2014 Intel NWSE High School results

These awards were presented April 4, 2014 at Portland State University. Congratulations to Best of Fair winners Harsha Uppili, Alexandra Ulmer and Sarayu Caulfield.

Lewis & Clark College will acknowledge outstanding performances at the Intel Northwest Science Expo with scholarship offers to first place category finalists. The first place winners in each category at the fair will be offered at minimum a Faculty Scholarship, which is valued at $13,000 for the 2014-15 academic year, and is renewable each year based on continued academic excellence. In order to be awarded the scholarship, students must be accepted through our regular admissions process and enroll at the college immediately following high school graduation. Students may qualify for a larger academic merit based scholarship upon admission to the college; if that is the case, the larger scholarship will replace the Faculty Scholarship.

Best of Fair, Scholarships, and Special Awards

Award	Award Sponsor	Title	Student List	Organization	Adult Sponsor
Best of Fair-Life	Students of Dr. Bill Lamb	Capacity Limits of Working Memory: The Impact of Multitasking on Cognitive Control and Emotion Recognition in the Adolescent Mind	Alexandra Ulmer, Sarayu Caulfield	Oregon Episcopal School	Peter Langley
Best of Fair-Physical	Students of Dr. Bill Lamb	The Fabrication and Characterization of Short and Long Term Memory Proton Induced Thin Film Synaptic Transistors	Harsha Uppili	Oregon Episcopal School	Peter Langley
ISEF Finalist	Northwest Science Expo System	A New Methodology for Laser Reduced Graphene as a Catalyst on the Counter Electrode of Dye Sensitized Solar Cells	Meredith Loy	Oregon Episcopal School	Peter Langley
ISEF Finalist	Northwest Science Expo System	Alzheimer's Disease Distribution in the Northwest in Relation to Microclimates	Talia Lichtenberg	West Linn High School	Jeff Bilyeu

ISEF Finalist	Northwest Science Expo System	Novel Synthesis of Antimony and Lithium Doped Tin Dioxide Membranes for Gas Sensors	Nikhil Murthy	Catlin Gabel School	Veronica Ledoux
ISEF Finalist	Northwest Science Expo System	The Efficiency of Ferromagnetic Nanoparticles and Chlorella Algae in the Remediation of Oil Spills	Sahil Veeramoney	Oregon Episcopal School	Catherine Molloseau
ISEF Finalist	Northwest Science Expo System	Generalized Decision Functions for Synthesis of multi-level Logic Circuits Realized by Memristor Imply Gates	Anika Raghuvanshi	Jesuit High School	Jennie Cournia
ISEF Finalist	Northwest Science Expo System	Investigation and Multi-Compound Inhibition of AHL Quorum Sensing in Pseudomonas putida and its role in Biofilm Development in vitro	Nick Miller	West Linn High School	Gabe Nagler
OSU College of Engineering Scholarship	Oregon State University	From A to B	Ben Pikus	The School of Science and Technology	Joel Laney
OSU College of Engineering Scholarship	Oregon State University	Novel Design of Next-Generation Multijunction Quantum Dot Solar Panels Using Monte Carlo-Based Modeling	Valerie Ding	Catlin Gabel School	Veronica Ledoux

OSU General Scholarship	Oregon State University	The Effect of Anthocyanin Dye Concentration on the Conductivity of Nano-crystalline Solar Cells	Austin Miller, John Hodson	Wilsonville High School	Jay Schauer
OSU General Scholarship	Oregon State University	The emergence of conifers from uncontrolled nitrogen fixing shrubs	Jane Yeoman	Tillamook High School	Clair Thomas
PSU Maseeh College of Engineering and Computer Science Computer Sciences Scholarship	PSU College of Engineering and Computer Science	A Novel Human Machine Interface Using 3D Vision and Kalman Filter Optimization	Alan Cheng	Southridge High School	David Holz
University of Oregon Scholarships	University of Oregon	Assessing the Variability of the Delta Scuti, Radially Pulsating Star V829 Aquila through Fourier Analysis	Evan Lavery, Grant Kresge	Oregon Episcopal School	Bevin Daglen
University of Oregon Scholarships	University of Oregon	Investigation and Multi-Compound Inhibition of AHL Quorum Sensing in Pseudomonas putida and its role in Biofilm Development in vitro	Nick Miller	West Linn High School	Gabe Nagler
University of Portland Scholarships	University of Portland	Alzheimer's Disease Distribution in the Northwest in Relation to Microclimates	Talia Lichtenberg	West Linn High School	Jeff Bilyeu
University of Portland Scholarships	University of Portland	Investigation and Multi-Compound Inhibition of AHL	Nick Miller	West Linn High School	Gabe Nagler

		Quorum Sensing in Pseudomonas putida and its role in Biofilm Development in vitro			
Award for Excellence in Scientific Research in Environmental Health	Oregon Environmental Health Association	Simulating Ocean Acidification and Climate Change: The Potential Effects on the Quorum Sensing of the Bioluminescence and Growth of the	Dylan Martins	West Linn High School	Gabe Nagler
IEEE Special Awards	IEEE Oregon	The Fabrication and Characterization of Short and Long Term Memory Proton Induced Thin Film Synaptic Transistors	Harsha Uppili	Oregon Episcopal School	Peter Langley
IEEE Special Awards	IEEE Oregon	Creating electricity through the use of natural drafts produced by hot water	Grace Ray	Gresham High School	Stephen Scannell
IEEE Special Awards	IEEE Oregon	From A to B	Ben Pikus	The School of Science and Technology	Joel Laney
IEEE Special Awards	IEEE Oregon	From Waste to Electricity and Hydrogen Gas: A Novel Power Management Device for Microbial Fuel Cell-Microbial Electrolysis Cell Coupled Systems	Ajay Krishnan	Oregon Episcopal School	Catherine Molloseau
IEEE Special Awards	IEEE Oregon	Development and Examination of a Simulated, Electromagnetically	Calvin Seneker, Alex Finley	Oregon Episcopal School	Catherine Molloseau

		Powered, Ferromagnetic Fluid Artificial Heart Pump			
IEEE Special Awards	IEEE Oregon	An Iterative Model for Developing Network-On-Chip (NoC) Architectures	Anusha Pai	Westview High School	Debbie Cooper
IEEE Special Awards	IEEE Oregon	Generalized Decision Functions for Synthesis of multi-level Logic Circuits Realized by Memristor Imply Gates	Anika Raghuvanshi	Jesuit High School	Jennie Cournia
Intel Excellence in Computer Science	Intel Corporation	Novel Algorithms for Digital System Synthesis using Innovative Low-Power Memristor Technology	Vikul Gupta	Oregon Episcopal School	Bevin Daglen
Mu Alpha Theta Award	Mu Alpha Theta	Infima for Hamming Weights of Matrices with Null Symmetric Sums over General Fields	Ashwin Sah	Jesuit High School	Jennie Cournia
Naval Excellence in Science and Engineering Award	Office of Naval Research, US Navy and Marine Corps	The Fabrication and Characterization of Short and Long Term Memory Proton Induced Thin Film Synaptic Transistors	Harsha Uppili	Oregon Episcopal School	Peter Langley
Naval Excellence in Science and Engineering Award	Office of Naval Research, US Navy and Marine Corps	Stratospheric Electromagnetic Space Launch System	Anton Anikin	West Linn High School	Julie McDevitt
Naval Excellence in Science and Engineering Award	Office of Naval Research, US Navy and Marine Corps	From Waste to Electricity and Hydrogen Gas: A Novel Power Management Device	Ajay Krishnan	Oregon Episcopal School	Catherine Molloseau

		for Microbial Fuel Cell-Microbial Electrolysis Cell Coupled Systems			
Naval Excellence in Science and Engineering Award	Office of Naval Research, US Navy and Marine Corps	Synthesis of a novel hybrid nanomaterial for application as a bimodal contrast agent in medical imaging	Anirudh Jain	Catlin Gabel School	Ashu Jain
Naval Excellence in Science and Engineering Award	Office of Naval Research, US Navy and Marine Corps	Investigation and Multi-Compound Inhibition of AHL Quorum Sensing in Pseudomonas putida and its role in Biofilm Development in vitro	Nick Miller	West Linn High School	Gabe Nagler
Outstanding Applied or Practical Chemistry Project by a Junior or Senior	Portland Industrial Chemists' Association/American Chemical Society	Novel Design of Next-Generation Multijunction Quantum Dot Solar Panels Using Monte Carlo-Based Modeling	Valerie Ding	Catlin Gabel School	Veronica Ledoux
Outstanding Aquatic Related Environmental Science Project	Lake Oswego Corporation	Predicting, Modeling, and Monitoring Harmful Algal Blooms in Shallow Urban Lakes	Aneesh Mysore	Westview High School	Debbie Cooper
Outstanding Chemistry Project	American Chemical Society, Portland Section	Novel Synthesis of Antimony and Lithium Doped Tin Dioxide Membranes for Gas Sensors	Nikhil Murthy	Catlin Gabel School	Veronica Ledoux
Outstanding Chemistry Related Project	Iota Sigma Pi	Novel Design of Next-Generation	Valerie Ding	Catlin Gabel School	Veronica Ledoux

		Multijunction Quantum Dot Solar Panels Using Monte Carlo-Based Modeling			
Outstanding Geoscience Project	Association Of Women Geoscientists	Novel Design of Next-Generation Multijunction Quantum Dot Solar Panels Using Monte Carlo-Based Modeling	Valerie Ding	Catlin Gabel School	Veronica Ledoux
Outstanding Natural Resources Science Project	Pacific NW Research Station, USDA Forest Service	The emergence of conifers from uncontrolled nitrogen fixing shrubs	Jane Yeoman	Tillamook High School	Clair Thomas
Outstanding Project by an 11th Grade Student	Yale University Science and Engineering Association	Generalized Decision Functions for Synthesis of multi-level Logic Circuits Realized by Memristor Imply Gates	Anika Raghuvanshi	Jesuit High School	Jennie Cournia
Outstanding Project in an Atmospheric Science Exhibit	American Meteorological Society	The effect of motor vehicle emissions in school parking lots on air quality	Megan Luby, Nick George	Wilsonville High School	Jay Schauer
Outstanding Project in In Vitro Biology	Society for in Vitro Biology	The Effects of Silver Versus Penicillin on Staphylococcus epidermidis	Vanessa Le	Oregon Episcopal School	Catherine Molloseau
Outstanding Project in Materials Science	ASM International Foundation	A New Methodology for Laser Reduced Graphene as a Catalyst on the Counter Electrode of Dye Sensitized Solar Cells	Meredith Loy	Oregon Episcopal School	Peter Langley

Outstanding Research in Psychology	American Psychological Association	Capacity Limits of Working Memory: The Impact of Multitasking on Cognitive Control and Emotion Recognition in the Adolescent Mind	Alexandra Ulmer, Sarayu Caulfield	Oregon Episcopal School	Peter Langley
Outstanding Use of the International System of Units	U.S. Metric Association	Using Caffeine as a natural insecticide against Culex Mosquitoes	Nicolas Wolnick	Bend Science Station	David Bermudez
Outstanding Use of the International System of Units	U.S. Metric Association	From Waste to Electricity and Hydrogen Gas: A Novel Power Management Device for Microbial Fuel Cell-Microbial Electrolysis Cell Coupled Systems	Ajay Krishnan	Oregon Episcopal School	Catherine Molloseau
Outstanding Use of the International System of Units	U.S. Metric Association	A Method for Modeling the Transmission of Phonons across Crystalline Grain Boundaries and Interfaces	Rahul Chandwani	Westview High School	Debbie Cooper
Project Best Illustrating Surgeon General's Health Recommendations	U.S. Public Health Service	Zebra Finches: A Model for Cognitive Decline After Prolonged Ethanol Exposure	Daniel Tang	West Linn High School	Julie McDevitt
Sustainable Development Award	Ricoh Corporation	Novel Design of Next-Generation Multijunction Quantum Dot Solar Panels Using Monte Carlo-Based Modeling	Valerie Ding	Catlin Gabel School	Veronica Ledoux

TiE Oregon Entrepreneurship Honorable Mention	TiE Oregon	The Fabrication and Characterization of Short and Long Term Memory Proton Induced Thin Film Synaptic Transistors	Harsha Uppili	Oregon Episcopal School	Peter Langley
TiE Oregon Entrepreneurship Honorable Mention	TiE Oregon	Cardiac Abnormality Detection through Neural Network Analysis	Andrew Chen	Beaverton High School	Mike Blok
TiE Oregon Entrepreneurship Honorable Mention	TiE Oregon	Stratospheric Electromagnetic Space Launch System	Anton Anikin	West Linn High School	Julie McDevitt
TiE Oregon Entrepreneurship Honorable Mention	TiE Oregon	Application of Fractal Patterns of Plants to Solar Panels to Improve Energy Efficiency per Unit Area	Chaitanya Karamchedu	Jesuit High School	Jennie Cournia
TiE Oregon Outstanding Enterpreneurship Projects	TiE Oregon	Hydro-Compression	Katie Barger, Tony Lucas	Glencoe High School	Chris Steiner
TiE Oregon Outstanding Enterpreneurship Projects	TiE Oregon	Ergonomic Spoon Design to Address the Oral Phase of Dysphagia	Karina Hiroshige	Oregon Episcopal School	Peter Langley
TiE Oregon Outstanding Enterpreneurship Projects	TiE Oregon	Design and Engineering of a User-Centric Information System to Streamline Communication Between Students and Their Teachers	Milo Webster	West Linn High School	Wind Lothamer
TiE Oregon Outstanding Enterpreneurship Projects	TiE Oregon	Power Through The Pipes	Tanner Asher	West Linn High School	Jonathan Davies
TiE Oregon Student Membership	TiE Oregon	Controlled Cell Growth Through the Use of	Peter Graham	Oregon Episcopal School	Peter Langley

		Paramagnetic Nanoparticles			
TiE Oregon Student Membership	TiE Oregon	The Effects of Aluminum Chloride and Estrogen on Normal Human Dermal Fibroblast Cells	Tess Oberholtzer	Oregon Episcopal School	Peter Langley
TiE Oregon Student Membership	TiE Oregon	Using Caffeine as a natural insecticide against Culex Mosquitoes	Nicolas Wolnick	Bend Science Station	David Bermudez
TiE Oregon Student Membership	TiE Oregon	The Synthesis of 9-Fluorenone Compounds	Courtney Holman, Katie Trese	Wilsonville High School	Thomas Schuster
TiE Oregon Student Membership	TiE Oregon	Use of Payload Bay and Dispersal Mechanism for Aerial Dispersal of Agricultural Dispersal Treatments in Remote Control Planes	Gabriel Sutherland	Oregon Episcopal School	Catherine Molloseau
TiE Oregon Student Membership	TiE Oregon	Hybridized Characteristic 3 Galois Extension Field Arithmetic for Elliptic Curve Cryptography: Phase III	Vinay Iyengar	Oregon Episcopal School	Bevin Daglen
TiE Oregon Student Membership	TiE Oregon	The Toxicity of Expired Acetylsalicylic Acid	Lisa LeFeber	Oregon Episcopal School	Bettina Gregg
Tom Owen Award for Excellence in Statistics	Oregon Chapter of the American Statistical Association	Cardiac Abnormality Detection through Neural Network Analysis	Andrew Chen	Beaverton High School	Mike Blok
Tom Owen Award for Excellence in Statistics	Oregon Chapter of the	Predicting, Modeling, and Monitoring Harmful	Aneesh Mysore	Westview High School	Debbie Cooper

	American Statistical Association	Algal Blooms in Shallow Urban Lakes			
Tom Owen Award for Excellence in Statistics	Oregon Chapter of the American Statistical Association	Evaluation of Ventricular Mass for Hypertrophic Cardiomyopathy using 4D Echocardiography	Hannah Tam	Winston Churchill High School	Meihua Zhu
U.S. Regional Stockholm Junior Water Prize	Water Environment Federation	The Efficiency of Ferromagnetic Nanoparticles and Chlorella Algae in the Remediation of Oil Spills	Sahil Veeramoney	Oregon Episcopal School	Catherine Molloseau
Vardhana Innovative Presentation	The Vardhana Family	Nanoparticle Filtration of Arsenic from Drinking Water	Lydia VanWinkle	West Linn High School	Brian Delfatti

Category Awards

Category	Place	Title	Student List	Organization	Adult Sponsor	Exhibit No
Animal Sciences	First Place	Using Caffeine as a natural insecticide against Culex Mosquitoes	Nicolas Wolnick	Bend Science Station	David Bermudez	HS-AN-0011
Animal Sciences	Second Place	The Egg Laying Behaviors of Parasitic Wasps	Grant Thomas	Oregon Episcopal School	Catherine Molloseau	HS-AN-0009
Animal Sciences	Third Place	Size Variation and Feeding Behavior in Oregon Spotted Frogs (Rana pretiosa)	Tlell Wolf	Bend Science Station	David Bermudez	HS-AN-0010
Behavioral and Social Science	First Place	Capacity Limits of Working Memory: The Impact of Multitasking on Cognitive Control and Emotion Recognition in the Adolescent Mind	Alexandra Ulmer, Sarayu Caulfield	Oregon Episcopal School	Peter Langley	HS-BE-0009

Behavioral and Social Science	Second Place	Banner Blindess	Scott DiBenedetto	Oregon Episcopal School	Bettina Gregg	HS-BE-0021
Behavioral and Social Science	Third Place	The Effects of Ordered Face-Perception on Recognition Capabilities	Kiran Kaur	The School of Science and Technology	Joel Laney	HS-BE-0004
Behavioral and Social Science	Honorable Mention	The Donation Obligation: Exploring the 'Rule of Reciprocity' Among Genders, Age, and Ethnic Groups	Keaton Whittaker, Lauren Burns	Wilsonville High School	Becca Shook	HS-BE-0061
Biochemistry	First Place	A Transgenerational Study of RNA Interference in Caenorhabditis Elegans	Olivia Langley	Oregon Episcopal School	Peter Langley	HS-BC-0001
Biochemistry	Second Place	Purification of PhaR Protein from Halomonas. Sp. TD01 and Characterization in its Emulsification, Combustion-Supporting, and Anti-bacterial Properties	Mianzhao Guo	Oregon Episcopal School	Peter Langley	HS-BC-0005
Biochemistry	Third Place	Comparing the Effectiveness of Aspirin and Pradaxa on Coagulation Times	Arianna Rahimian, Maya Weiss	Oregon Episcopal School	Catherine Molloseau	HS-BC-0008
Cellular and Molecular Biology	First Place	Protective Effects of Mitochondria-Targeted Molecule MitoQ in Pancreatic Cancer Cells	Nivedita Mandal	Jesuit High School	Mousumi Mandal	HS-CM-0001
Cellular and Molecular Biology	Second Place	Effects of Xanthine Oxidase Inhibition on Angiotensin II-Induced Hypertrophy of Renal Tubular Cells	Mukund Raguram	Oregon Episcopal School	Peter Langley	HS-CM-0019
Cellular and Molecular Biology	Third Place	Controlled Cell Growth Through the	Peter Graham	Oregon Episcopal School	Peter Langley	HS-CM-0008

		Use of Paramagnetic Nanoparticles				
Chemistry	First Place	Novel Synthesis of Antimony and Lithium Doped Tin Dioxide Membranes for Gas Sensors	Nikhil Murthy	Catlin Gabel School	Veronica Ledoux	HS-CH-0039
Chemistry	Second Place	Synthesis of a novel hybrid nanomaterial for application as a bimodal contrast agent in medical imaging	Anirudh Jain	Catlin Gabel School	Ashu Jain	HS-CH-0052
Chemistry	Third Place	Improved synthesis for colbalt(II) bipyridine complexes	Zach Winger	The School of Science and Technology	Joel Laney	HS-CH-0019
Chemistry	Honorable Mention	Synthesis, Characterization and Fabrication of an Antimony Doped Tin Oxide Nanosensor to Detect Volatile Organic Compounds	Vineet Edupuganti	Oregon Episcopal School	Catherine Molloseau	HS-CH-0041
Computer Science	First Place	A Novel Human Machine Interface Using 3D Vision and Kalman Filter Optimization	Alan Cheng	Southridge High School	David Holz	HS-CO-0023
Computer Science	Second Place	Design and Engineering of a User-Centric Information System to Streamline Communication Between Students and Their Teachers	Milo Webster	West Linn High School	Wind Lothamer	HS-CO-0013
Computer Science	Third Place	Utilizing Digital Auscultation and Speech Recognition Technology as a Diagnostic Aid for Pulmonary Diseases	Steven Cen	Westview High School	Debbie Cooper	HS-CO-0010
Earth Science	First Place	The effect of phosphate fertilizers on the radium content	Mayur Paralkar,	Tigard High School	Prasanna Paralkar	HS-EA-0001

		of soil and the possible implications for radon exposures	Mihir Paralkar			
Earth Science	Second Place	The Effect of Hemlock Char on Denitrification in Flood Inundated Soils	Bryton Dorland, Kestrel Bailey	Tillamook High School	Clair Thomas	HS-EA-0008
Energy and Transportation	First Place	From Waste to Electricity and Hydrogen Gas: A Novel Power Management Device for Microbial Fuel Cell-Microbial Electrolysis Cell Coupled Systems	Ajay Krishnan	Oregon Episcopal School	Catherine Molloseau	HS-ET-0019
Energy and Transportation	Second Place	Optimizing Algal Growth to Maximize the Biofuel Output of Nannochloropsis Oculata	Katie Rule, Jessica Wong	The School of Science and Technology	Joel Laney	HS-ET-0002
Energy and Transportation	Third Place	Power Through The Pipes	Tanner Asher	West Linn High School	Jonathan Davies	HS-ET-0039
Energy and Transportation	Honorable Mention	The Effect of Color Temperature on Hydrogen Production in Chlamydomonas reinhardtii	Sarah Wong, Katherine Pippenger	Oregon Episcopal School	Bevin Daglen	HS-ET-0004
Engineering: Electrical and Mechanical	First Place	Generalized Decision Functions for Synthesis of multi-level Logic Circuits Realized by Memristor Imply Gates	Anika Raghuvanshi	Jesuit High School	Jennie Cournia	HS-EE-0042
Engineering: Electrical and Mechanical	Second Place	Implementation and Evaluation of a New Routing Algorithm for Networks-on-Chip	Lukas Schwab	Lincoln High School	Christof Teuscher	HS-EE-0048
Engineering: Electrical and Mechanical	Third Place	Development and Examination of a Simulated, Electromagnetically Powered,	Calvin Seneker, Alex Finley	Oregon Episcopal School	Catherine Molloseau	HS-EE-0041

		Ferromagnetic Fluid Artificial Heart Pump				
Engineering: Electrical and Mechanical	Honorable Mention	Use of Payload Bay and Dispersal Mechanism for Aerial Dispersal of Agricultural Dispersal Treatments in Remote Control Planes	Gabriel Sutherland	Oregon Episcopal School	Catherine Molloseau	HS-EE-0009
Engineering: Materials and Bioengineering	First Place	The Fabrication and Characterization of Short and Long Term Memory Proton Induced Thin Film Synaptic Transistors	Harsha Uppili	Oregon Episcopal School	Peter Langley	HS-EM-0022
Engineering: Materials and Bioengineering	Second Place	A New Methodology for Laser Reduced Graphene as a Catalyst on the Counter Electrode of Dye Sensitized Solar Cells	Meredith Loy	Oregon Episcopal School	Peter Langley	HS-EM-0055
Engineering: Materials and Bioengineering	Third Place	The VP (Ventriculoperitoneal) Shunt Circuit	Jennifer Cramer	West Linn High School	Jonathan Davies	HS-EM-0029
Engineering: Materials and Bioengineering	Honorable Mention	Nanoparticle Filtration of Arsenic from Drinking Water	Lydia VanWinkle	West Linn High School	Brian Delfatti	HS-EM-0030
Environmental Analysis and Effects	First Place	Predicting, Modeling, and Monitoring Harmful Algal Blooms in Shallow Urban Lakes	Aneesh Mysore	Westview High School	Debbie Cooper	HS-VA-0031
Environmental Analysis and Effects	Second Place	Monitoring Ocean Microscopic Organic Materia: A Study on the Environmental Impacts of the Fukushima Earthquake	Jinsong Yan	Cleveland High School	Mai Duong	HS-VA-0050
Environmental Analysis and Effects	Third Place	The Effects of Titanium Dioxide Nano-particles on the Heterocyst Production of Anabaena in Media	Carl Felstiner	Oregon Episcopal School	Peter Langley	HS-VA-0038

		With and Without Nitrates				
Environmental Analysis and Effects	Honorable Mention	The effect of motor vehicle emissions in school parking lots on air quality	Megan Luby, Nick George	Wilsonville High School	Jay Schauer	HS-VA-0032
Environmental Management	First Place	The Efficiency of Ferromagnetic Nanoparticles and Chlorella Algae in the Remediation of Oil Spills	Sahil Veeramoney	Oregon Episcopal School	Catherine Molloseau	HS-VM-0004
Environmental Management	Second Place	A Comparison of the Effects of Vermicompost Tea on Drosophila melanogaster and Aphis sp.	Katie Malueg	Oregon Episcopal School	Peter Langley	HS-VM-0003
Environmental Management	Third Place	Efficiency vs. Comfort	Taylor Sund	Gresham High School	Kathy Childress	HS-VM-0012
Environmental Management	Honorable Mention	Greywater Treatment	Lexy Tracy	Oregon Episcopal School	Catherine Molloseau	HS-VM-0005
Mathematical Sciences	First Place	Hybridized Characteristic 3 Galois Extension Field Arithmetic for Elliptic Curve Cryptography: Phase III	Vinay Iyengar	Oregon Episcopal School	Bevin Daglen	HS-MA-0003
Mathematical Sciences	Second Place	Infima for Hamming Weights of Matrices with Null Symmetric Sums over General Fields	Ashwin Sah	Jesuit High School	Jennie Cournia	HS-MA-0015
Mathematical Sciences	Third Place	The effect of Parameters on the Correlation of Preference and Votes in Social Choice Functions	Henry Talbott	Oregon Episcopal School	Catherine Molloseau	HS-MA-0005
Mathematical Sciences	Honorable Mention	Decoding the Personality of Music using Mathematical Trnasforms	Uma Doshi	Jesuit High School	Satish Doshi	HS-MA-0017

Medicine and Health Sciences	First Place	Alzheimer's Disease Distribution in the Northwest in Relation to Microclimates	Talia Lichtenberg	West Linn High School	Jeff Bilyeu	HS-ME-0022
Medicine and Health Sciences	Second Place	Evaluation of Ventricular Mass for Hypertrophic Cardiomyopathy using 4D Echocardiography	Hannah Tam	Winston Churchill High School	Meihua Zhu	HS-ME-0052
Medicine and Health Sciences	Third Place	The Association Between Congenital Cardiac Lesions Involving High Shear Stress With Platelet Dysfunction and Von Willebrand Disease	Holly Langley	Oregon Episcopal School	Peter Langley	HS-ME-0009
Medicine and Health Sciences	Honorable Mention	Aspartame: Hold the PET, Please	Nicole Jackson	West Linn High School	Jonathan Davies	HS-ME-0025
Microbiology	First Place	Investigation and Multi-Compound Inhibition of AHL Quorum Sensing in Pseudomonas putida and its role in Biofilm Development in vitro	Nick Miller	West Linn High School	Gabe Nagler	HS-MI-0031
Microbiology	Second Place	Simulating Ocean Acidification and Climate Change: The Potential Effects on the Quorum Sensing of the Bioluminescence and Growth of the	Dylan Martins	West Linn High School	Gabe Nagler	HS-MI-0038
Microbiology	Third Place	The Effectiveness of Astaxanthin as a Sunscreen Without the Use of Carcinogens	Amiette Baskerville	West Linn High School	Gabe Nagler	HS-MI-0032
Microbiology	Honorable Mention	Targeting unique spectral absorptions through multi-treatment laser therapies for corresponding	Shana Feltham, Melanie Martinsen	West Linn High School	Nancy Monson	HS-MI-0042

		differential mortality rates between Escherichia coli and Micrococcus luteus bacteria				
Physics and Astronomy	First Place	Novel Design of Next-Generation Multijunction Quantum Dot Solar Panels Using Monte Carlo-Based Modeling	Valerie Ding	Catlin Gabel School	Veronica Ledoux	HS-PH-0006
Physics and Astronomy	Second Place	Assessing the Variability of the Delta Scuti, Radially Pulsating Star V829 Aquila through Fourier Analysis	Evan Lavery, Grant Kresge	Oregon Episcopal School	Bevin Daglen	HS-PH-0004
Physics and Astronomy	Third Place	Cloud Chamber Observations of Cosmic Rays in the Stratosphere as Compared to Sea Level	Jesse Rodriguez	West Salem High School	Michael Lampert	HS-PH-0036
Physics and Astronomy	Honorable Mention	Frequency Modulation Feedback Control for Near-Field Acoustic Characterization of Mesoscopic Fluid Films	Pramith Devulapalli	Westview High School	Debbie Cooper	HS-PH-0030
Plant Sciences	First Place	Analysis of Brassica rapa Anthocyanin Biosynthesis under Diverse Environmental Induction Factors	Bo An	West Linn High School	Michael Glane	HS-PL-0030
Plant Sciences	Second Place	The emergence of conifers from uncontrolled nitrogen fixing shrubs	Jane Yeoman	Tillamook High School	Clair Thomas	HS-PL-0011
Plant Sciences	Third Place	The Effect of Mycorrhizal Fungi on the Growth of Ribwort Plantain in	Mira Reichman	Oregon Episcopal School	Peter Langley	HS-PL-0008

		Soil Contaminated With Lead				
Plant Sciences	Honorable Mention	The Effect of Light Intensity on Chlamydomonas reinhardtii Movement and Velocity.	Evan Hiroshige	Oregon Episcopal School	Catherine Molloseau	HS-PL-0014