Water Testing Activity

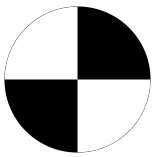
Word Bank:

Turbidity- *Measures the clarity of the water. Turbid water is caused by soil erosion, runoff, algae, and bottom sediment. Ideal turbidity is clear.*

pH- *Measures how acidic of basic the water is. The range is 0-14, 0 being the most acidic and 14 being the most basic. An example of a basic is Baking Soda. An example of an acid is Vinegar. Ideal pH is between 6.5 and 8.*

Dissolved Oxygen- *Dissolved Oxygen is important to the livelihood of aquatic life. The saturation % of dissolved oxygen shows water quality. Cold water can hold more oxygen than warm water. High levels of bacteria or rotting plants can cause % Saturation to decrease.*

Secchi Disk-



% of Saturation- *The level of Dissolved Oxygen in the water. If water is cold it can hold more oxygen and therefore will most likely have a lower level of a % saturation.*

Procedure:

Step One: Identify the temperature

1. Fill your jar with water (fill to the fill line).
2. Look to the side of the jar and identify what the temperature says in Celsius.
3. Record your results on the data sheet below.

Step Two: Test the Turbidity*

1. Look to the bottom of the container to see the Secchi Disk* icon.
2. Compare the appearance of the Secchi Disk Icon at the bottom of the jar to the measurement of the turbidity on the provided chart.
3. Record your results on the data sheet below.

Step Three: Test the pH*

1. Fill the large test tube to the 10 mL mark using water from your jar.
2. Add **one** pH tablet to the test tube (be sure you are using the **pH tablet**).
3. Cap and mix the test tube until the tablet has disappeared completely.
4. Compare the color of the sample to the pH color on the provided chart.
5. Record your results on the data sheet below.

Step Four: Test the Dissolved Oxygen*

1. Fill the small vial with water all the way to the top using water from your jar.
2. Drop **two** Dissolved Oxygen tabs into vial-causing the water to overflow **(be sure you are using the Dissolved Oxygen tablet)**.
3. Tighten the cap and shake for approximately 4 minutes until the tablet has completely disappeared.
4. Wait 5 minutes for the color to fully develop and compare to the sample Dissolved Oxygen on the provided chart.
5. Record your results on the data sheet below.

Step Five: Identify the % of Saturation*

1. Use the provided chart to identify the % of oxygen saturation of your water sample using your data for the temperature and the Dissolved Oxygen results.
2. Record your results on the data sheet below.

Earth Echo Monitoring Data Sheet:

Water Sample Set: A or B

Parameter	**Sample 1**	**Sample 2**
Water Temp Celsius		
Turbidity		
pH		
Dissolved Oxygen		
% Oxygen Saturation		

1. Write one statement about your results (something you learned or was really interesting or unexpected):
2. Write one question you now have that might lead to further study (think about HOW or WHY questions):