

WSSF Quarter Note

Special Awards Offered at the Wyoming State Science Fair 2017!

Happy New Year 2017!

We are down to the wire ... only ~1 month before the regional science fairs begin! Perhaps this preview of some special awards presented at the Wyoming State Science Fair will be a motivation to push through this 'crunch time' and put a little extra effort into your projects. Wyoming organizations and University of Wyoming entities generously offer prestigious special awards to support and encourage student research. Because the Wyoming State Science Fair is an Intel ISEF Affiliated Fair, Intel ISEF also provides special awards for qualified student researchers. These awards are sponsored by national organizations and often have very specific qualifications (many are for 9th-12th grade students).

Some of the awards that will be given at the Wyoming State Science fair are detailed in this newsletter - others will be announced on Facebook in the coming weeks. Please read the award descriptions carefully, and learn more about the sponsoring organizations who support your research.

~ Erin Stoesz, Wyoming State Science Fair Coordinator

Part of doing science is staying on top of the most recent science news and discoveries. Here's a taste of what we saw in 2016.

How many of these stories from Science News magazine did you follow?:

1) Gravitational waves; 2) Zika virus; 3) Proxima b; 4) Three-parent baby; 5) Arctic sea ice loss; 6) Ancient human migration; 7) Minimal genome; 8) Alzheimer's treatment; 9) Antarctic ozone hole; 10) Artificial intelligence

Read them and more today at <https://www.sciencenews.org/article/top-science-stories-2016/>

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UNIVERSITY OF WYOMING

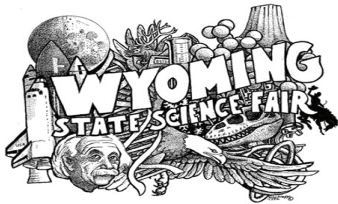
Incredible award opportunity for **12th grade students** at the Wyoming State Science Fair!

Win automatic entry into the Wyoming Research Scholars Program and continue your science research career as a University of Wyoming Undergraduate!

As a Wyoming Research Scholar you can:

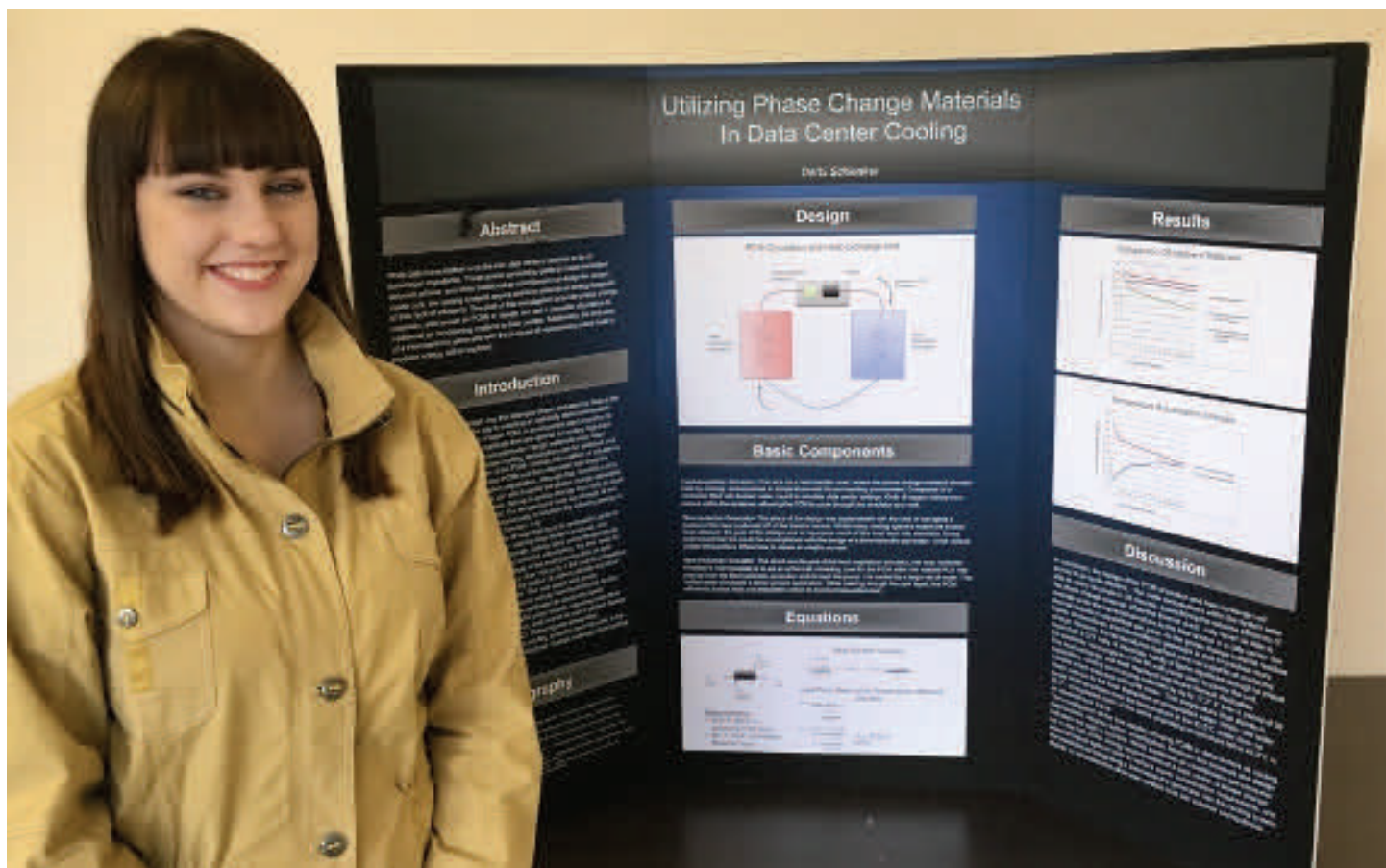
- * Be paired with a UW faculty mentor to participate in cutting-edge research
- * Become an expert in science writing, presentations, and outreach
- * Receive a stipend for student salary (at \$10/hour), research support, and travel

For more information about WRSP visit <http://www.uwyo.edu/wrsp/index.html>



To be eligible:

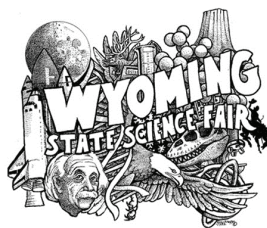
- * ***Conduct exceptional research in a core science (biology, botany, ecology, chemistry, mathematics, or physics/astronomy).***
- * ***Compete at the 2017 Wyoming State Science Fair (March 5-7, 2017).***
- * ***Prepare a short essay about what impact the award would have on your educational and career goals. Send essays to wystatefair@gmail.com by February 7, 2017.***
- * ***Plan to attend the University of Wyoming in the 2017 Fall semester.***



Darbi Schlenker, winner of the 2016 WRSP Award at the Wyoming State Science Fair, is now a Chemistry major at the University of Wyoming!

Read the abstract for her award-winning science fair research: While data consumption is on the rise, data centers continue to be of paramount importance. These power-consuming giants produce exorbitant amounts of heat, and while traditional air conditioners can keep the servers inside cool, the cooling systems require extreme amounts of energy because of their lack of efficiency. The goal of this investigation is to use phase change materials, also known as PCMs to design and test a plausible alternative to traditional air conditioning systems in data centers. Additionally, the inclusion of a thermoelectric generator with the purpose of reprocessing waste heat to produce energy will be explored.

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Most people say that it is the intellect which makes a great scientist. They are wrong: it is character.

~ Albert Einstein

Wyoming Special Awards

University of Wyoming English Department



New in 2017: The UW English Department gives one monetary award to recognize the project that most effectively uses communication techniques to tell the story of the science being done.

Powder River Basin Resource Council Awards

Powder River Basin Resource Council Bill Barlow Memorial Youth in Conservation Awards: In an ongoing effort to promote the importance of studies of Wyoming ecosystems and studies of the ecological impacts of development, the Powder River Basin Resource Council (www.powderriverbasin.org) presents the Bill Barlow Memorial Youth in Conservation Awards at the Wyoming State Science Fair. These monetary awards are presented in the memory of a great rancher and conservationist who was also a founding member of the Powder River Basin Resource Council — Bill Barlow.



Powder River Basin Council Award for Energy Conservation and Renewable Energy: This monetary award is for studies of renewable energy, energy conservation and energy efficiency.

Wyoming NASA Space Grant Consortium Special Awards



Wyoming NASA Space Grant Consortium (wyomingspacegrant.uwyo.edu) presents special certificate and monetary awards to projects conducting and presenting excellent research on a topic of interest to NASA and Space Grant.

University of Wyoming Geology Museum Award



The University of Wyoming Geology Museum recognizes students whose projects enhance our knowledge and understanding of Wyoming's geology and paleontology.

Look for More Awards on our Facebook Page

- “Friend” us at Wyoming Science—Fair

Intel ISEF Affiliated Fair Special Awards

Society for In Vitro Biology Award



The Society for In Vitro Biology provides a certificate award to the most outstanding 11th grade student whose research project is in the areas of plant or animal in vitro biology or tissue culture. In addition, the award recipient will receive publicity in the society's newsletter and might be invited to submit an abstract of their work at the society's annual meeting.

Learn more about the Society at <http://www.sivb.org>

United States Air Force Special Awards



The United States Air Force Research Laboratory is a major supporter of the Intel International Science & Engineering Fair and all affiliated regional science fairs. They recognize students whose research offers Air Force applicability. Award recipients receive an over-the-shoulder bag, power bank charger, a dog tag USB flash memory drive, and a dual USB car charger.

U.S. Metric Association Award



The U.S. Metric Association recognizes a student in any division or category whose project involves quantitative measures and correctly uses units of the SI metric system for those measures. Winning projects should use a variety of metric units for different kinds of measures, and use of those measures should be integrally important in the student research. The subject of the winning project should not be the SI system itself.

Follow these guidelines for the best chance at receiving this award:
<http://www.us-metric.org/wp-content/uploads/2016/03/science-fair-judging-guide.pdf>

Yale Science & Engineering Association Award



The Yale Science & Engineering Association, Inc. provides one certificate and pewter medallion to the most outstanding 11th grade project (10th or 12 grade projects may be eligible in extraordinary cases) in Computer Science, Engineering, Physics or Chemistry.

Genius (Global Environmental Issues) Olympiad Award



Three projects done by students in grades 8-12 will invited to apply to compete in the 2016 Genius Olympiad competition. The Genius Olympiad is the most prestigious high school event designed to engage youth in searching for solutions to the environmental challenges of today. This international event will be held at SUNY Oswego June 12-17th, 2017. Eligible projects must fit within one of the following disciplines: ecology and biodiversity, environmental quality, resources and energy, human ecology, or innovation.

The scientist is not a person who gives the right answers, he's one who asks the right questions. ~Claude Lévi-Strauss, *Le Cru et le cuit*, 1964

Intel ISEF Affiliated Fair Special Awards

American Meteorological Society Certificate



The American Meteorological Society recognizes 9th, 10th, 11th or 12th grade students who have done creative research in the areas of atmospheric and related oceanic and hydrologic sciences. Award recipients receive a certificate of achievement and recognition in the December issue of the *Bulletin of the American Meteorological Society (BAMS)*.

American Psychological Association Education Directorate Certificate



The American Psychological Association Education Directorate recognizes a student or team of students for outstanding research in psychological science under the category of behavioral and social sciences or any category relating to psychology (e.g., animal sciences, biochemistry, computer science, environmental science, mathematical science, medicine and health). Projects are judged based on creative ability, scientific thought, thoroughness, skill, and clarity.

ASM Materials Education Foundation Medallion and Certificate



The American Meteorological Society provides a medallion and certificate to the best materials engineering project at the Wyoming State Science Fair. Selection will be based on use of materials-related concepts, demonstration of structure-processing-properties-performance relationships, presentation, understanding of the scientific method, and project display aesthetics.

Association for Women Geoscientists Certificate



The Association for Women Geoscientists recognizes a female student whose project exemplifies high standards of innovativeness and scientific excellence in the geosciences. The project that receives recognition should increase public awareness of the geosciences, illustrate the interdisciplinary nature of the geosciences, or promote the sensitivity to the earth as a global system.

ASU Walton Sustainability Solutions Initiative Award



The ASU Rob and Melani Walton Sustainability Solutions Initiative recognizes 9th, 10th, 11th, or 12th grade students who seek innovative solutions to humanity's most challenging problems. Students who exhibit their research in any category are eligible, but they should convey intent in their research to solve a complex problem that involves social justice, environmental and economic prosperity. The winner will receive a certificate and the opportunity to enter competition for a Grand Prize trip to Arizona for the 2018 Sustainability Solutions Festival.

See who won some of these awards at the 2016 Wyoming State Science Fair!

<http://www.uwyo.edu/sciencefair/2016wssfawardwinners.html>

If you're not part of the solution, you're part of the precipitate. ~Henry J. Tillman

Mu Alpha Theta Certificate



Mu Alpha Theta, the National High School and Two-Year College Mathematics Honor Society, provides a certificate of recognition to a project that demonstrates the most challenging, original, thorough and creative investigation of a problem involving mathematics accessible to a high school student. Projects in any category are eligible. Components of the investigation may include, but are not limited to, mathematical proof, mathematical modeling, statistical analysis, visualization, simulation, and approximation. Judging will be based on creative ability, use of mathematics, scientific thought, thoroughness, skill, clarity, and teamwork (if applicable).

NASA Earth System Science Certificate Award



NASA recognizes a project that best demonstrates insight into Earth's interconnected systems (atmosphere, lithosphere, hydrosphere, cryosphere, and biosphere). The project should incorporate studies of the different components of Earth systems, their interactions and their evolution over time. Projects in both the Junior and Senior divisions are eligible.

NOAA's "Taking the Pulse of the Planet" Award



The National Oceanic and Atmospheric Administration recognizes student research that emphasizes NOAA-related science by presenting a certificate and medallion to a project by either middle or high school student(s). The winning research project will emphasize NOAA's mission of **Science, Service and Stewardship: "To understand and predict changes in climate, weather, oceans and coasts, To share that knowledge and information with others, and To conserve and manage coastal and marine ecosystems and resources."** NOAA is a trusted source of accurate information in four areas of global importance: ecosystems, climate, weather & water, and commerce & transportation. Projects in all Junior and Senior division categories are eligible.

Ricoh Sustainable Development Certificate Award



Ricoh Americas Corporation is a major sponsor of the Intel ISEF. They are offering a certificate award to a project that has principles and technical innovations that offer the greatest potential for increasing our ability to grow environmentally friendly and socially responsible businesses. The winning project must also protect the environment and conserve resources, emphasize pollution prevention, and promote conservation of biodiversity.

Recent projects winning the Ricoh award at the Intel International Science & Engineering Fair have included "development of a low-grade waste heat recovery system that generates electricity, and a micro-scale anaerobic digestion process for biogas production."

Learn more about Ricoh at <https://www.ricoh-usa.com/en>

Intel Excellence in Computer Science Award



The Intel Company sponsors a \$200 + certificate award to encourage participation in computer science. Computer science is one of the fastest growing fields today, and it is an important source of innovation for the 21st century. This award goes to the top first place winner of the Senior Division (Grades 9-12) Computer Science Category.