

Name: _____ Period: _____ Date: _____

The Effects of Carbon Dioxide and Light on Photosynthesis: Virtual Lab

Procedure:

1. Go to this website:
<http://www.newpathlearning.com/MML/PHOTOSYNTHESIS/files/BubbleLab.swf>
2. View the parts of the simulation. Play with the buttons to see how they work.
3. Click the button that says "Prepare Plant"
4. Set the **CO₂ Concentration to 0 ppm (parts per million)**.
5. Set the **Light Intensity to 5000 lux**.
6. Choose a **time limit**. How many minutes do you want to record? This must stay **CONSTANT** throughout your experiment. (Record as one of your constants in question #3)
7. Click on the **"Start" button** and *count how many bubbles* are produced in your time limit.
8. Click the **"Stop" button** to stop the timer. Record your data.
9. Repeat steps 4-8 for each of the scenarios. Use the tables as a guide for what factors to change. Fill in the data table below.

		Light Intensity (lux)		
		5000	15000	25000
CO ₂ Concentration (ppm)	0			
	300			
	600			
	1200			

FACTOR #1:

How does CARBON DIOXIDE (CO₂) LEVEL affect the rate of photosynthesis?

1. What is the independent variable? _____
2. What is the dependent variable? _____
3. What are the constants? _____
4. What is the optimal CO₂ concentration? _____

FACTOR #2:

How does LIGHT INTENSITY affect the rate of photosynthesis?

1. What is the independent variable? _____
2. What is the dependent variable? _____
3. What are the constants? _____
4. What is the optimal light intensity level? _____

[illegible]