



Are you involved in a 4-H project where you learn about science, engineering, or technology?

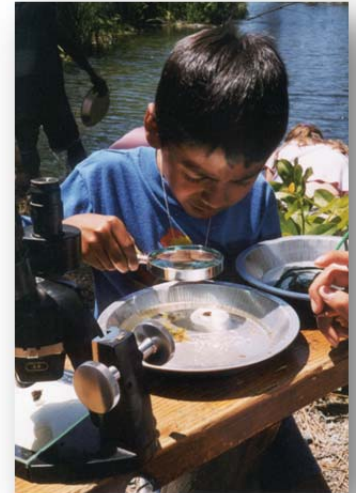
In 4-H, have you ...

- Observed, compared, organized, inferred, or communicated?
- Planned or designed something?
- Built or constructed something?

If yes, then you've participated in the process of science and engineering!

4-H science, engineering, and technology projects include:

- Animal Science
- Biological Science (embryology, entomology, marine biology, and veterinary science)
- Consumer and Family Science (textiles, fiber science, and kitchen science)
- Earth Science (astronomy, climatology, forestry, and water education)
- Physical Science (energy management, sustainability, and geology)
- Plant Science (agriculture and gardening)
- Environmental Education and Stewardship
- Engineering and Technology (website design, computers, gis/gps, and video production, aerospace, electricity, electronics, robotics, engines, and woodworking)
- Or any other project where you use science and engineering skills!



"We looked in the water for bugs or anything else. I saw a frog with orange eyes. A frog survives by eating flies and living in its habitat." – John, a 12 year old 4-H member at camp



4-H helps you ...

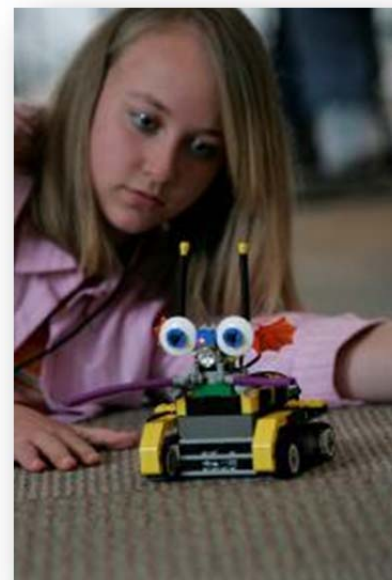
- ✓ Become interested in science and engineering.
- ✓ Learn about science, engineering, and technology.
- ✓ Use the processes and skills of science and engineering.
- ✓ Reflect on the nature of science and how it is used every day.
- ✓ Do science and engineering! Investigate and build things.
- ✓ Begin to think of yourself as a scientist or engineer.

"In a one-day interactive UC Davis veterinary science education outreach event for 4-H members, one parent said his 12-year-old daughter was alive with her enthusiasm from the day, and the father commented that his career choices might have been different if he had this experience 30 years ago!" – 4-H Staff

Where to start?

Here are suggestions if you want to become involved with science, engineering, and technology in your 4-H Club.

1. Determine what topic you and your fellow 4-H members are most interested in. What sparks your interest? Is it exploring nature, building robots, veterinary medicine, gardening, or something else?
2. Find an adult 4-H volunteer who is willing to lead a project and work with you as a junior or teen leader.
3. Search for existing curriculum and materials. Many 4-H SET curricula are available with a focus to help youth explore science, engineering, or technology.
FREE curriculum is available at <http://www.ca4h.org/Projects/Curriculum/> Low cost curriculum is available at <http://www.4-h.org/resource-library/curriculum/>
4. Identify people in your community who are also interested in this topic. Arrange field trips and guest presentations.



Strengthen an existing project with science, engineering, and technology!

Every project in 4-H can benefit from the addition of science, engineering, and technology concepts. For example, incorporate bio-security into animal science, fiber science into clothing/textiles, or nutrition and chemistry into food projects.

Connect with citizenship and service learning!

There are many ways you can extend your science, engineering, or technology project with service! Think about ways you can provide a benefit to your local community about something you've learned. Perhaps you can identify local issues and present a science demonstration at a city council meeting. Or develop a project to label storm drains and help protect your watershed. Or work with scientists at local schools, colleges, or companies to help them with their research!

Participate in the 4-H National Youth Science Day during National 4-H Week in October!

For more information, please visit www.ca4h.org



*"I was able to share my **passion** for science by being the teen leader for the 4-H science project. For this project, I had two goals for the science project members: the members would discover for themselves the basic concepts of science, and would have fun as well. The members learned about crystals and their structures by creating sugar crystal sticks, how polymers work, how forensics science helps solve mysteries, how to make automata, which is a simple machine, and how to make a solar oven out of a pizza box."
– Jessica, teen 4-H member*