Oxygen Carbon Dioxide Cycle Lesson Plan

Objectives: By the end of this lesson the students will .be able to state how plants give off oxygen as a bi product. The students will be able to state how animals give off carbon dioxide as a bi product. Students will be able to describe the cycle of oxygen and carbon dioxide exchange between plants and animals. The students will be able to describe why every organism on the planet is connected through this process.

Grades: K-8 (With Adaptations for High School Students)

Materials:

1. Straws
2. Water
3. Clear Cups
4. Bromythmol Blue Chemical
5. Animals and Plants from the Oxygen Carbon Dioxide Unit

Introduction:

The educator will ask the students to take a big breath in and hold it as long as they can. Then talk to the students about why we had to let that breath out and how we breath in oxygen and breath out carbon dioxide as the process.

Lesson:

After the introduction the educator will discuss with the students how we need oxygen to breath but plants need carbon dioxide to be able to breath and survive. Explain to the students the process of the carbon dioxide and oxygen exchange between plants and animals. Tell the students that animals would not be able to exist without plant and the opposite as well because of this cycle. After this the educator will do the carbon dioxide experiment with the students. In this experiment the educator will fill each student’s cups with water and will ad one or two drops of the Bromothymol Blue Chemical tester. Then they will give each student a straw and tell them to blow into the cup with the straw. What they will see is that the blue liquid will change colors of the water from a dark blue to yellow. This is because you are introducing carbon dioxide into the water which the Bromothymol Blue reacts to by changing colors. After this experiment the educator will bring out the plants and the animals from this unit and talk about each one and discuss how they have special ways of breathing and contributing to this cycle

Wrap Up:

When the animals are away the educator will then ask the students to imagine a world where either plants or animals did not exist in it. What would the organisms have to do to breath or how would they survive.