

Regional and CREST Special Awards

Biophysics Award

The Biophysics award, sponsored by the biophysical society applies the power of physics, chemistry and math to understanding health, preventing disease, and inventing cures. The recipient of this award receives a certificate and \$100.

Anish Goswami

Novel Evolutionary Artificial Intelligence methods for de novo drug design

In Vitro Biology

This award recognizes the best 11th grade student exhibiting in the areas of plant or animal in vitro biology or tissue culture. A formal letter of congratulations will be sent and publicity of the winner's achievement will be included in the society's online newsletter

Benjamin McClelland, Benjamin Pinoli, Jacob McClelland

The Efficacy of PEG Axonal Fusion Therapy after Scar Tissue Removal on Post-Traumatic CNS Injury in Lumbricus terrestris

Metric System: Best Use of the SI

The Best Use of the Metric System award, sponsored by the US Metric Association, is a certificate to recognize the project that has used metric measures and expresses those measures consistently and correctly.

Aditi Bhaskar

Detection of Nitrogen Levels in Sample Using Novel Method

Isabella Scalise, Angelina Scalise

Comparing Antibacterial Properties of Common Polyphenols in Honey and Hibiscus, and the Impact of Digestive Enzymes from Bees

Most Outstanding Exhibit in Materials Science

The project that receives Most Outstanding Exhibit in Materials Science award demonstrates exceptional use of materials-related concepts and some aspect of the materials paradigm: structure - processing - properties - and performance relationships. The winner of this award receives a certificate and ribbon.

Linnea Collett, Jady Sherry

Testing Tensile Strength of Student Engineered Starch-Based Bioplastic

[Mu Alpha Theta Award](#)

The Mu Alpha Theta Award certificate is for the individual or group project that demonstrates the most challenging, original, thorough, and creative investigation of a problem involving mathematics.

Camryn Lau, Evelyne Knight

Cartographic Modeling of External Factors on Ideal Oil Droplet Size Distributions and Potential Implications on Future Subaqueous Oil Spills

[NASA Earth System Science Award](#)

The NASA Earth System Science Award Certificate is given to the project that best demonstrates insight into Earth's interconnected systems. The project incorporates studies of the different components of Earth systems, their interactions and their evolution over time.

Alexis Gessler

The Effect of Different Amounts of Light on the Growth of Plants

Chaya Valluri

Lichens as Biological Health Indicators of the Peach Cove Fen

[Naval Excellence in Science and Engineering Award](#)

The Naval Science and Engineering Award recognizes 4 exceptional projects. The Office of Naval Research is pleased to support the education of future scientists and engineers of America and presents each project with a \$50 gift certificate.

Ava Sechrist

The Effect of Social Media Exposure on Weight-Based Bias

Ayushi Mallick

Emotion Identification for Alexithymia Patients

Maura Schramm

Effect of Hypoxia in Yeast Cells on Uptake of a Plasmid for Potential Treatment of Sandhoff Disease

Mithun Karthikeyan

The effect of touch on "muscle memory" and cell deformation in the Mimosa Pudica

[NOAA Taking the Pulse of the Planet Award](#)

The Taking the Pulse of the Planet award honors one project selected from among all the general award categories whose research emphasizes 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."

Hayden Wierman

Improving The Efficiency of Heat Exchangers In Ocean Thermal Energy Converters

Kaitlyn Pelletier, Mabel Knapick

Microplastics in Sand

Oregon Environmental Health Association

The Excellence in Scientific Research in Environmental Health award, sponsored by the Oregon Environmental Health Association, recognizes a student who helps promote environmental health and safety with a certificate and \$60.

Grace Sato

SAFE Water- Self Assemble-able Filter for Everyone

Outstanding Project in Atmospheric Science

The Outstanding Project in Atmospheric Science, sponsored by the American Meteorological Society, awards a Certificate of Outstanding Achievement for creative scientific endeavor in the areas of atmospheric and related oceanic and hydrologic sciences. Each year the AMS publishes the names of science fair winners in the December issue of the Bulletin of the American Meteorological Society.

Sophie Jonker

Which Sea Algae Alters pH The Most Over Time?

Camryn Lau, Evelyne Knight

Cartographic Modeling of External Factors on Ideal Oil Droplet Size Distributions and Potential Implications on Future Subaqueous Oil Spills

Outstanding Research in Psychology

The Outstanding Research in Psychology award, sponsored by the American Psychological Association, awards a certificate recognizing outstanding research in the category of behavioral and social sciences or any category related to psychology.

Ava Sechrist

The Effect of Social Media Exposure on Weight-Based Bias

Madeline Santoso

Video Game Reward Systems and Their Impact on Players' Behavior in the Iterated Prisoner's Dilemma

Ricoh Sustainable Development Award

Ricoh USA Certificate recognizes projects that demonstrate a technical innovation that offers the greatest potential for increasing our ability to grow environmentally friendly and socially responsible businesses.

Riley Heinonen, Averie McCurry

A new way of promoting sustainability through an eco-friendly gardening invention.

Kalia Rechenberg

Plants Remediating Heavy Metals

Stockholm Junior Water Prize

The Stockholm Junior Water Prize, sponsored by the Water Environment Foundation, is awarded to the best water-related projects at the fair. It is aimed at enhancing the quality of life through improvement in water quality, water resource management or water and wastewater treatment. The recipients of this prize get a certificate, a free year-long membership to the WEF, and the opportunity to apply to the state level WEF competition.

Jack Cunningham, Lorelei Cunningham

Turbidity Reading And Transmission

Grace Sato

SAFE Water- Self Assemble-able Filter for Everyone

Hayden Wierman

Improving The Efficiency of Heat Exchangers In Ocean Thermal Energy Converters

Jacob Rice

Horizontal Hydropower

Anna Nielsen, Sophia Nielsen

Progression of Sea Star Wasting Syndrome on the Oregon Coast

Sophie Jonker

Which Sea Algae Alters pH The Most Over Time?

Student Award for Geoscience Excellence

Female recipients receive an Award Certificate to recognize projects, in the opinion of the judges, that exemplify the high standards of innovativeness and scientific excellence in the geosciences.

Heonia Afonin

Testing the Structural Integrity of Buildings Built on Different Soil Types

US Air Force

The Air Force Research Laboratory is proud to support science, technology, engineering, and mathematics. This certificate recognizes projects with Air Force applicability in science and technology.

Jakob Conner

Procedurally Analyzing Webpage Reading Level to Assist Young Researchers and those without English Proficiency

Kiara Jia, WenWen Qiu

Effect of analgesic on Daphnia Magna

USAID

The US Agency for International Development is pleased to offer one Science Champion Award Certificate to recognize an exceptional project that has the potential to make an impact on addressing international development challenges.

Yaya Kiss

Studying the effects of Continuous and Intermittent Pulsed Electric Fields on Microgreen Growth in a Hydroponic System

Kalia Rechenberg

Plants Remediating Heavy Metals

Yale Science and Engineering Association

The Yale Science and Engineering Association sponsors a certificate and a medallion awarded to the two best 11th grade computer science, engineering, physics, or chemistry projects.

Ahmed Zaidan

Barber Trimmer Prototype

Jacob Rice

Horizontal Hydropower

Best Multi-Disciplinary Research

The Best Multi-Disciplinary Research Award is given to a project that demonstrates outstanding achievement combining 2 or more distinct scientific/engineering disciplines, synthesizing these different perspectives to provide a more whole-system approach to a problem. The project that receives this award gets a certificate and \$125 thanks to an anonymous community member as well as the WLWV Education Foundation.

Nathan Rumsey

Machine-Learning Powered Spatiotemporal Analytics System for Deciduous Forest Phenology

Best Project Display

The best digital project display board is organized, lacks errors, draws readers in, and is comprehensive.

Linnea Collett, Jady Sherry

Testing Tensile Strength of Student Engineered Starch-Based Bioplastic

Isabella Scalise, Angelina Scalise

Comparing Antibacterial Properties of Common Polyphenols in Honey and Hibiscus, and the Impact of Digestive Enzymes from Bees

Best Use of Statistical Analysis

The Best Use of Statistical Analysis Award recognizes a student who conveys an exceptional understanding and interpretation of the results of their statistical analyses. The two projects who receive this certificate also receives a brand new Texas Instruments-84 Graphing rechargeable calculator.

Masha Galtseva

Personality in Motion: Squash and Stretch

Yaya Kiss

Studying the effects of Continuous and Intermittent Pulsed Electric Fields on Microgreen Growth in a Hydroponic System

Experimental Design

The best experimental design award is given to the project which demonstrates the best practices of experimental design. This award comes with a \$25 cash prize from a generous community sponsor.

Sarah Gordon, Sophie Gordon

Planaria Growth with Exposure to Light and Various Water Conditions

Field Knowledge

To the students who indicate the best understanding of their topic and who can related their work to other research in the field. This award comes with a \$25 cash prize from a generous community sponsor.

Carly Shanklin

The Effects of Smoke Inhalation on Equine Respiratory Systems

Green Chemistry Award

The Green Chemistry award recognizes a project that has addressed the area of sustainable chemistry with emphasis on reducing chemical waste or remediating hazardous substances.

Bo Dickson

An Efficient and Effective Home Herbicide Solution

Intelligent Machines

The Intelligent Machines award recognizes a student who visually and verbally convey how their project, involving intelligent machines or artificial intelligence, will improve the human experience. This award comes with a \$25 cash prize from a generous community sponsor.

Anish Goswami

Novel Evolutionary Artificial Intelligence methods for de novo drug design

Most Creative Project Idea

The Most Creative Project award goes to a project that takes a unique approach to solving a scientific or technical problem and makes use of readily available materials to collect data or address a need. This award comes with a \$25 cash prize from a generous community sponsor.

Camryn Lau, Evelyne Knight

Cartographic Modeling of External Factors on Ideal Oil Droplet Size Distributions and Potential Implications on Future Subaqueous Oil Spills

Noteworthy Logbook

The Noteworthy Log book contains documentation of project's process from beginning to end (evidence the logbook has been used throughout the project). Logbook documents thought process of student through all phases of project.

Uma Grover

The Development of a Microplastic Separation Technique Using Electrostatics

Paul Sherman Award

The students who receive the Paul Sherman award Student exhibit passion and enthusiasm for their project and scientific and/or engineering research. The winners receive a \$25 gift card to Powell's Books.

Cassidy Young, Sophia Levesque

The Future Is Algae

Caroline Nielsen

Volleyballs as Fomites for Bacteria Transmission

Timothy Wieland

Manipulating Gene expression Associated with Beta Carotene Production in Brassica rapa for Increased Vitamin A Formulation

Promising Young Scientist

To the 9th grade students who present thoughtful, well-conducted experiments that show promise of greater things to come. Each project that receives this award wins a \$25 check made possible thanks to generous support from community members

Haley-Ray Newbore, Emmeline Staten

Biodegradable Mask

Bode Holland, Devon LeGare, Jameson Hultgren

The Cycloid Curve

Cassidy Young, Sophia Levesque

The Future Is Algae

Caroline Nielsen

Volleyballs as Fomites for Bacteria Transmission

Bo Dickson

An Efficient and Effective Home Herbicide Solution

Natalie Jones, Natalie Smith

How Does a High-Fat vs. High-Carb Preworkout Meal Affect Training Performance?

Timothy Wieland

Manipulating Gene expression Associated with Beta Carotene Production in Brassica rapa for Increased Vitamin A Formulation

Women In Engineering

The Women in Engineering Award is given to a project that demonstrates excellence in applied engineering in any field by a female student. This award comes with a \$125 gift certificate thanks to a generous community sponsor.

Linnea Collett, Jady Sherry

Testing Tensile Strength of Student Engineered Starch-Based Bioplastic

Oregon State University (\$2000, one time)

Oregon State University recognizes two exceptional students in any category with a scholarship. This scholarship is a \$2,000, one-time general scholarship.

Zoe Black, Avery McCormick

Longevity and strength of a Dye-Sensitized Solar Cell

Category Awards

Behavioral and Social Sciences

First Place: Madeline Santoso

Video Game Reward Systems and Their Impact on Players' Behavior in the Iterated Prisoner's Dilemma

Second Place: Summer Tan, Jeffrey Fang

Consumer Behavior in the Age of Fast Fashion

Third Place: Masha Galtseva

Personality in Motion: Squash and Stretch

Honorable Mention: Juliann Ellsworth, Savannah Staten

The Correlation Between Education Model and Mental Health

Bioengineering & Materials Science

First Place: Linnea Collett, Jady Sherry

Testing Tensile Strength of Student Engineered Starch-Based Bioplastic

Second Place: Haley-Ray Newbore, Emmeline Staten

Biodegradable Mask

Third Place: Laura Smith, Anna Le

How to Create a Heart in Silico

Computer Sciences & Robotics

First Place: Anish Goswami

Novel Evolutionary Artificial Intelligence methods for de novo drug design

Second Place: Nathan Rumsey

Machine-Learning Powered Spatiotemporal Analytics System for Deciduous Forest Phenology

Third Place: Ayushi Mallick

Emotion Identification for Alexithymia Patients

Honorable Mention: Jakob Conner

Procedurally Analyzing Webpage Reading Level to Assist Young Researchers and those without English Proficiency

Electrical and Mechanical Engineering

First Place: Cooper Berggren, Cade Holland

Applying Temporary Natural Rubber Seals to Prohibit Permanent Damage from Prolonged Water Exposure on a Golf Ball while Maintaining Performance

Second Place: Drayton Nimz, Thomas Pierce

Cost Effective Mobility Aid Using Ultrasonic Sensors to Improve the Spatial Comprehension of the Visually Impaired in Real-World Situations

Third Place: Ahmed Zaidan

Barber Trimmer Prototype

Honorable Mention: Bode Holland, Devon LeGare, Jameson Hultgren

The Cycloid Curve

Energy & Environmental Engineering

First Place: Aditi Bhaskar

Detection of Nitrogen Levels in Sample Using Novel Method

Second Place: Grace Sato

SAFE Water- Self Assemble-able Filter for Everyone

Third Place: Uma Grover

The development of a microplastic separation technique using electrostatics

Honorable Mention: Cassidy Young, Sophia Levesque

The Future Is Algae

Environmental and Earth Sciences

First Place: Anna Nielsen, Sophia Nielsen

Progression of Sea Star Wasting Syndrome on the Oregon Coast

Second Place: Ellie Counts

The effect of worms vs common fertilizers on plant growth in healthy and high-salinity conditions

Third Place: Camryn Lau, Evelyne Knight

Cartographic Modeling of External Factors on Ideal Oil Droplet Size Distributions and Potential Implications on Future Subaqueous Oil Spills

Honorable Mention: Kalia Rechenberg

Plants Remediating Heavy Metals

Invertebrate & In Vitro Biology

First Place: Benjamin McClelland, Benjamin Pinoli, Jacob McClelland

The Efficacy of PEG Axonal Fusion Therapy after Scar Tissue Removal on Post-Traumatic CNS Injury in Lumbricus terrestris

Second Place: Isabella Scalise, Angelina Scalise

Comparing Antibacterial Properties of Common Polyphenols in Honey and Hibiscus, and the Impact of Digestive Enzymes from Bees

Third Place: Maura Schramm

Effect of Hypoxia in Yeast Cells on Uptake of a Plasmid for Potential Treatment of Sandhoff Disease

Honorable Mention: Alice Kang

The Effect of Vitamin B-12 on the Progression of Parkinson's Disease

Life Sciences

First Place: Yaya Kiss

Studying the effects of Continuous and Intermittent Pulsed Electric Fields on Microgreen Growth in a Hydroponic System

Second Place: Mithun Karthikeyan

The effect of touch on "muscle memory" and cell deformation in the Mimosa Pudica

Third Place: Jesika Conner, Nicole Beltman

Algae; The Key to Long term Manned Martin Expeditions

Honorable Mention: Dina-Rosa Biggs

Classical Music's impact on stress levels on Male vs. Female Miniature Horses

Medicine and Health Sciences

First Place: Nolan Rapp, Sarthak Sameer-Asita

Effect of Quarantine on Physical Health

Second Place: Olivia Tinio

Measuring the Range of Motion of the Human Knee for AK Prosthetic Development

Third Place: Koharu Sakiyama

Using Image Analysis to Identify Tumor-Derived Extracellular Vesicles in Mouse Lymph Nodes

Honorable Mention: Gracelyn Dunham

The effect of antioxidants on skin exposed to blue light.

Proceeding to the Northwest Science Expo

Nolan Rapp, Sarthak Sameer-Asita

Olivia Tinio

Koharu Sakiyama

Anna Nielsen, Sophia Nielsen

Ellie Counts

Camryn Lau, Evelyne Knight

Linnea Collett, Jady Sherry

Haley-Ray Newbore, Emmeline Staten

Laura Smith, Anna Le

Anish Goswami

Nathan Rumsey

Ayushi Mallick

Benjamin McClelland, Benjamin Pinoli, Jacob

McClelland

Isabella Scalise, Angelina Scalise

Maura Schramm

Yaya Kiss

Mithun Karthikeyan

Jesika Conner, Nicole Beltman

Cooper Berggren, Cade Holland

Drayton Nimz, Thomas Pierce

Ahmed Zaidan

Aditi Bhaskar

Grace Sato

Uma Grover

Madeline Santoso

Summer Tan, Jeffrey Fang

Masha Galtseva

Jakob Conner

Kalia Rechenberg

Bode Holland, Devon LeGare, Jameson Hultgren

Cassidy Young, Sophia Levesque

Juliann Ellsworth, Savannah Staten

Alice Kang

Dina-Rosa Biggs

Gracelyn Dunham

2021 Best Of Fair

Advancing to the Regeneron International Science and Engineering Fair”

Linnea Collett, Jady Sherry

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