UMass 4-H Computer Science

With Support from Google

4-H Youth Development
UMASS EXTENSION

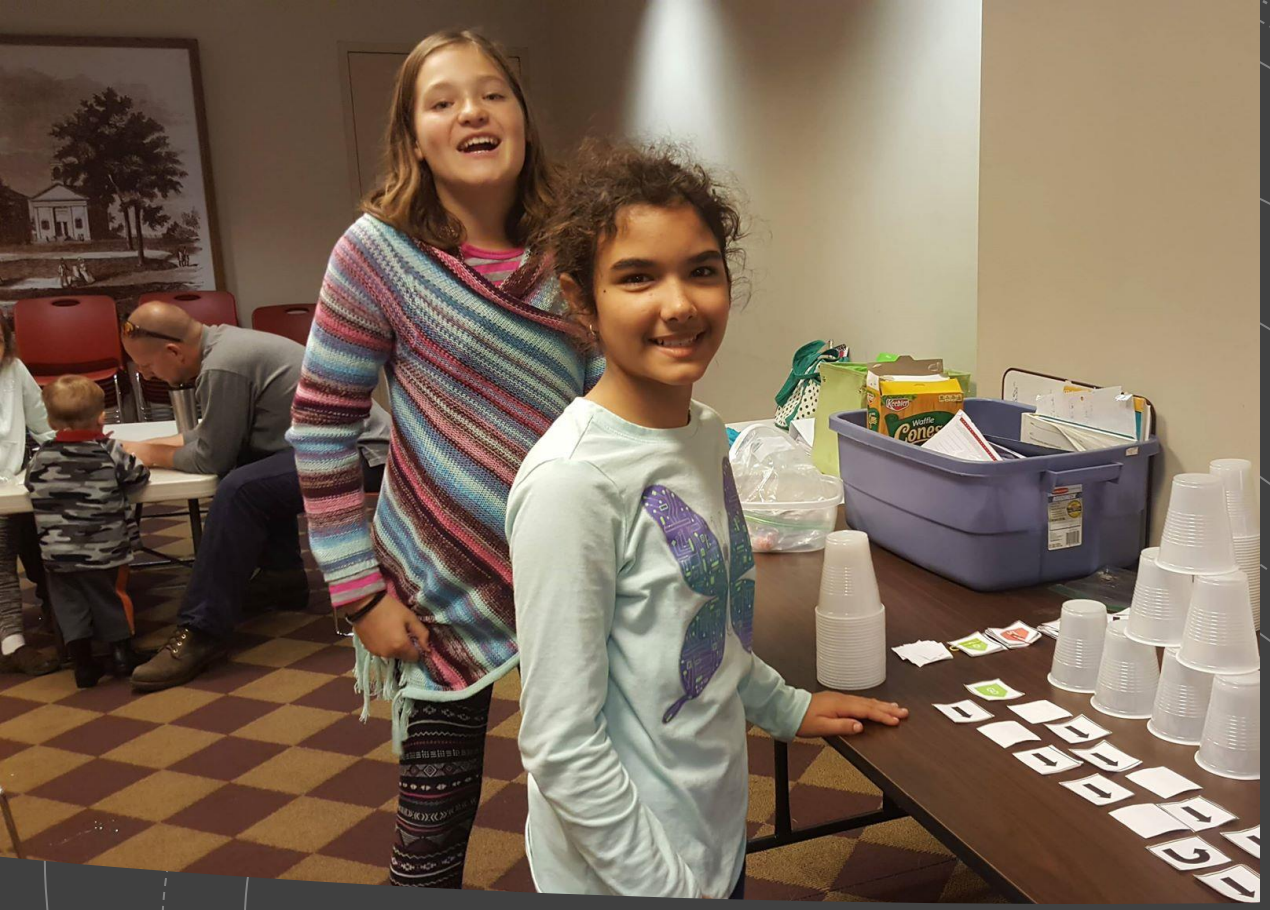
2018 & 2019
NYSD Kits focus on
Computer Science

code your world

GAME CHANGERS

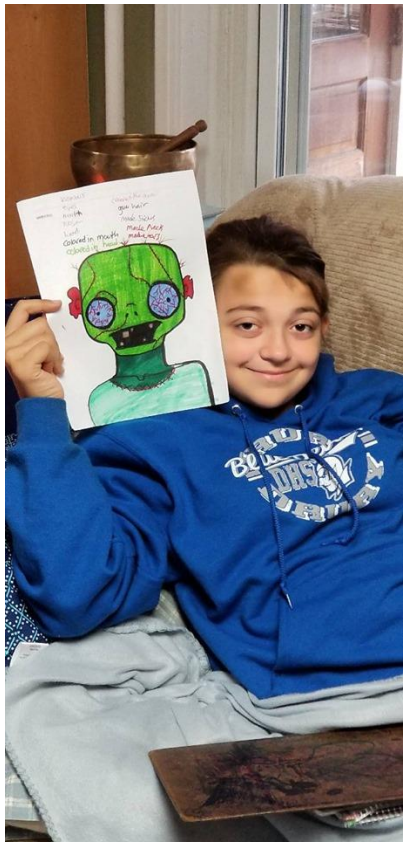
NATIONAL YOUTH SCIENCE DAY

Three Youth Attend National Training in Utah March 2019



CS Teens lead activities in their community.

Resources include CSFirst

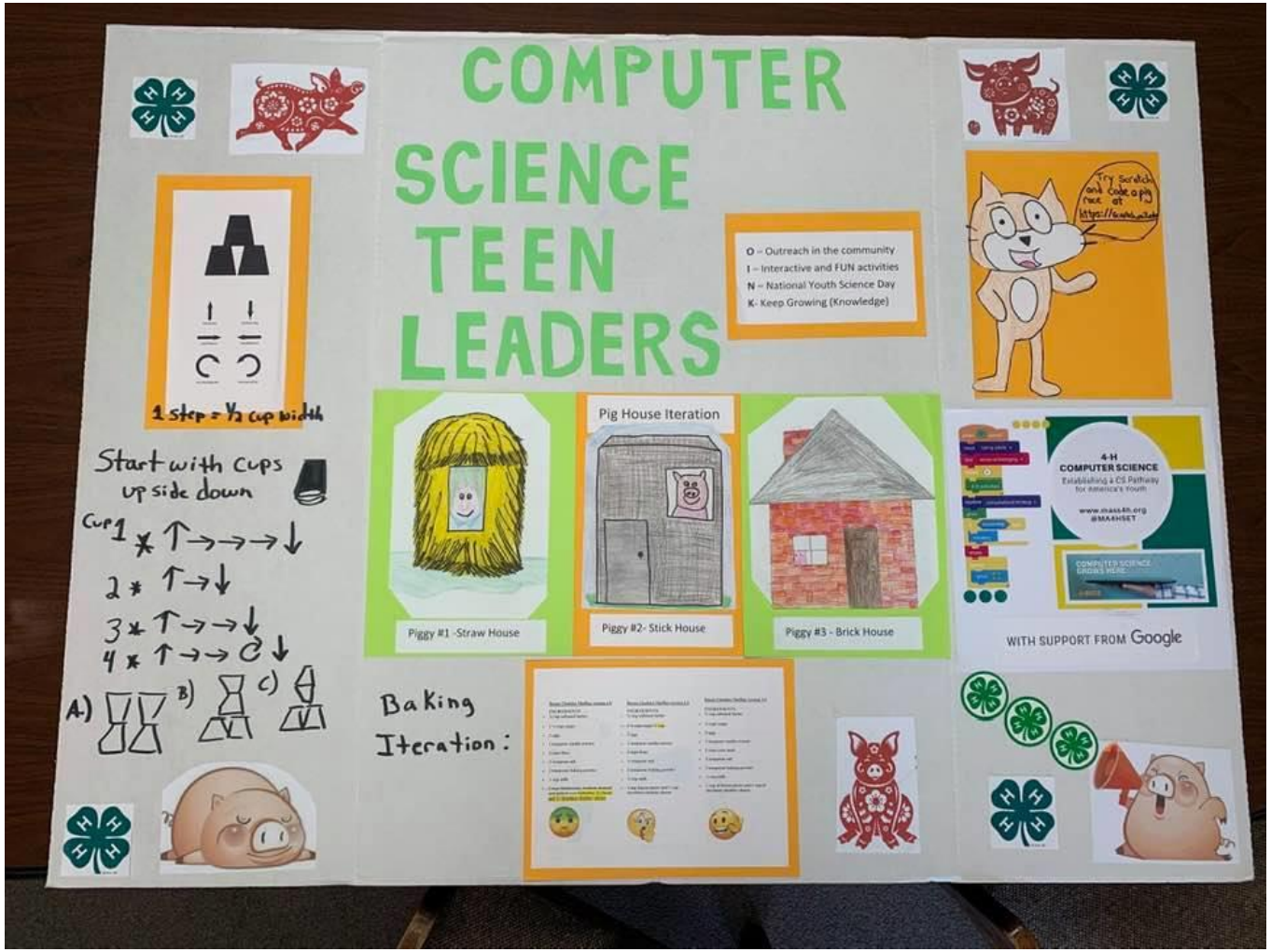


Promotional Displays

Barnstable County Fair

(Pig Theme)

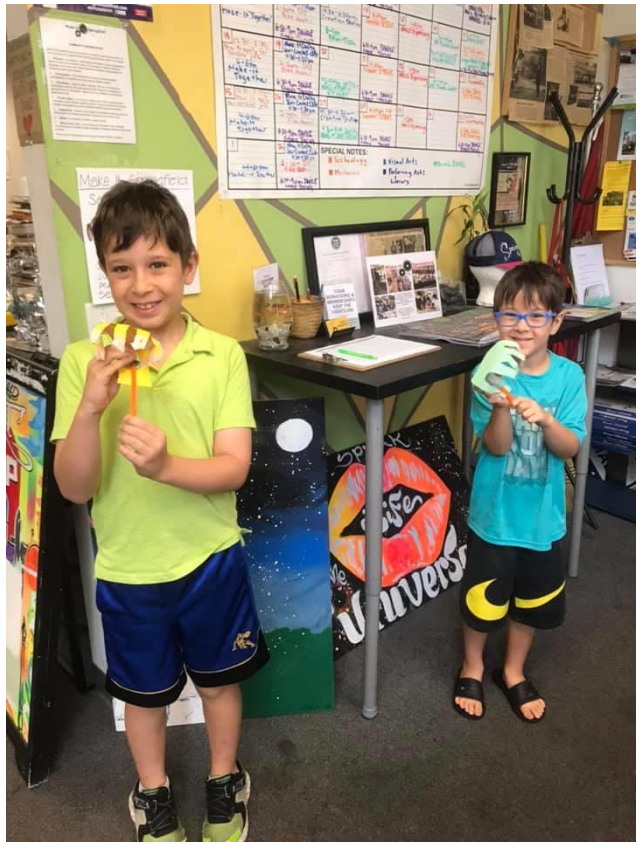
- 3-little pigs cup stacking
- Muffins with bacon
- Scratch Jr. Pig race



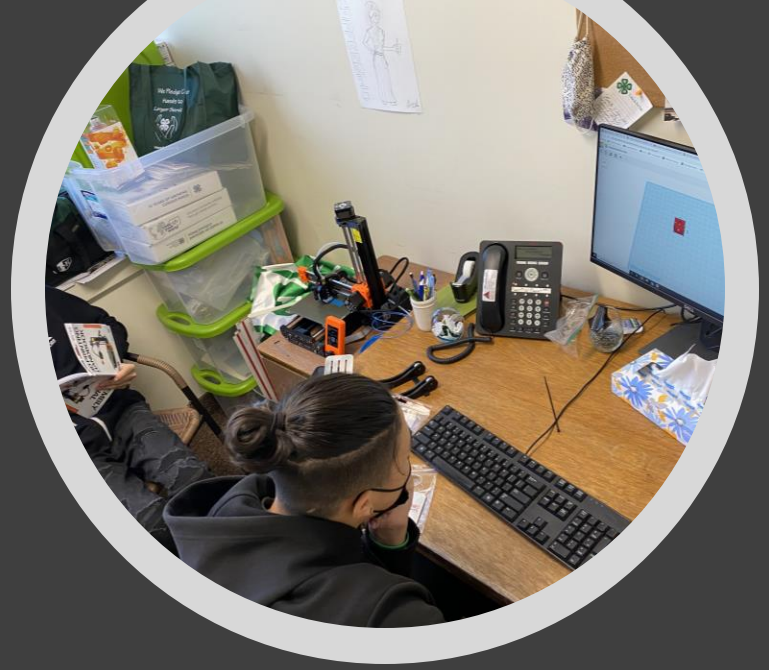
How does computer science relate to other 4-H projects :

- Horses around tacking up, versatility, 3-D name tags
- Animal Science and Livestock Judging
- Dog agility, 3-D printing crate tag
- Clothing and Textiles: quilting
- Healthy Lifestyles: Code your walk, circuit training, cooking
- Robotics and Computer Science with Coding and Programming
- Ice breakers and games, and more!

Robotic Hand is a Hit!



Springfield Teen Leaders participating in CS

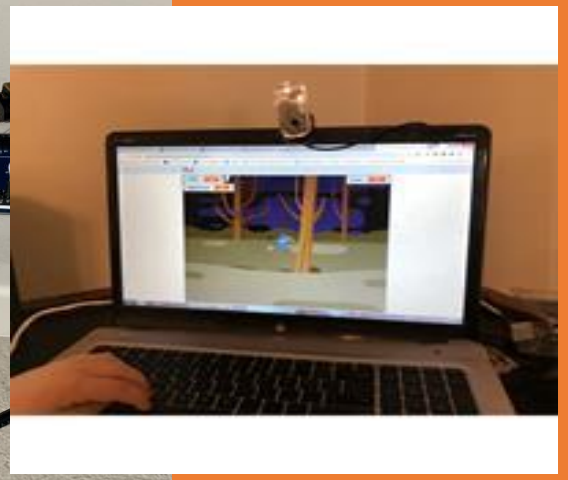


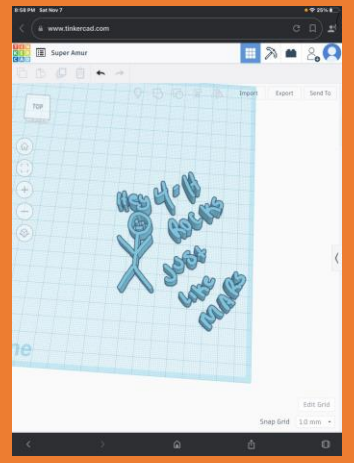
Learning & Teaching

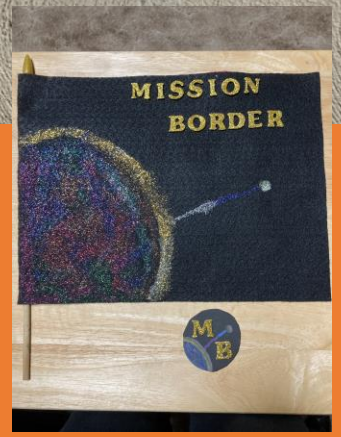
2021 Virtual

STEAM Fair

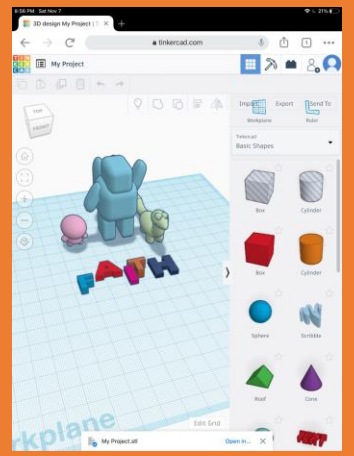
18 USC 707






MISSION
BORDER

MARS
Earth



Summer of Science
"Space the 4-H Frontier" – July 2021

Prepare for space - July 2nd Training Academy

- A look at AI and binary (Page 3-4 of Code Your World)
- Review Code your Dance with conditionals – (Pages 1-2 of Code Your World)
- Use the Deck of cards to create your own game (Program Your Playground)
- Go further and practice coding – cup stacking https://curriculum.code.org/csf-1718/courseb/6/
- Physical Fitness is key for Astronauts – create your training plan using "Code your Walk"
- Create a Flag using the Clipboard Quilt Guide
- Design a Mission Patch

Teach youth computer science!

Computer science clicks with Click2SciencePD!

We offer training that's easy to follow. See the skills on video, do hands-on activities, and then practice the skill with youth. Young people need computer science skills to thrive; and *with Click2Science, you can do it!*

CLICK 2 SCIENCE pd

Find out more! http://www.click2sciencepd.org/

A guided exploration of coding and electronics.

Mission 4: Lights For Your Ship | Mission 14: Security System Online | Mission 21: Your Launch Panel

- **Chapter 1:** Getting you out of the darkness and into the cozy light. In this chapter you will learn how to use your HERO board and basic parts such as LED's, resistors, the breadboard, and switches.
- **Chapter 2:** Repair your damaged solar array and refuel your battery. In this chapter you will learn how to read data from your photoresistor and how to use a multi-colored LED.
- **Chapter 3:** Locking down your ship with proper security systems and alarms. You will learn how to program and wire a keypad and a passive buzzer.
- **Chapter 4:** Returning you back to the surface of the water and preparing you to get home. You will learn how to use a seven segment display and rotary encoder in these projects.
- **Chapter 5:** Blast off… Wait – first we need to build you a working launch panel. This is where things get really fun and we add the OLED Display allowing you to have a mini monitor display for your control panel. Put everything together from the previous chapters and get ready to go into space.

New Resources for Trainings

Coming Up:
Computer Science Week
STEAM Festival
Winter Workshops
Explore UMass

- Kim Pond kima@umass.edu
- Lauren DuBois ldubois@umass.edu

4-H Youth Development
UMASS EXTENSION

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