

Name: \_\_\_\_\_

Date: \_\_\_\_\_



## Student Pre-Test

**Instructions:** Water quality data was collected from a water source over a two month period and organized into the Data Collection Table below. Using this data, answer the following questions to the best of your ability. Provide as much detail in each answer as possible. Partial credit will be awarded.

**Data Collection Table**

Water Temp. °C	pH	D.O. (ppm)	Nitrates (ppm)	Phosphates (ppm)	BOD (ppm)	CO2 (ppm)	Turbidity (JTU)	Date
10	7	11.3	1.1	1.2	2	0.5	2	4/5/06
10.5	7	11.3	1.1	1.2	2	0.5	2	4/12/06
11	6.8	11	1.2	1.2	2	0.6	3	4/19/06
11	6.9	11	1.3	1.4	2.1	0.5	3	4/26/06
12	6.5	10.8	1.5	1.4	2	0.7	3	5/2/06
14	6.4	10.3	1.6	1.5	1.9	0.6	3	5/9/06
14.5	6.3	10.2	1.6	1.7	2	0.6	4	5/16/06
14	6.4	10	1.6	1.7	2	0.6	3	5/23/06
14	6.4	10	1.5	1.8	2.1	0.7	3	5/30/06

## Questions

1. Based on the pH levels reported, do you think the water source is a healthy environment for most organisms living in the water? Why or why not?

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2. Do phosphate and nitrate levels change significantly over the data collection period? What does this tell you about the quality of the water?

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3. Is there any relationship between Dissolved Oxygen (D.O.) levels and water temperature in the recorded data? Explain your answer and indicate what this information might reveal about the quality or health of the water.

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4. Is it scientifically valid to assess the overall health of the water based on the two months of data that was reported in the table? Explain your answer.

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5. Turbidity is a measure of the quantity of suspended particles in the water. The higher the turbidity the more particles are present. Large amounts of suspended particles can block sunlight. If extremely high turbidity levels occur for several weeks following the data collection period, would you expect the Dissolved Oxygen (D.O.) levels to be lower, the same, or higher than 10 ppm. What could cause a rapid increase in turbidity? Explain your answer.

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