

Name _____

Biochemical Oxygen Demand Lab

Due Friday, May 26

Must be Typed

Guiding Questions:

- 1) How does biochemical oxygen demand affect dragonfly ecosystems?
- 2) Do different substances that are found in possible dragonfly environments demand oxygen?

Background Information:

1. What is DO and why is it important for a river's health?
2. How much DO does a dragonfly nymph need to survive?
3. How does oxygen get into the river? Describe both ways we talked about.
4. What is meant by biochemical oxygen demand? Support your answer by giving specific examples, and how these examples would change the oxygen.
5. Why is measuring the oxygen demand important?
6. Give as many examples as possible of substances that are associated with BOD.

Experimental Design:

Brief description of our lab design, talking about all three bottles. Explain why we need both a variable and a control.

- a) **Diagram of the experimental set-up:** (label the variable, control, etc.)
- b) **Describe how you will conduct the experiment**

Procedure:

Describe or *attach* a procedure.

Data:

Include all data in a table format

Data analysis:

Discuss the results and any possible errors.

1. How much BOD was there in the control?
2. How much BOD was there in the variable?
3. How much BOD was just due to the water, and how much was a result of what you put in your variable bottle?
4. What are some sources of possible error?

Discussion and Conclusion:

In paragraph form, answer both of the guiding questions.

Give evidence in your answer.

What have you learned in this lab and why does it matter?

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Questions for BOD Lab

Background Information

1. What is DO and why is it important for a river's health? _____

2. How much DO does a dragonfly nymph need to survive? _____

3. How does oxygen get into the river? Describe both ways we talked about.

4. What is meant by biochemical oxygen demand? Support your answer by giving specific examples, and how these examples would change the oxygen.

5. Why is measuring the oxygen demand important?

6. Give as many examples as possible of substances that are associated with BOD.

Experimental Design

1. Write a brief description of our lab: _____

2. Why did we use three bottles? Describe what we did for each bottle.

Data Analysis

1. How much BOD was there in the control? _____

2. How much BOD was there in the variable? _____

3. How much BOD was just due to the water, and how much was a result of what you put in your variable bottle? _____

4. What are some sources of possible error? _____

Discussion and Conclusion

1. How does biochemical oxygen demand affect dragonfly ecosystems?

2. Do different substances that are found in possible dragonfly environments

demand oxygen? _____

3. What have you learned in this lab and why does it matter? _____
