Virtual lab photosynthesis

This simulation allows you to manipulate many variables. You already observed how light colors will affect the growth of a plant, in this simulation you can directly measure the rate of photosynthesis by counting the number of bubbles of oxygen that are released.

Propose hypotheses on how each of these **variables** effect the production of oxygen from a plant.  (circle below)

a) Increasing the light intensity will [ increase / decrease ] rate of photosynthesis.  
b) Increasing CO2 levels will [ increase / decrease ] rate of photosynthesis.  
c. Increasing temperature will [ increase / decrease ] rate of photosynthesis.

**I.Question: How Does Light Intensity Affect the Rate of Photosynthesis**

Procedure: The purple slider can be used to change the light levels. You will count the number of bubbles at each level. The timer in the square box can be used to measure 30 seconds.

A) Based on the light tests, as you increase the intensity of light, the rate of photosynthesis:

  [ increases / decreases / stays the same ].  (circle)

B)  How do you know?

C)   What are the bubbles really showing?

**II. Question: How Does Carbon Dioxide Affect the Rate of Photosynthesis?**

Procedure: Set the light to its highest intensity (50). Adjust the CO2 levels by clicking on the bottle.

\*Write a conclusion in a complete sentence that describes how the level of CO2 affects the rate of photosynthesis.  *(Use Question 1A to help you write this.  It will look similar. )*

**III. Question: How Does Temperature Affect the Rate of Photosynthesis?**

Create a data table (use the ones above to help you) and input values for at least 3 Temperatures

Use your data to write a conclusion. This should be in a complete sentence.