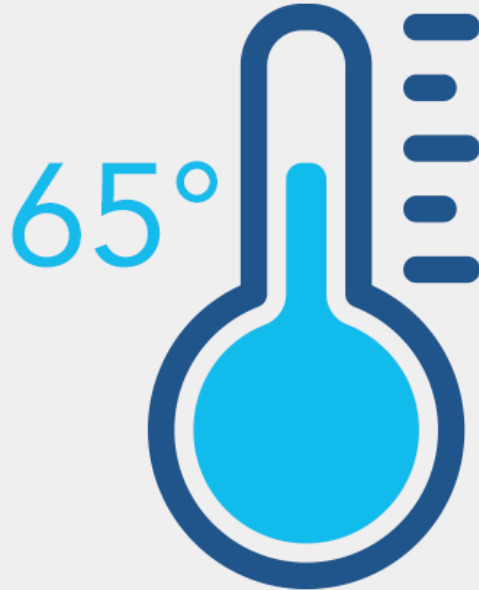
Station 5: Turbidity

- Pour water sample into glass cylinder.
- Take glass cylinder with clean water sample and place in colorimeter. Press READ button.
- Then, place your water sample in the glass cylinder into the colorimeter. Press READ button.
- Answer will be given in FTU.



Station 6: Temperature

- Place thermometer into water sample.
- Read in Celsius.



Station 7: Bacterial COLIFORM

- Grab an agar plate.
- Place Q tip in water sample.
- Spread water sample gently across agar plate.
- Seal off agar plate with masking tape. Label with your name and location.



Station 8: Salinity

- Place three drops of water sample onto refractometer (open the case).
- Look into the eyepiece while directing the refractometer at the light.
- Record data
- Rinse off when done!



Record ALL DATA IN A DATA TABLE

- Use data to determine health of water way.
- Any possible sources of contamination? If so, from where?
How did they get there?

EXAMPLE