**Aquatic Snails**

Takes place over two days, but no more than that or else a snail might die.

**OBJECTIVE:**

**TERMS TO GO OVER:**

Carbon dioxide

Photosynthesis

Respiration

**PRE-LAB DEMONSTRATION MATERIALS:**

* bromothymol blue
* methylene blue
* cups
* water
* a clear-colored soda
* 5 test tubes
* test tube holder
* straw
* iron fillings/cork

**PRE-LAB DEMONSTRATION PROCEDURE:**

1. In 4 test tubes, fill halfway with water
2. In 1 test tube, put bromothymol blue in and note the color
3. In a 2nd test tube, put methylene blue in and note the color
4. In a 3rd test tube, put bromothymol blue, and using the straw, blow into the test tube until the color change is complete
5. In a 4th test tube, put in methylene blue and add iron fillings (do this ahead of time so the reaction color is more clear) –OR– seal with a cork and shake vigorously
6. In a 5th test tube, fill halfway with soda, add bromothymol blue and note the color

**WHAT IS HAPPENING?**

Bromothymol blue reacts in the presence of carbon dioxide, turning from blue to green and finally yellow. Methylene blue reacts in the presence of oxygen, turning from blue to a darker blue.

**LAB MATERIALS:**

* 4 jars with lids
* Water
* Elodea
* 2 aquatic snails
* 8 test tubes and corks
* Bromothymol blue
* Methylene blue

**GROUP LEADER/VOLUNTEER/TLC ROLE**

Assist with the handling of organisms and securing the lids.

**LAB PROCEDURE**

1. Assign each table group (of which there should be four) one of the following: just water, elodea, snail, elodea and snail.
2. Just water: fill the jar completely with water, cap, and set aside overnight.
3. Elodea: fill the jar ¾ with water and place elodea into the jar. Add water to fill the jar, cap it and set aside.
4. Snail: repeat step 3, except with a snail.
5. Elodea and snail: repeat step 3, except with an elodea and snail both in the jar.
6. Next day for each group: open the jar and remove everything except the water. Fill two test tubes halfway with this water. Add bromothymol blue to one tube and methylene blue to the other, and then cork it. Note the color.
7. As a class, compare the reactions of the different groups.