



## BUILDING SCIENCE LITERACY AND FUTURE STEM PROFESSIONALS

**30,826**

Michigan 4-H youth experiences related to science, technology, engineering and math (STEM) in 2020-2021

**291**

Michigan 4-H programs offered in 2021 on STEM

## PRIORITY

### A R E A S

Michigan State University Extension's 4-H Youth Development programs excite youth about future STEM careers and build critical STEM skills. These programs seek to increase:

- **Aspirations and attitudes toward science.**
- **Interest and engagement in science.**
- **Skills in critical thinking, problem-solving and decision-making.**

The experiential inquiry-based learning process is offered through a variety of science experiences ranging from animal science to robotics and biology to consumer science.

## IMPACTS

Michigan 4-H science activities help youth recognize the relevance of science as well as become more likely to see themselves pursuing a related career and equipped with cutting-edge STEM skills that are in high demand. A 10-year longitudinal study conducted by Tufts University found that 4-H youth are:



**2X**

more likely to participate in science programs during out-of-school time.



**3X**

more likely to take part in science programs as a female in grade 12

**“This [4-H science] class was awesome! My daughter and I learned so much. We loved that there was a lot of hands-on learning. Highly recommend these classes to anyone!”**

— Parent of a youth participant in a Michigan 4-H science program

For more information about MSU Extension's science programs and resources, contact [4Hscience@msu.edu](mailto:4Hscience@msu.edu) or visit us online.





## 4-H LIVESTOCK SKILLATHON TESTS ANIMAL SCIENCE KNOWLEDGE

Amid the ongoing COVID-19 pandemic, MSU Extension staff sought new ways to safely engage youth across the state in educational experiences. A collaborative team of 20 came together to create and offer the 2021 Virtual 4-H Livestock Skillathon. Through the contest, youth demonstrated their ability to identify, judge and evaluate the production and management of multiple animal species, as well as showed their knowledge of general agricultural information. Conducted through a series of multiple-choice questions, youth ages 8 to 19 shared their knowledge about feeding, care, handling, medication, genetics, breeding, animal parts, breed identification and more. Depending on the age category, the number of contest questions ranged from 150 to 250 questions and even included a test for adults.

Nearly 200 participants from 52 counties registered for the three regional qualifying events. Contestants who scored in the top 20 percentile of their age division were invited to compete at the state level 4-H Livestock Skillathon. Sixty-four youth qualified for this honor, moving on to test their knowledge with peers across the state. After the experience, youth commented:

**“It was fun to learn about new animals.”**

**“It brought me a lot of new knowledge and I was curious about some of the questions once the event was over, so I looked more into them.”**

**“A few of the questions were things I had never heard of so after the event I did research and now I’m educated on them.”**

## ENGAGING NEW 4-H’ERS FOR THE FIRST TIME

In summer 2021, MSU Extension Alpena County offered a 4-H Day Camp for the first time to local youth. Running for three afternoons, the camp focused on STEM through water and river quality lessons, educational sessions on outdoor habitats and fun activities such as kayaking. Eager for this type of hands-on learning, the camp filled up in just four days’ time, with nearly 60% of campers having never engaged with 4-H before.

On the first day of camp, two of the first-time 4-H attendees were two young girls who quietly remained at a distance. After just a couple of hours, the girls seemed much more relaxed and engaged. The next day, the children’s caretaker shared the following with staff:

**“They love camp! They can’t stop talking about it. Their dad and mom are very impressed and would like to have more info on other classes 4-H offers!”**

