



Water in the Environment

Grade Level: 4th – 8th grades

Where Taught: on the Bio-Bus, *or* in a classroom or lab

Students: no more than 15 people on the Bus, or up to 30 in a classroom or lab, plus an adult supervisor (parent volunteers okay)

Time needed for presentation: 30-45 minutes

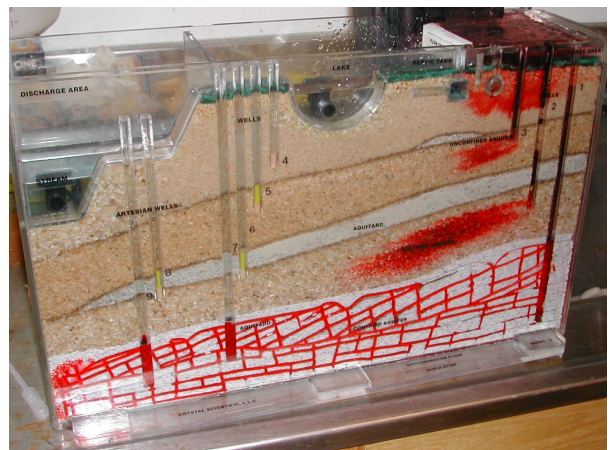
Georgia Performance Standards: 4th grade S4E3 a, b, c, d, e and S4E4 a, b, c, d;
5th grade S5E1 a, b, c; 6th grade S6E3 a, b, c, d

The Water in the Environment module is designed to introduce students to the importance of maintaining the availability of fresh water here on Earth. The module also introduces students to the basic properties of water that allow life on Earth to exist. Emphasis is placed on understanding the harmful effects of pollutants in our lakes, rivers, streams, and groundwater.

The water module provides several visual and hands-on activities that teach students about the importance of water. Firstly, students are taught about the properties of water and the water cycle. Demonstrations illustrate the properties of water such as specific heat and cohesion. The Earth is presented as a closed system in which water is continually recycled. Secondly, students are educated about where fresh water comes from. An experiment with an aquifer illustrates how lakes and rivers are continually refilled, and also shows how pollution from underground storage tanks and leakage from landfills contaminates the water. A demonstration with a filter column shows how layers in an aquifer filter wastes from water, and shows the properties of water in action... Thirdly, students are taught about how run-off can contaminate our freshwater and affect the food web. This phenomenon is illustrated with a demonstration of how phosphates can cause algal blooms which prevent light transmission into rivers, lakes, streams, and even sections of ocean.



Models like the magnetic one in the Bio-Bus Fellow's hand are used to talk about the properties of water.



Demonstration of a polluted aquifer.