1

Basic Info

Important!

Start your data sheet right! **Each page** you record data on should have your names, the date, time, and site location at the top. On the first page, you should also include a brief description of the site.

Now, on to SCIENCE!

2

Temperature

Air Temperature

1. Hold thermometer in shade for about 2 minutes.
2. Read temperature and record data! *(Note: Always measure air temperature before water temperature. What are your units? Celsius or Fahrenheit?)*
3. Don't forget to record what the weather is like too!

Water Temperature

1. Hold thermometer in water, almost completely submerged, for at least 2 minutes.
2. Read temperature and record data! *(Note: What are your units? Celsius or Fahrenheit?)*

3 Transparency

1. Pinch the white finger clamp on the hose of your transparency tube closed.

2. Facing upstream, fill the transparency tube to the top. *(Tip: Hold the bottom end lower than the top to allow air bubbles to escape!)*

3 Transparency

3. Look directly into the tube from the open top. Can you see the black and white *Secchi* pattern on the bottom of the tube? If not, carefully open the finger clamp and slowly release water until the pattern is visible.

4. Read the number on the outside of the tube closest to the water line. *(Note that the measurements start at the bottom of the tube.)*

5. Record your data in centimeters. If the Secchi pattern was visible when the tube was full of water, write > 60 cm.

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4 Dissolved Oxygen

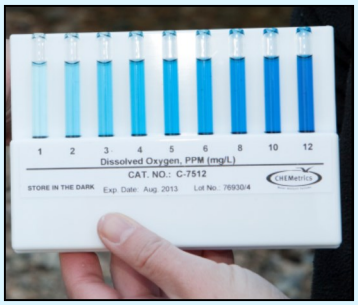
1. Open black case. Facing upstream, fill the clear plastic sample cup with water.
2. Place a glass ampoule in sample cup with the small tip against the bottom edge closest to you. With a gentle snap of the wrist, pull the ampoule towards you to break the tip. The ampoule will quickly fill with water.

3. Remove the ampoule from the sample cup and mix by inverting several times.
4. Wait 2 minutes. (While waiting, you can empty the sample cup and return it to the case.)

4 Dissolved Oxygen

5. After 2 minutes, compare the ampoule to the color comparator. Set the ampoule flat against the white background of the comparator, between blue tubes until you find a close match.

6. Record your data! Dissolved oxygen is measured in either PPM *(parts per million)* or mg/L *(milligrams per liter).*
7. When finished, put the used ampoule into plastic trash bottle.



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5 pH

1. Remove pH test strip from bottle and close lid! Do not touch green pad on end of strip.
2. Facing upstream, dip pH strip in water and remove immediately.
3. Wait 15 seconds.
4. Compare pH strip to the color chart on bottle. Read quickly because color will continue to change with time.
5. Record your data! *(What does that number mean? Is the water acidic? Neutral? Alkaline?)*

6 Observations

Now that you've recorded your data, think about what those numbers mean in relation to where you were testing. What were the *riparian* (shoreline) conditions like? Do you think this area provides suitable habitat for cutthroat trout?

Record your observations.

Take a deep breath and look around you. Isn't this better than sitting in class? Have you thanked your teachers for putting this trip together?

Ponder life. Consider writing a river haiku.

And watch for another great spot to measure water quality.