



WSU Snohomish County 4-H STEM Patch Program

Why focus on STEM with 4-H Youth?

Mission: Youth are natural scientists. They are explorers, they invent tools, just like engineers do, they solve problems through trial and error and they use technology. We want to intentionally provide experiences that allow our 4-H youth to use/improve these skills and have fun. We want them to know that they are practicing and using the same skills that a scientist, an engineer, and a mathematician use every day. We want to support/encourage their natural enthusiasm to learn and understand how the world works. **You are encouraging future scientists, engineers and mathematicians!**

- ❖ **“Science is a way of thinking.** Science is observing and experimenting, making predictions, sharing discoveries, asking questions, and wondering how things work.”
- ❖ **“Technology is a way of doing.** Technology is using tools, being inventive, identifying problems, and making things work.”
- ❖ **“Engineering is a way of doing.** Engineering is solving problems, using a variety of materials, designing and creating, and building things that work.”
- ❖ **“Math is a way of measuring.** Math is a way of sequencing (1,2, 3....), patterning (1,2,1,2,1,2...), and exploring shapes (triangle, square, circle), volume (holds more or less) and size (bigger, less than).” The Brain Building in Progress Campaign, Massachusetts Department of Early Education and Care

How it Works

- ❖ **Introduce to the Youth:**
 1. You are already a scientist when you wonder, observe, and try to predict what might happen. You are an engineer when you solve problems by designing and creating things that work. (a new way to feed chickens/cavies, etc.) You are a mathematician when you use math to measure how big, how small, or how often something happens. You also use tools and make use of technology. **We want you to know how often you already use these skills and abilities. And we want to give you the chance to use them more often or maybe for the first time. You may earn a STEM Patch by participating in 4 STEM activities to be determined by the Program Leader of the project you are participating in. Patches/Rockers will be awarded at the 4-H awards ceremony at fair. Each year that you participate you may earn another year patch that will surround your STEM patch.**
- ❖ **Before Activity:** 4-H leaders help youth **Identify** STEM skills and abilities that they will use during the activity and review what they mean. Look at the STEM poster for skill/ability possibilities.
- ❖ **Explain** the activity and have the youth **DO** the hands on STEM activity
- ❖ **After the activity: REFLECTION questions** – What happened? Why is that important? Can you apply what you learned or anything that happened while you were doing the activity that might be helpful somewhere else? Are there any other STEM skills/abilities or science that you used?
 1. **Fill out STEM Activity Report and keep for your files. Send names of youth who have earned STEM patch to Kim Baker, kim.baker@wsu.edu** 4-H Program Coordinator by August 1, 2023 to assure STEM certificates and patches are ready for the 4-H Awards Night at ESF.

Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.