

Student Scientists Explore Urban Forest



Left to Right: Kayla Young, Antonio Price, Jayshaun Prince, Kessonga Allen

It is important to expose budding scientists to the concepts of science, math, engineering and technology (STEM) as soon as possible. A great way to get the ball rolling is through hands-on field experimentation and observation. There are some things that a field expedition can offer to a student that cannot be gleaned from a book. There is no replacement for having them appreciate the process of doing field work. This is especially important for future scientists that live in and around urban centers.

On Sunday, September 21, 2014, Kayla Young (4th grader), Antonio Price (7th grader), Jayshaun Prince (4th grader) and Kessonga Allen (4th grader), spent their day walking through the Cranbrook-Kingswood forest observing wildlife and learning about the ecology of living systems. Forests occupy approximately one-third of Earth's land area, account for over two-thirds of the leaf area of land plants, and contain about 70% of carbon present in living things.

To prepare for the expedition the students conducted a variety of biochemistry experiments in the lab; learned key terminology and gathered background information on different forest biomes- e.g. deciduous, boreal. The field expedition was designed to develop the student's observation and data gathering skills and to help them better understand the characteristics of forest biomes.

They spent a majority of their time in the forest classifying organisms; gathering soil and water quality data as well observing key environmental concepts-e.g. soil erosion, succession, symbiosis. The students evaluated the health of the forest ponds in three main areas: (1) pH concentration, (2) total dissolved solids (TDS), and (3) dissolved oxygen concentration. The soil quality parameters that they evaluated included: (1) pH concentration, (2) phosphorous concentration, and (3) nitrogen concentration.

Now that the students have gotten a taste of doing field work, there is no turning back. The team plans to continue gathering field data in the forest and investigating other biomes. Afterwards, they plan to take their work to the next level by replicating key parts of these biomes in the lab. Stay tuned.



Kayla collecting water sample from pond



Kessonga and Antonio preparing to test pH and TDS of pond water



Jayshaun, Kessonga and Antonio gathering leaf samples from tree in forest

About the Ecotek Science Program

Ecotek is a science research lab program for young inventors and researchers. Student scientists work on projects aligned with the issues being addressed by world leaders at the United Nations. To learn more about Ecotek Lab go to <http://www.ecotek-us.com>