EXTENSION SNAPSHOT
Fulton-Mason-Peoria-Tazewell Unit
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Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Local Extension staff and volunteers inspire young people in pursuit of STEM careers

Science, technology, engineering, and mathematics (STEM) related careers in the environmental sciences were included in Bradley University's Detroit Area Pre-College Engineering Program (DAPCEP) classes thanks to University of Illinois Extension horticulture and natural resources staff and volunteers. ‘Green Thumbs’ and ‘Eco Explorers’ were course offerings, in the fall and spring semesters, to participants in grades four through twelve.

“DAPCEP courses cover everything from robotics and coding to ecology and plant science,” noted Nicole Flowers-Kimmerle, Illinois Extension horticulture educator. “For five Saturdays, youth participate in the class of their choice and hopefully are inspired to complete high school and go on to pursue careers in a STEM field.”

DAPCEP aims to increase the number of historically underrepresented students ready for STEM careers. They collaborate with schools and universities, including Illinois Extension, to create engaging curricula that encourage high school graduation and pursuit of STEM degrees and careers.

In February, Flowers-Kimmerle and a dedicated team of Master Gardeners and Master Naturalists, led a plant science class called 'Green Thumbs'. It was such a great experience that they returned in September with 'Eco Explorers', engaging a total of 19 eager learners.

"We find that integrating plant science and ecology with elements of physics and chemistry really helps students dive deeper into biological science," Flowers-Kimmerle shared.

The classes are a blend of hands-on learning, information sharing, and engaging discussions. For instance, the students have explored how water reaches the top of a tree by studying water's chemical properties and the physics of water movement. They've also learned bird songs using spectrograms, a visual representation of sound, along with various other topics like seed adaptation and fossil formation.

One of the sixth-grade participants noted, "Learning bird calls and seeing them on the spectrograms really helped me connect a song to a specific bird."

DAPCEP and Illinois Extension have a common goal of fostering an environment that encourages learning in a fun and inclusive way. These Saturday morning classes are one way that we are working together to achieve this goal.

Students used tools to simulate different bird beak shapes and make connections of the beak shape to the food the bird eats. This is one of the hands-on activities that Extension horticulture and natural resources staff and volunteers did during the STEM career inspiring classes at DAPCEP.

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