

MISSION STATEMENT

The Mission of the FHSU Science and Mathematics Education Institute is to inform, reform, and improve science and mathematics education, awareness, and appreciation in K-12 schools, the University, and the community in western Kansas. The Science and Mathematics Education Institute serves as a bridge between FHSU, K-12 schools, and the community by supporting, facilitating, and promoting outreach programs.

Goals

1. Provide professional development in science and mathematics content for pre-service and in-service science and mathematics teachers strengthening subject matter knowledge and developing pedagogical skills.
2. Seek external funds to support science and mathematics education programs.
3. Function as a central coordination for outreach activities and professional development offerings in science and mathematics available through the FHSU mathematics and science departments and community programs.

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FORT HAYS STATE UNIVERSITY
SCIENCE AND MATHEMATICS
EDUCATION INSTITUTE

Forward thinking. World ready.

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SCIENCE AND MATHEMATICS EDUCATION INSTITUTE



UNIVERSITY

The FHSU Science & Mathematics Education Institute hosts many different continuing education opportunities for pre-service and in-service teachers.

MAKERSPACE: Provides a space for any FHSU student or Hays community member to build, tinker and explore projects & ideas within the STEM fields. We provide access to our 3D printers, 3D scanner, tablet computers, TVs, tools & ample workspace. We also maintain numerous projects that anyone can participate in including Lego Robotics, rocket building, hydrogen fuel cell cars & computer programming.



ROBOTICS WORKSHOPS: Teachers are instructed in using LEGO Robotics kits for our annual LEGO Robotics Competition.

MODELING WORKSHOPS: Teachers are instructed in using the Modeling teaching methods to instruct their students in physics and chemistry. Teachers are provided with materials and equipment to help them implement the Modeling curriculum.

HIGH ALTITUDE BALLOON WORKSHOPS: Ballooning provides an opportunity for teachers and students to take part in engineering and research. Teachers and students define the research they aim to complete, and operate within the volume, weight, and cost constraints of the high-altitude balloon. After the launch teachers and students retrieve the materials and analyze the collected data.

K-12 OUTREACH

The FHSU Science and Mathematics Education Institute offers many different opportunities for the youth in western Kansas. These opportunities give the local youth the ability to see how mathematics and science are present in everything from building robots to how objects fly.



Science, Mathematics, & Technology 2015 Summer Camps:

Rainforest Rescue Girls Robotics Adventure-- Rescue a rare pair of Bengal cubs.

Robotics Adventure: Searching for Sunken Treasure in Davy Jones Locker—Explore a secret hidden treasure.

Calling ALL Engineers—Explore mechanical, electrical, civil and aerospace engineering.
Geometry & Golf—Have a fun & wild week while sharpening your mathematics skills.

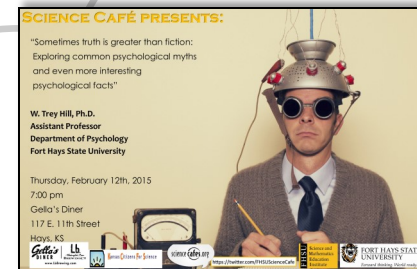
Birds, Planes, Rockets: How Things Fly! - Discover & explore factors affecting lift, design and make your own flying craft.

LEGO ROBOTICS COMPETITION: During this competition students have the opportunity to compete against other schools in a variety of challenges designed for the LEGO Robotics kits.

FHSU REGIONAL SCIENCE AND ENGINEERING FAIR: Students design and carry out experiments and bring their results to the Science Fair with hopes of making it to the state and international competitions.

DIGITAL PLANETARIUM: The Science and Mathematics Education Institute has a digital planetarium that can be checked out and used for programs throughout the region.

COMMUNITY



Many of the events and workshops the Science and Mathematics Education Institute host are open to the public.

SCIENCE CAFÉ: Science Café is a monthly event hosted by the Institute. During Science Café current issues in science are presented and discussed.



SPACE WEEK: The Science and Mathematics Education Institute participates in Space Week with a variety of activities. Past activities include: display of space shuttle tiles in Forsyth Library and a community rocket launch.

STEM-Ed ANNUAL CHRISTMAS SHOW: In December the Fort Hays State University Student STEM-Ed chapter, in coordination with the Science and Mathematics Education Institute, present a science themed Christmas show. A Christmas story is read and science demonstrations explain different aspects of the story.