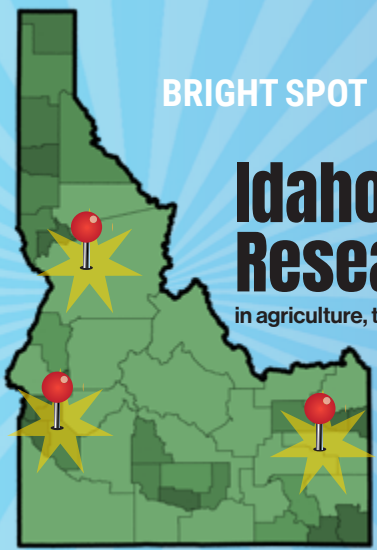


BRIGHT SPOT

Idaho Student Researchers Shine

in agriculture, technology, physical sciences, and behavioral sciences



2021 AWARD WINNERS

IDAHO STEM ACTION CENTER AND PARTNERS HOST IDAHO SCIENCE & ENGINEERING FAIRS

Each spring, Idaho STEM Action Center and its partners proudly host 3 regional high school science and engineering fairs for grades 9-12 across Idaho. Students present their findings at EISEF (Eastern Idaho Science and Engineering Fair) in partnership with Idaho National Laboratory (INL), WISEF (Western Idaho Science and Engineering Fair) in partnership with Micron, or NISEF (Northern Idaho Science and Engineering Fair). The 2021 fairs were held virtually to comply with COVID-19 safety precautions.

STEM professionals from Idaho STEM Action Center, industry, and university partners volunteered as judges, doing their part to inspire the next generation. Employees and company leaders from Micron, INL, Idaho Central Credit Union, Applied Materials, Microsoft, Schweitzer Engineering Laboratories, Simplot, T-Mobile, Boise State University, Idaho State University, University of Idaho, and many others gave their time to support these young scientists as they move one step closer to choosing their future careers.

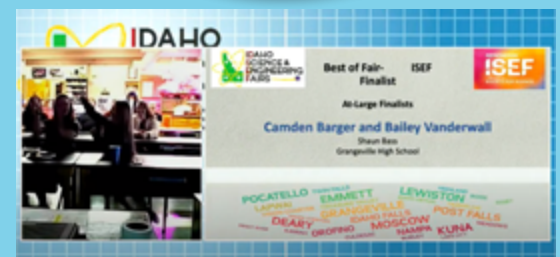
Top Schools Recognized at Regional Fairs

- Grangeville High School
- Emmett High School
- Hillcrest High School, Idaho Falls

Top awardees were among 109 projects, 150 students, and 10 schools participating in the virtual 2021 Idaho regional science fairs. Participation is expected to return to 2020 levels—170 projects, 248 students, 19 schools—for the Spring 2022 science fairs.

For more information on award winners, visit: stem.idaho.gov/idsef

Idaho's STEM jobs pay well, nearly twice the median wage of non-STEM jobs. Competitions like the Idaho Science and Engineering Fairs are important to the state's future, because they offer students opportunities to engage in original research projects aligned with their interests, and meet and learn with other motivated students in their area.



STEM is about *more* than Science, Technology, Engineering, and Math. It's about engaging with the world through creativity, collaboration, and innovation.

And STEM skills give Idahoans a competitive edge in the workplace; preparing them for high-paying, high-demand careers in agriculture, healthcare, computer science, and more.

STEM...Helping build a prosperous Idaho!



IDSEF 2020

LOOKING INTO THE FUTURE IN IDAHO AND BEYOND

This year's student innovation was in top form with these award-winning, Idaho-relevant projects:

Grangeville High School students Camden Barger and Bailey Vanderwall's team project compared growing tomato plants with hydroponics using a synthetic fertilizer versus growing tomato plants with aquaponics using fish-fertilized water. The fish used were goldfish, bluegill, or tilapia. The result was that fish fertilized water did significantly better than the synthetic fertilized water, with goldfish-fertilized water performing best overall.

Seth Tuma of Bonners Ferry, a student at Idaho Virtual Academy, prototyped a motorized fish ladder as his project. Powered by a small water pump motor and using marbles to simulate fish, Seth iterated his design by first constructing the fish ladder in cardboard and then in wood. He fine-tuned the ladder so that the marbles moved up the steps almost flawlessly.

Jimin Ryu of Boise, a student at Timberline High School, analyzed water collected from Mason's Creek, which flows into the Boise River, and the Boise River using an unmanned aircraft system to collect samples of water. The project focused on seeing how the effects of urbanization and agricultural flow return would affect the water quality standard in the lower Boise River.

Megan Church of Emmett High School studied aerosol effects on the environment. She obtained a control sample of air in her classroom and then cultured three different kinds of green algae. Megan's initial hypothesis was that algae contribute aerosol particles into the air. What she found is that algae help reduce the particles suspended in the air. This information can be applied when looking at both heating and cooling of the climate and the spread of pathogens in the air.

Building STEM through:

EDUCATOR ACCESS

to STEM professional development throughout Idaho.

WORKFORCE DEVELOPMENT

focused partnerships with industry and universities.

STUDENT STEM COMPETITIONS

and camp support.

Our Partners



STEM IS EVERYWHERE AND FOR EVERYONE!



GET INVOLVED TODAY!

Your participation is essential for Idaho's success! There are many ways for you to engage with STEM education. Mentor. Volunteer. Donate. Partner. Help us build a path to prosperity for all Idahoans.

LEARN MORE

To learn more about the STEM Action Center's strategies, success stories, and positive impacts in your community, email: admin@stem.idaho.gov or visit stem.idaho.gov.



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