**Effect of Fertilizer on the pH of Pond Water**

**Problem**: How does the addition of fertilizer high in nitrogen and phosphorus affect the pH of pond water?

**Background Information:**

1. Describe what happens to algal growth when fertilizer is added.
2. Describe photosynthesis.
3. How does carbon dioxide affect the pH of water?

**Hypothesis**: If fertilizer high in phosphorus and nitrogen is added to pond water, then the pH of the pond water will (go up or go down) as compared to pond water without added fertilizer due to the (increased rate of photosynthesis or the increased rate of decomposition).

**Variables**:

* Independent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Dependent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Controlled: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Materials:** List all materials used to complete lab.

**Procedure**:

1. Label two cups: Control Group and Fertilizer.
2. Measure 100 mL of pond water and place in cup labelled Control Group.
3. Take pH of pond water and record in data table.
4. Measure 100 mL of pond water and place in cup labelled Fertilizer.
5. Add 20 mL of fertilizer to the cup labelled Fertilizer.
6. Take pH of pond water with added fertilizer and record in data table.
7. Place cups under a growth light.
8. Wait 48 hours and take pH of the samples again.

**Data**:

pH of Water Due to Presence of Fertilizer

|  |  |  |
| --- | --- | --- |
| Presence of Fertilizer | Initial pH | Final pH |
| None added |  |  |
| 20mL of Fertilizer added |  |  |

**Graph**: Include a Graph of your data.

**Discussion**: Use your rubric!!!!