

2008 Intel Northwest Science Expo Special Award Results-High School

Notice: these results have not been confirmed and are subject to change.

High School Outstanding Chemistry Project Sponsored by American Chemical Society, Portland Section

\$250, certificate

Siheng You, Sunset High School

Project: Chemical Analysis of a Holly Bark Extract with Herbicidal Properties

High School Outstanding Project in an Atmospheric Science Exhibit Sponsored by American Meteorological Society

certificate & trophy

Benjamin Lampert, West Salem High School

Project: DETERMINING THE EFFECTIVENESS OF AERIAL INFRASOUND ARRAYS VERSUS LAND BASED SYSTEMS

High School Outstanding Project in an Atmospheric Science Exhibit Sponsored by American Meteorological Society

certificate & trophy

Matthew Feltz, West Salem High School

Project: DETERMINING THE EFFECTIVENESS OF AERIAL INFRASOUND ARRAYS VERSUS LAND BASED SYSTEMS

High School Outstanding Project in an Atmospheric Science Exhibit Sponsored by American Meteorological Society

certificate & trophy

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certificate & trophy

Matthew Feltz, West Salem High School

Project: DETERMINING THE EFFECTIVENESS OF AERIAL INFRASOUND ARRAYS VERSUS LAND BASED SYSTEMS

High School Outstanding Project in an Atmospheric Science Exhibit Sponsored by American Meteorological Society

certificate & trophy

Amy Tang, Westview High School

Project: Vehicular Particulate Matter (PM2.5) and CO2 Emission of Biodiesel B5 and B33 Blends and Regular Gasoline Fuels

High School Outstanding Research in Psychology Sponsored by American Psychological Association and Teachers of Psychology in Secondary Schools

Certificate and trophy

Shelby Patterson, West Linn High School

Project: Caffeine Expectancies: How Expectations Affect Performance on Memory and Attention

High School Outstanding Research in Psychology Sponsored by American Psychological Association and Teachers of Psychology in Secondary Schools

Certificate and trophy

Alyssa Walhood, West Linn High School

Project: Caffeine Expectancies: How Expectations Affect Performance on Memory and Attention

High School Excellence in Statistics Sponsored by American Statistical Association

three \$75 awards and trophy

Elizabeth Hausmann, Southridge High School

Project:

High School Excellence in Statistics Sponsored by American Statistical Association

three \$75 awards and trophy

Gwendolyn McGinnis, Oregon Health Science University

Project: Spatial Ability Enhanced in Left-Handers on Memory Island

High School Excellence in Statistics Sponsored by American Statistical Association

three \$75 awards and trophy

Chelsea Ford, Wilsonville High School

Project: Testing For a Relationship Between Early Childhood Education and High School Success

High School Excellence in Statistics Sponsored by American Statistical Association

three \$75 awards and trophy

Katy Britsch, Wilsonville High School

Project: Testing For a Relationship Between Early Childhood Education and High School Success

High School Outstanding Project in Surface Physics or Microelectronics Sponsored by American Vacuum Society, NW section

\$200 & ribbons

Brandon Carlson, Oregon Episcopal School

Project: The effect of silver nanoparticles on photovoltaic solar cell efficiency

High School Army Outstanding High School Project Sponsored by Army Research Office, U.S.

Army

Certificate and tangible award

Timothy Bauman, Central Catholic High School

Project: Retrieving Regions-Of-Interest from Videos On The Fly Without Transcoding

High School Outstanding Project in Materials Science Sponsored by ASM International Foundation

certificate and medal mailed after the fair

Teja Pitla, Westview High School

Project: The Aluminium-Oxygen Battery

High School Outstanding Project in Materials Science Sponsored by ASM International Foundation

certificate and medal mailed after the fair

Nikolas Bugas, Westview High School

Project: The Aluminium-Oxygen Battery

High School Outstanding Project in Materials Science Sponsored by ASM International Foundation
certificate and medal mailed after the fair

Andy Hsiao, Westview High School

Project: The Aluminium-Oxygen Battery

High School Outstanding Geoscience Project Sponsored by Association Of Women Geoscientists
certificate & trophy

Jacinda Thomas, Tillamook High School

Project: The Biogeochemical Effect of Catastrophic Fire and Salvage Logging on Soil Nutrient Levels
in the Fremont National Forest

High School Herbert Hoover Young Engineer Award Sponsored by Herbert Hoover Presidential
Library Association

Medallion, certificate

Avilash Cramer, West Linn High School

Project: Designing a more efficient sewing machine

High School Highway Transport First Place Sponsored by Highway Transport Research
\$200

Morgan Walti, Liberty High School

Project: Bionic Arm: an Application of Electromagnetics

High School Highway Transport Second Place Sponsored by Highway Transport Research
\$100

Alex Edison, West Salem High School

Project: Construction of a Small Scale Railgun as a Proof of Concept for Liquid Rails

High School IEEE Special Awards Sponsored by IEEE Oregon

Taytlyn Fitzgerald, Connections Academy

Project: Make a Robot Spectacular in a Generic Way

High School IEEE Special Awards Sponsored by IEEE Oregon

Tesca Fitzgerald, Connections Academy

Project: Make a Robot Spectacular in a Generic Way

High School IEEE Special Awards Sponsored by IEEE Oregon

Morgan Walti, Liberty High School

Project: Bionic Arm: an Application of Electromagnetics

High School IEEE Special Awards Sponsored by IEEE Oregon

Marisa Peralta, West Linn High School

Project: Increasing magnetic field strength and applications to small generators

High School IEEE Special Awards Sponsored by IEEE Oregon

Jamie Roberts, Crescent Valley High School

Project: Harvesting Wave Energy Through the Use of Piezo Electric Sensors

High School IEEE Special Awards Sponsored by IEEE Oregon

Madeleine King, Crescent Valley High School

Project: Harvesting Wave Energy Through the Use of Piezo Electric Sensors

High School IEEE Special Awards Sponsored by IEEE Oregon
Logan Cooper, Crescent Valley High School
Project: Harvesting Wave Energy Through the Use of Piezo Electric Sensors

High School IEEE Special Awards Sponsored by IEEE Oregon
Arushi Raghuvanshi, Jesuit High School
Project: Genetic Algorithms and Robotics for Speech and Lip Synchronization

High School IEEE Special Awards Sponsored by IEEE Oregon
John Rognlie, West Linn High School
Project: Robotic Mapping and Orientation via Known Landmarks

High School IEEE Special Awards Sponsored by IEEE Oregon
Drew Snodgrass, West Linn High School
Project: Robotic Mapping and Orientation via Known Landmarks

High School IEEE Special Awards Sponsored by IEEE Oregon
Therese Chen, Oregon Episcopal School
Project: The Effects of Electromagnetic Fields on Rust Formation

High School Intel Excellence in Computer Science Sponsored by Intel Corporation
\$200, certificate
Franklin Zhao, Westview High School
Project: Quantum Encoding Algorithm for Error Correction

High School Outstanding Chemistry Related Project Sponsored by Iota Sigma Pi
\$25, book, certificate
Katherine Lownsbery, West Salem High School
Project: Effect of Electric Field on Potassium Sulfate Crystal Growth

High School Outstanding Aquatic Related Environmental Science Project Sponsored by Lake
Oswego Corporation
\$50 and trophy
Spencer Vines, Skyview High School
Project: Effects of Varied Nitrogen Phosphorus ratios on Anabaena Flos-Aquae.

High School Best of Fair Sponsored by Madden Industrial Craftsmen
Plaque and \$100
Elliot Prince, West Linn High School
Project: Evaluating Sleep Hygiene: Empowering Teens to Take Charge

High School Best of Fair Sponsored by Madden Industrial Craftsmen
Plaque and \$100
Ashutosh Patra, Sunset High School
Project: Low Cost Identification of Anaerobic Microbes for Harvesting Energy and Cleansing
Wastewater in a Single Chambered Microbial Fuel Cell

High School Mu Alpha Theta Award Sponsored by Mu Alpha Theta
Certificate and trophy
Kirben Smoody, KiWi HS
Project: Enumerating Burr Puzzles

High School Mu Alpha Theta Award Sponsored by Mu Alpha Theta
Certificate and trophy
Prachi Pai, Merlo Station High School
Project: Chaotic Maps from a Cryptanalysis Viewpoint (Where Chaos Meets Computers)

High School Mu Alpha Theta Award Sponsored by Mu Alpha Theta
Certificate and trophy
Roshen Warriar, Jesuit High School
Project: Exploring the Collatz Conjecture

High School NOAA's Taking the Pulse of the Planet Sponsored by National Oceanic and
Atmospheric Administration
certificate, medal, letter
Jamie Roberts, Crescent Valley High School
Project: Harvesting Wave Energy Through the Use of Piezo Electric Sensors

High School NOAA's Taking the Pulse of the Planet Sponsored by National Oceanic and
Atmospheric Administration
certificate, medal, letter
Madeleine King, Crescent Valley High School
Project: Harvesting Wave Energy Through the Use of Piezo Electric Sensors

High School NOAA's Taking the Pulse of the Planet Sponsored by National Oceanic and
Atmospheric Administration
certificate, medal, letter
Logan Cooper, Crescent Valley High School
Project: Harvesting Wave Energy Through the Use of Piezo Electric Sensors

High School Innovative Engineering Award Sponsored by National Society of Professional
Engineers
lapel pin, certificate
Morgan Walti, Liberty High School
Project: Bionic Arm: an Application of Electromagnetics

High School Naval Excellence in Science and Engineering Award Sponsored by Office of Naval
Research, US Navy and Marine Corps
Certificate and \$75 gift certificate and medal
Kelsey Dean, Wilsonville High School
Project: Correlations between Chemical and Biological Indicators of Water Quality

High School Naval Excellence in Science and Engineering Award Sponsored by Office of Naval
Research, US Navy and Marine Corps
Certificate and \$75 gift certificate and medal
Willie Neiswanger, Merlo Station High School
Project: Universal Screwdriver Head

High School Naval Excellence in Science and Engineering Award Sponsored by Office of Naval Research, US Navy and Marine Corps
Certificate and \$75 gift certificate and medal
Michael Loy, Oregon Episcopal School
Project: Developing a Novel pH Buffer Methodology to Prevent Concrete Corrosion

High School Naval Excellence in Science and Engineering Award Sponsored by Office of Naval Research, US Navy and Marine Corps
Certificate and \$75 gift certificate and medal
Morgan Walti, Liberty High School
Project: Bionic Arm: an Application of Electromagnetics

High School Award for Excellence in Scientific Research in Environmental Health Sponsored by Oregon Environmental Health Association
\$150, certificate
Alex Humphrey, Crescent Valley High School
Project: Experimental Study on Reverse Osmosis Desalination

High School Award for Excellence in Scientific Research in Environmental Health Sponsored by Oregon Environmental Health Association
\$150, certificate
Ashutosh Patra, Sunset High School
Project: Low Cost Identification of Anaerobic Microbes for Harvesting Energy and Cleansing Wastewater in a Single Chambered Microbial Fuel Cell

High School Award for Excellence in Scientific Research in Environmental Health Sponsored by Oregon Environmental Health Association
\$150, certificate
Amy Tang, Westview High School
Project: Vehicular Particulate Matter (PM_{2.5}) and CO₂ Emission of Biodiesel B5 and B33 Blends and Regular Gasoline Fuels

High School Outstanding Sustainability Project Sponsored by Oregon Museum of Science and Industry
OMSI membership, OMSI science store gift certificate, certificate, and opportunity to display project at OMSI during the Earth Day celebration.
Alex Humphrey, Crescent Valley High School
Project: Experimental Study on Reverse Osmosis Desalination

High School Outstanding Sustainability Project Sponsored by Oregon Museum of Science and Industry
OMSI membership, OMSI science store gift certificate, certificate, and opportunity to display project at OMSI during the Earth Day celebration.
Chelsea Thaw, Crescent Valley High School
Project: A STUDY OF THE EFFECTS OF CLIMATE CHANGE ON EUPHYDRYAS EDITHA TAYLORI AND PLANTS FRAGARIA VIRGINIANA AND FESTUCA ARUDINACEA.

High School Outstanding Sustainability Project Sponsored by Oregon Museum of Science and Industry

OMSI membership, OMSI science store gift certificate, certificate, and opportunity to display project at OMSI during the Earth Day celebration.

Kat Maggiulli, Crescent Valley High School

Project: A STUDY OF THE EFFECTS OF CLIMATE CHANGE ON EUPHYDRYAS EDITHA TAYLORI AND PLANTS FRAGARIA VIRGINIANA AND FESTUCA ARUDINACEA.

High School Outstanding Sustainability Project Sponsored by Oregon Museum of Science and Industry

OMSI membership, OMSI science store gift certificate, certificate, and opportunity to display project at OMSI during the Earth Day celebration.

Andrew Daw, Mazama High School

Project: Shoes That Generate Electricity

High School Outstanding Sustainability Project Sponsored by Oregon Museum of Science and Industry

OMSI membership, OMSI science store gift certificate, certificate, and opportunity to display project at OMSI during the Earth Day celebration.

John-Nicholas Furst, Crescent Valley High School

Project: Experimental Study on the Efficiency of Harvesting Power from Rain Gutter Downspouts

High School Outstanding Project in Plant Biology Sponsored by OSU Department of Botany and Plant Pathology

\$50 and trophy

Lipi Gupta, Crescent Valley High School

Project: Experimental Study of Effect of Forest Fires on Tree Growth and Wood Quality

High School Outstanding Project in Plant Biology Sponsored by OSU Department of Botany and Plant Pathology

\$50 and trophy

Marissa Minato, Crescent Valley High School

Project: Experimental Study of Effect of Forest Fires on Tree Growth and Wood Quality

High School Outstanding Project in Plant Biology Sponsored by OSU Department of Botany and Plant Pathology

\$50 and trophy

Molly Ward, Crescent Valley High School

Project: Experimental Study of Effect of Forest Fires on Tree Growth and Wood Quality

High School Outstanding Project in Plant Biology Sponsored by OSU Department of Botany and Plant Pathology

\$50 and trophy

Jamie Canepa, Jesuit High School

Project: The Effect of Increased Temperature on the Growth of the corals Montipora digitata and Zoanthus sp.

High School Outstanding Science Project About Forests Sponsored by Pacific NW Research Station, USDA Forest Service

Plaque

Jacinda Thomas, Tillamook High School

Project: The Biogeochemical Effect of Catastrophic Fire and Salvage Logging on Soil Nutrient Levels in the Fremont National Forest

High School Outstanding Applied or Practical Chemistry Project by a Junior or Senior Sponsored by Portland Industrial Chemists' Association/American Chemical Society

\$200, certificate

Julia Cohen, Oregon Episcopal School

Project: Optimization of Algal Culture Growth Parameters to Obtain Lipids for Biodiesel Mass-Production- A Second Year Study

High School Outstanding Applied or Practical Chemistry Project by a Junior or Senior Sponsored by Portland Industrial Chemists' Association/American Chemical Society

\$200, certificate

Lia Dawley, Oregon Episcopal School

Project: Optimization of Algal Culture Growth Parameters to Obtain Lipids for Biodiesel Mass-Production- A Second Year Study

High School Outstanding Applied or Practical Chemistry Project by a Junior or Senior Sponsored by Portland Industrial Chemists' Association/American Chemical Society

\$200, certificate

Rahael Gupta, Oregon Episcopal School

Project: Optimization of Algal Culture Growth Parameters to Obtain Lipids for Biodiesel Mass-Production- A Second Year Study

High School Sustainable Development Award Sponsored by Ricoh Corporation
certificate, trophy, entry in raffle for a digital camera

Avilash Cramer, West Linn High School

Project: Designing a more efficient sewing machine

High School Sustainable Development Award Sponsored by Ricoh Corporation
certificate, trophy, entry in raffle for a digital camera

Nick Mendes, Merlo Station High School

Project: The Effectiveness of Natural Wood Adhesives

High School Sustainable Development Award Sponsored by Ricoh Corporation
certificate, trophy, entry in raffle for a digital camera

Ashutosh Patra, Sunset High School

Project: Low Cost Identification of Anaerobic Microbes for Harvesting Energy and Cleansing Wastewater in a Single Chambered Microbial Fuel Cell

High School Outstanding Project in In Vitro Biology Sponsored by Society for in Vitro Biology
Certificate and trophy

Jennifer Luong, Oregon Episcopal School

Project: A Study of the Effect of Narcissus obvallaris Salisbury Alkaloid Extract on Escherichia coli Biofilm

High School Outstanding Air Quality Project Sponsored by Southwest Clean Air Agency
Plaque

Amy Tang, Westview High School

Project: Vehicular Particulate Matter (PM_{2.5}) and CO₂ Emission of Biodiesel B5 and B33 Blends and Regular Gasoline Fuels

High School Creative Use of Technology for Data Collection Sponsored by Texas Instruments
TI-84 Plus calculator

Michael Chen, Merlo Station High School

Project: Transient Phenomena in Astrophysics: Modeling 9 metis to determine radius of orbit

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Gwendolyn McGinnis, Oregon Health Science University

Project: Spatial Ability Enhanced in Left-Handers on Memory Island

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Benjamin Lampert, West Salem High School

Project: DETERMINING THE EFFECTIVENESS OF AERIAL INFRASOUND ARRAYS
VERSUS LAND BASED SYSTEMS

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Matthew Feltz, West Salem High School

Project: DETERMINING THE EFFECTIVENESS OF AERIAL INFRASOUND ARRAYS
VERSUS LAND BASED SYSTEMS

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Kathryn Flyte, West Linn High School

Project: The Effects of Hydration on Athletic Performance

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Alexandra Frye, West Linn High School

Project: The Effects of Hydration on Athletic Performance

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Brittany Saulsbury, West Linn High School

Project: The Effects of Hydration on Athletic Performance

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force

Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Siheng You, Sunset High School

Project: Chemical Analysis of a Holly Bark Extract with Herbicidal Properties

High School U.S. Air Force Outstanding Project Sponsored by U.S. Air Force
Certificate, pad folio, WiFi hotspot finder, USB flash drive, ballpoint pen and messenger bag
Nevedha Rajan, Sunset High School

Project: Boosting Ethanol Production: Finding the Optimal Fermenting Conditions for *S. cerevisiae*
and the Influence of Magnetism in the Fermentation Process

High School Outstanding Use of the International System of Units Sponsored by U.S. Metric
Association

certificate and trophy

Kerry Streiff, Oregon Episcopal School

Project: An Examination of Chloride Deposition in Connate Water Isolated from Subterranean Rock
Deposits in Oregon's Willamette Basin Comparatively Related to

High School Outstanding Use of the International System of Units Sponsored by U.S. Metric
Association

certificate and trophy

Dennis Shi, Oregon Episcopal School

Project: An Examination of Chloride Deposition in Connate Water Isolated from Subterranean Rock
Deposits in Oregon's Willamette Basin Comparatively Related to

High School Outstanding Use of the International System of Units Sponsored by U.S. Metric
Association

certificate and trophy

Spencer Vines, Skyview High School

Project: Effects of Varied Nitrogen Phosphorus ratios on *Anabaena Flos-Aquae*.

High School Project Best Illustrating Surgeon General's Health Recommendations Sponsored by
U.S. Public Health Service

Certificate and trophy

Hussein Abu-Hamdeh, Merlo Station High School

Project: Does a Smoker's Body Mass Index and/or Blood Pressure Differ Significantly from those of
Non-Smokers?

High School U.S. Regional Stockholm Junior Water Prize Sponsored by Water Environment
Federation

Certificate, invitation to compete for State Stockholm Junior Water Prize

Emma Newman, Oregon Episcopal School

Project: Comparing Biological Filters and Mechanical Filters for Parking Lot Water Treatment at
Oregon Episcopal School

High School U.S. Regional Stockholm Junior Water Prize Sponsored by Water Environment
Federation

Certificate, invitation to compete for State Stockholm Junior Water Prize

Jessica Lund, Oregon Episcopal School

Project: Comparing Biological Filters and Mechanical Filters for Parking Lot Water Treatment at
Oregon Episcopal School

High School U.S. Regional Stockholm Junior Water Prize Sponsored by Water Environment Federation

Certificate, invitation to compete for State Stockholm Junior Water Prize

Caitlyn Au, Oregon Episcopal School

Project: The effect of *Eichhornia crassipes* vs. *Vallisneria spiralis* on Nitrate and Phosphate levels in a constructed wetland

High School Outstanding Project by an 11th Grade Student Sponsored by Yale University Science and Engineering Association

Certificate and medallion received by mail

Andrew Mintner, Tualatin High School

Project: Real-time election verification using rate integration auditing

High School Julie Becker Award Sponsored by Youth Exploring Science

\$1000, certificate, book, and biography of Julie Becker

Anugraha Rajendran, Tualatin High School

Project: The Effect on Hydrodynamics using Torricelli's Theorem