

Eutrophication Design an Experiment

Design an experiment to test the growth of photosynthetic algae.

In your write-up you need 5 parts.

1. Question – What are you testing?
2. Research - What is Eutrophication? Nitrate? Phosphate?
3. Hypothesis – what is your testable prediction?
4. An Experiment Procedure (step by step)
 - a. Be sure to include a control.
 - b. Identify the dependent and independent variables.
 - c. Be sure to indicate specific quantities (volume, time, mass, etc.)
 - d. LAST STEP IS REPEAT EXPERIMENT 3 TIMES TO STRENGTHEN RESULTS.
5. Expected results – what do you expect will happen.

Materials at your disposal:

- Various sizes of beakers
- Plastic cups
- Control (deionized) water
- Pond Water (with algae)
- Nitrate Solution (10%)
- Phosphate Solution (10%)
- Nitrate/Phosphate Solution (5%/5%)
- Microscope Slides
- Coverslips.

Data Table: Your data table showing your results should be here in the lab.

Post Lab:

1. Which of the samples showed the most growth of organisms during the experiment?
2. Which sample showed the least growth?
3. Describe ways that Nitrates and Phosphates can enter waterways.
4. Explain the process of Eutrophication.
5. Did this lab effectively model the entire eutrophication process? What could you change to better model eutrophication?