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FOR IMMEDIATE RELEASE

Three North Idaho students earn top honors at Idaho Science & Engineering Fairs

MOSCOW, Idaho (April 6, 2021) — Moscow High School junior Nicole Xiao earned Best of Fair at the 2021 Northern Idaho Science and Engineering Fair. Her project was among 110 entries that 150 students statewide presented at the fifth annual Idaho Science & Engineering Fairs, which the Idaho STEM Action Center staged virtually throughout March.

Xiao's project, "Manipulation of Novel hsp23.8::ZmCLA4 Gene Construct for Manipulation of Leaf Angle in Tomato [*Solanum lycopersicum*] to Adapt to Heat Stress," also earned NISEF's Best in Category in Biological, Earth, and Environmental Sciences, a Category Gold award, and a special award from the United States Environmental Protection Agency.

In addition to naming three regional Best of Fair winners like Xiao, the STEM Action Center awarded three at-large Best of Fair winners, and the students responsible for two of these projects hail from the northern part of the state: Grangeville High School juniors Camden Barger and Bailey Vanderwall and Idaho Virtual Academy sophomore Seth Tuma.

The Barger-Vanderwall project, a Biological, Earth, and Environmental Sciences entry titled "Comparing the Succession of Aquaponics with Hydroponics," also earned a Category Gold award and special awards from the United States Environmental Protection Agency, National Oceanic and Atmospheric Administration, Ricoh, U.S. Metric Association, Stockholm International Water Institute, and Yale Science & Engineering Association.

Tuma's project, "Motorized Fish Ladder," also earned a Category Gold Award at the Western Idaho Science and Engineering Fair and special awards from the Office of Naval Research, Ricoh, U.S. Agency for International Development, and U.S. Air Force. It also captured the Lewis Engineering Award from Pocatello-based Lewis Corporation that includes a cash award of \$250 plus a certificate for the most outstanding project at WISEF that demonstrated engineering-based skills. Tuma, a Bonners Ferry resident, entered WISEF because his school, Idaho Virtual Academy, is based in Boise.

On top of earning serious bragging rights, the Best in Fair winners will represent Idaho at the Regeneron International Science and Engineering Fair in May.

Grangeville High School students earned NISEF's other Best of Category awards.

Christa Bledsoe, a junior, took Best of Category in Behavioral and Social Sciences for her project, "Personalities and Sound Pollution." She also earned a Category Gold award and received a special award from the U.S. Air Force.

Aliyah Pineda, also a junior, took Best of Category in Engineering, Mathematics, and Physical Sciences for her project, "Ultraviolet Sanitation Case." She also earned Category Gold award and a special award from the U.S. Agency for International Development. In addition, Lewis Corporation awarded Pineda with the Lewis Engineering Award, and like Tuma she received a cash award of \$250 plus a certificate for the most outstanding project at NISEF that demonstrated engineering-based skills.

Pineda also won NISEF's Bearden Award for Women in Computer Science. The award, which includes a \$750 cash prize, is funded by longtime Idaho resident Elizabeth "Betsy" Bearden for the female or team of females whose research exemplifies high standards of innovation in creating solutions with computer science.

Judges honored three more NISEF projects with Category Gold awards: "Comparing Natural Fertilizers Effects on Wheat," a Biological, Earth, and Environmental Sciences entry by Grangeville High School juniors Cameran Green and Aliyah Poxleitner; "The Power of Song," a Behavioral and Social Sciences entry by Orofino High School juniors Delrae Harris and Riley Schwartz; and "Snow Alarm," a Biological, Earth, and Environmental Sciences entry by Grangeville High School senior Brandon Vetter.

The STEM Action Center also presented six NISEF projects with Category Silver awards and an additional 16 special awards from the American Meteorological Society, American Psychological Association, ASM Materials Education Foundation, Association for Women Geoscientists, United States Environmental Protection Agency, Mu Alpha Theta, National Aeronautics and Space Administration, Office of Naval Research, Society for In Vitro Biology, and Stockholm International Water Institute.

Grangeville High School earned the Top School award for the second consecutive year. The award is calculated based on total projects and total category awards, including Silver, Gold, Best in Category, and Best in Fair.

Grangeville High School science teacher Shaun Bass was named NISEF's top-performing educator. His students earned two of NISEF's three Best in Category awards and five of the seven Category Golds.

A group of experts throughout Idaho from an array of STEM-related fields served as judges.

NISEF is one of three regional science fairs the STEM Action Center stages statewide each spring. Although held virtually this year due to the COVID-19 pandemic, the Coeur d'Alene Resort typically hosts the Northern Idaho Science and Engineering Fair. Boise State University and Idaho State University usually host the Western Idaho and Eastern Idaho Science and Engineering Fairs, respectively.

Students in ninth through 12th grades throughout Idaho are eligible to submit entries.

According to STEM Action Center interim executive director Dr. Kaitlin Maguire, competitions like these are important to the state's future, offering students opportunities to engage in original research projects aligned with their interests and meet and learn with other motivated students in their area.

"The quality of the research that Idaho students present each year never ceases to amaze me," Dr. Maguire said. "Although our science fairs were virtual this year, the awards still have the same merit. And the experience students gained by participating — by thinking critically about real-world problems, seeking solutions, and explaining their findings succinctly — will prove invaluable when they enter the workforce."

In addition to facilitating critical and creative thinking, problem solving, innovation, and collaboration, she said 19 of Idaho's 20 hot jobs through 2026 require STEM skills and that STEM jobs pay more than twice as much as non-STEM jobs.

The STEM Action Center presented the 2021 Idaho Science and Engineering Fairs in partnership with the NASA Idaho Space Grant Consortium, Battelle Energy Alliance, Micron, Society for Science, Cradlepoint, POWER Foundation, Applied Materials, Idaho Central Credit Union, Lewis Corporation, and Nutrien.

Visit the Idaho STEM Action Center's YouTube channel at [youtube.com/c/IdahoSTEMActionCenter](https://www.youtube.com/c/IdahoSTEMActionCenter) to watch the awards ceremony.

About the Idaho STEM Action Center

The Idaho STEM Action Center was created in 2015 because Idaho citizens are not entering the STEM pipeline fast enough to meet current and future Idaho workforce needs. Its goals are to increase equitable access to STEM opportunities, align education and workforce needs, and amplify awareness of STEM throughout Idaho. The organization is working with industry, government, educators, and students to develop new resources and support high-quality professional-development opportunities to foster a STEM-educated workforce that ensures Idaho's continued economic prosperity.

Visit STEM.idaho.gov for more information, and visit <https://STEM.idaho.gov/support-us/foundation> to make a tax-deductible donation to the Idaho STEM Action Center Foundation, a 501(c)(3) nonprofit organization, to enhance the investment the state has made in Idaho's STEM community. Contributions provide greater access to STEM camps for children, student competitions, and many other life-shaping programs.