

Boys & Girls Club Attends UCC STEAM EXTRAVAGANZA

What would you think if you touched a banana and you made music?

Here's how kids created music, played Pac Man, made game controllers, and learned how much fun simple computer programming can be...

The Boys & Girls Club staff wanted to captivate and provide fun, hands-on learning for young people during the Umpqua Community College's (UCC) 3rd annual STEAM

Extravaganza, and they had the perfect plan to do so. By using one of the Club's Makey Makey devices, an electronic invention tool and toy, they had kids learning some basic electrical engineering and circuitry, and demonstrated how much fun learning about conductivity can be.

The Makey Makey tool allows users to connect everyday objects to computer programs. Using a circuit board, alligator clips, and a USB cable, the toy uses closed loop electrical signals to send the computer either a keyboard stroke or mouse signal. Enter the bananas.

Ethan Hanner, Americorps member and Club Youth Mentoring Specialist says, "Because bananas are living things, they are also great at conducting electricity and helped to complete the circuit between the person, and the Makey

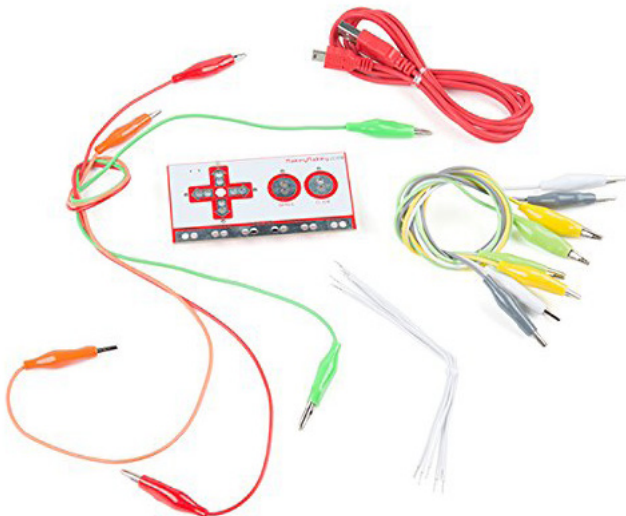
Makey. We set up different music applications on the computer, so when the kids touched the bananas, a signal was sent to play different musical notes."

There children of all ages attending the STEAM Extravaganza, and all wanted to test out the Makey Makey and create some music. Ethan said the kids had so much fun, they really didn't realize they were learning basic computer engineering and computer science, and, on a fundamental level, how computers work.

Left:

Young people's interest in computer engineering is heightened during UCC's STEAM Extravaganza.

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The Makey Makey Tool Kit



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The kids were also given the opportunity to build their own controllers, and use them to play games like Pong. Ethan said they had controllers set up, but again, this was an opportunity for hands-on learning. "We brought cardboard and aluminum foil so kids could create controllers and use them to play the games they made. This activity gave them a better view into how circuits can be made."

Another tool the Club staff demonstrated and taught kids to use, was a program called Scratch. Scratch is a graphical programming language, developed by the Lifelong Kindergarten group at the

Massachusetts Institute of Technology. Scratch allows children to learn coding concepts and create interactive projects without needing to learn a text-based programming language. Marcus Vela, Education Director for the Club, says this program is a great tool for elementary and middle school youth to program interactive stories, games, and animations. "This is a simple "drag and drop" program that is free online, so we were able to show kids how quick and easy it is to develop a computer program."

The goals at the Club are to encourage young people in all aspects of learning, help them to gain knowledge, and hone in on their interests for future careers and life-long success. Based on the reaction of the attendees, the day was a huge success in sparking interest in how computer construction engineering works. The kids had fun while learning new and exciting hands-on techniques. "Tools like the Makey Makey are great for teaching empowerment of technology," says Marcus. "It was a good day."



Left:
Marcus Vela, Education Director at the Club, watches kids as they learn how you can use your body as a way to complete a circuit and play a game on a computer.