**STEM Fridays** are facilitated by CSU undergraduate students studying to become science teachers, mentored by EOC staff and CSU education faculty. The science content has been developed at CSU to give students a real scientific research experience in a real scientific laboratory. All content is tied to Colorado Science Education Standards and compatible with the Next Generation Science Standards.

**Logistics**

Field trips take place on Friday mornings anytime between 8:30 AM and 11:45 AM and last for ~90 minutes. Schools are limited to one group of up to 30 students grades 4th through 12th per school year. The CNS Education & Outreach Center will cover the cost of a school bus that you arrange. An invoice from the school must be submitted to us after the trip for payment. Please have your students bring their science notebooks. Cancellations must be received three weeks prior to a scheduled field trip.

For more information, visit: www.cns-eoc.colostate.edu/cnseocstemfriday.html

**Topic Options**

**Get Critical! (6th through 12th grade)**
How does information get from one place to another so quickly? In this research experience, we will conduct experiments with optical fibers to learn about reflection, refraction, critical angles, and diffraction. Students even get a chance to send text messages between groups!

**Get Energized! (4th through 12th grade)**
Learn what it takes to develop a new, more efficient battery and solar panel. Students will test different materials and use their own data to help them construct a working rechargeable battery and solar cell using skills and techniques straight out of a CSU research laboratory.

**Pico Pong (4th through 12th grade)**
Explore the interaction between the virtual and physical worlds with this unique kit. You will learn how to code a simple game (Pong) in the Scratch programming environment and then use a Pico sensor board to collect a variety of sensor data: light, pressure, flex, sound, and position. You will then use these data to control the game paddles. It’s the epitome of “edutainment!”

**Really Ancient Fossils (6th through 12th grade)**
Learn how paleontologists uncover past events that led to the fossilization of a community of sea creatures millions of years ago. Students will excavate a model rock formation, make a map, record their observations in a science notebook, and compare their observations to reference materials.

**Small Fish, Big Questions* (6th through 12th grade)**
*Available beginning March 25, 2016
Guppies you see at the pet store come in a wide variety of colors and fin shapes. In this research experience, we will compare pet store guppies to guppies from high and low predation environments in Trinidad. Through careful observation you will get a feel for how biological changes over time occur. Although these guppies are tiny, they are helping us solve some of the biggest questions in science today!

**Soil Carbon (6th through 12th grade)**
Explore how carbon moves through the environment as you analyze three soil samples from different areas of the 2012 High Park Fire. It is your task to determine which of the samples was intensely burned, moderately burned, or unburned.