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**Monroe County 4-H Team Celebrates National Youth Science Day
Local Youth Learn about Computer Science & Coding Through Hands-on Activities**

The Monroe County 4-H team had a productive month of October leading local youth through introduction to computer science and coding activities for 4-H National Youth Science Day. 4-H National Youth Science Day (NYSD) is an annual initiative inspiring kids everywhere to take an active interest in STEM topics through hands-on learning. Since 2008, NYSD has engaged millions of youth around the world in exciting and innovative STEM learning and experiences, from wind power to robotics to rocketry.

This year's National Youth Science Day focused on "Game Changers," a set of activities that gets youth learning about basic coding and computer science problems through a variety of hands-on-activities. The Monroe County 4-H team conducted "Game Changers" at three different locations this year - Greece Public Library's How-To Fest, Friendship Children's Center, and at Gates Public Library for the 4-H Mighty Monday series.

At Greece Public Library's How-To Fest, 4-H Educator Lori Koenick and AmeriCorps VISTA Mike Dondorfer encouraged participants to think about efficiency and computational ideas, and apply this framework to an engaging puzzle activity, "Hack Your Harvest." Keeping this idea of efficiency in mind, youth used simple programming language to compose routes for a tractor to move on a game board, while avoiding obstacles or harvesting crops. "It was rewarding to do a hands-on computer science activity with the public," stated Koenick. "I feel like some people can be intimidated by computer science, but the Game Changers curriculum makes it accessible to all."

4-H Educator Jessica Reid expanded upon the "Hack Your Harvest" activity in an afterschool program at Friendship Children's Center in Rochester, New York. Several youth were able to learn about how computers perform tasks through programming language and code. After completing several puzzles increasing in difficulty, children were able to apply what they learned to create their own puzzles for their friends to solve.

At Gates Public Library, Reid led students through "Game Changers" at the "Mighty Monday Computer Science with 4-H" workshop on October 21st. The evening started off with a fun game of "conditional tag", where youth learned the purpose of basic "If....then..." statements in coding through an exciting game of freeze tag. "If you get tagged by the

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green ball," 4-H Educator Jessica Reid explained to the children, "THEN you are frozen. IF you are tagged with the yellow ball, THEN you are unfrozen." Participants then completed the "Hack Your Harvest" puzzles, and went on to try their hands at the "Pitch Your Passion" activity, linking strings of code to make an animated project about something important to them. "Pitch Your Passion" utilizes a fun and eye-catching program called Scratch, which allows students to drag and drop color-coded bits of code and piece them together to make their projects come to life. One girl excitedly chose a butterfly as her sprite, or character, and explored putting together the pieces of code that would make it talk. Another young participant exclaimed "I love this!" as she saw how her code come to life in her project through the actions of her sprite on screen.

The Monroe County 4-H Program is offered through Cornell Cooperative Extension to the youth of Monroe County. 4-H is a worldwide youth development program open to all youth aged 5 to 19, who want to have fun, learn new skills, and explore the world. In return, youth who participate in 4-H find a supportive environment and opportunities for hands-on or "experiential" learning about things that interest them.

Learn more at <http://monroe.cce.cornell.edu/4-h-youth-development>.



4-H Educator Lori Koenick guides "How-To Fest" participants through the "Hack Your Harvest" activity. Photo credit: Mike Dondorfer