Names: _____

Snails and Aquatic Plants.... What's the connection?

The Problem…you have been given a kit to establish an aquarium tank to breed snails. No air pump has been provided but you were given an Elodea plant. Why might Elodea plants be important in maintaining a snail aquarium tank?

Go to http://www.classzone.com/cz/index.htm

- Click on **High School Science – California - GO**
- Click on **Biology 2008 California**
- Click **Virtual Labs**
- Click **Carbon Transfer Through Snails and Elodea**

Problem -

1) You will explore the link between Elodea and snails in a virtual lab to answer this question.
2) You will form a hypothesis about the relationship between snails and Elodea
3) You will design an experiment to test your hypothesis.

Before you get started you need to explore the lab where you will set up the investigation. You must click on each item in the Check List before you can begin the lab.

Procedure – follow the directions…step by step. Record your information in the computer and on this sheet.

Hypothesis: _____

Dependent Variable (what you will be measuring): _____

Operational definition (How you will measure the dependent variable):

In this investigation we will measure the level of carbon dioxide by _____

_____

_____

_____

Independent variable (What you will change in the experiment): _____

_____

_____

_____

Control(s): What you will be comparing your independent variable to: _____

<u>Minimum</u> # of tubes is 3 for each set up: one setup in the light and one setup in the dark. I have written what you should put in the first tube for the light and dark. For the other tubes you can vary the amount of plants, and amount of snails, both, etc. Should the test tubes in Rack #1 mirror those in Rack #2?

Prediction: Complete the table(s) below with your set up AND prediction for what will happen based on your hypothesis

Test Tubes	Contents	Starting color	Predicted End Color	Results
Rack 1 - 1	**Plant, light**			
Rack 1 - 2				
Rack 1 - 3				
Rack 1 - 4				
Rack 2 - 1	**Plant, no light**			
Rack 2 - 2				
Rack 2 - 3				
Rack 2 - 4				

Start the Clock…..in other words, run the experiment.

More Data: Fill in the Results on the table above. Was your hypothesis supported or disproved?

Test Tubes	For each test tube explain why the color of the BTB changed or didn't change? Use the following terms: photosynthesis, cellular respiration, CO2, pH, acidic, basic, neutral, light, dark
Rack 1 - 1	
Rack 1 - 2	
Rack 1 - 3	
Rack 1 - 4	
Rack 2 - 1	
Rack 2 - 2	
Rack 2 - 3	
Rack 2 - 4	

Why are Elodea required for a snail aquarium?