



DELAWARE VALLEY SCIENCE FAIRS, INC.

PROGRAM OF ENTRIES 2019

71ST DELAWARE VALLEY SCIENCE FAIRS

6th - 12th Grades

APRIL 2 - 4, 2019

The Greater Philadelphia
Expo Center
Oaks, Pennsylvania

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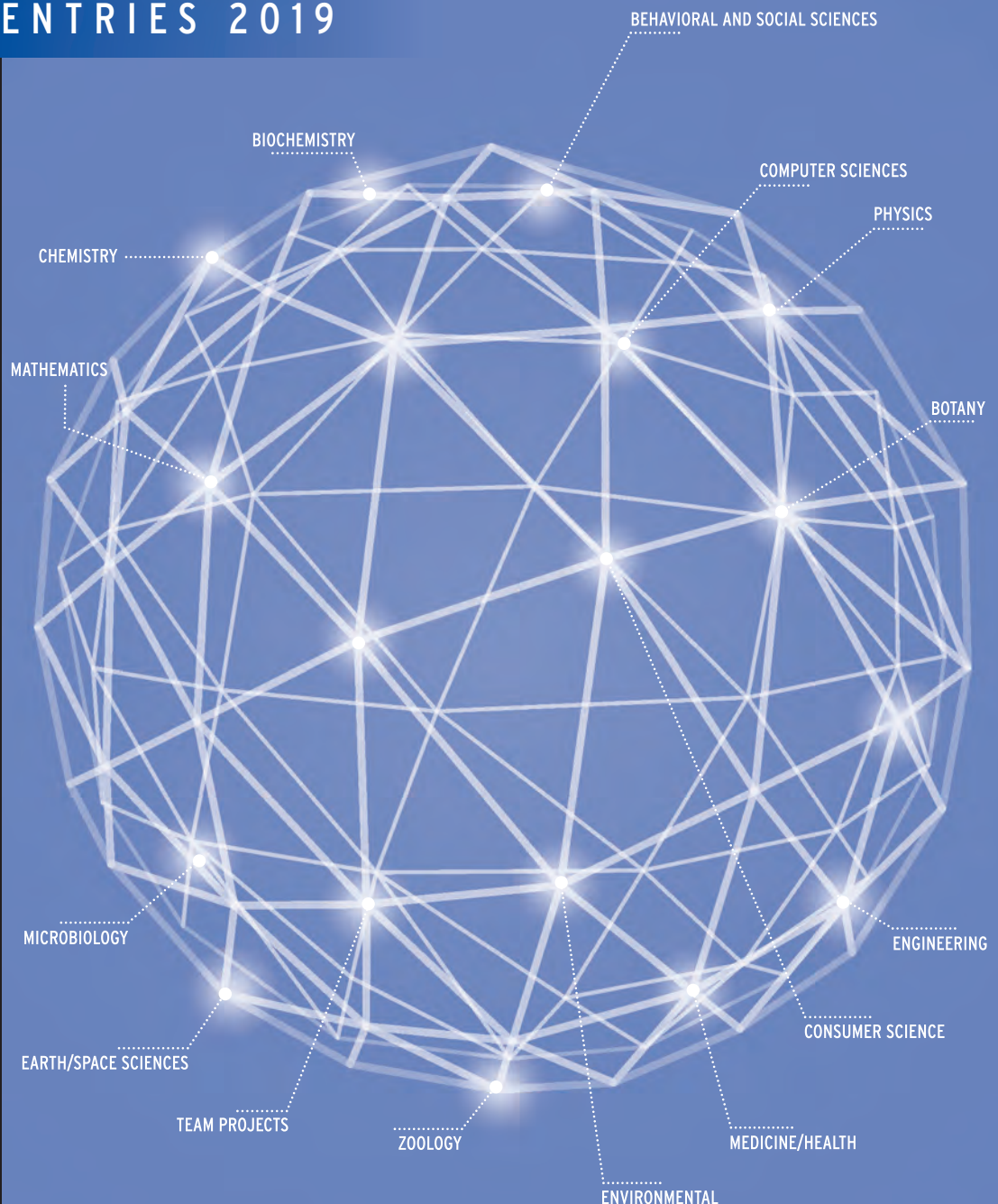
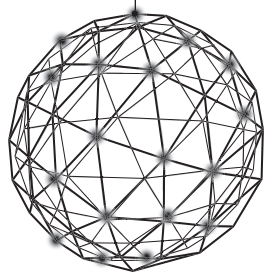


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Welcome to the 71st Annual Delaware Valley Science Fairs (DVSF). I extend congratulations to all the participants. Every student here has won an award from their Regional fairs. As I have said many times before, you are not winners because you won an award. You are winners because you started and completed a research project! This is an experience that will serve you well. The skills you learn by participating in a science fair will better prepare you for the journey ahead and I wish you all the best in the future.

DVSF is a program whose mission is to bring parents, teachers and industry together to stimulate and nurture young people so they can grow and develop into contributing members of the community. We will continue to strive to expand our Teacher Development Program, Mentorship Program and collaborations with industry and professional societies. We also provide students from various social and economic backgrounds opportunities to share their aptitudes and interests.

The focus for DVSF is what is going on in the classroom. DVSF is designed to encourage students to think and solve problems; skills that they will need for careers, college, and citizenship. We are committed to preparing tomorrow's innovators. The Next Generation of Science Standards (NGSS) emphasizes critical thinking skills of applying knowledge, evaluation claims, providing evidence for points of view, and analyzing new situations. These are the same skills student learn when they undertake a research project and enter a science fair. It is here where intellectual curiosity and creative problem solving come into play. The importance of science competitions cannot be underestimated. It is ok if one doesn't place. It is the process of participation itself that is uniquely valuable.

Our students, who competed at the Intel International Science and Engineering Fair (ISEF) in Pittsburgh, did very well. They won 14 awards, including, 2 'Best in Category'! Eight students from DVSF were also named Semi-Finalists and one is a Finalist in the Broadcom MASTERS competition for middle school students. We also had two Finalists in the Regeneron Science Talent Search for high school seniors! We are all very proud of their accomplishments. DVSF provides a vehicle for all students to excel and reach their full potential.

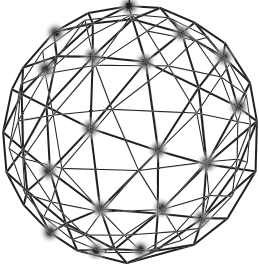
I want to thank the following for their contributions: Drexel University, our Sponsors, the Board of Trustees, the Regional Fair Directors, our Advisory Board, the professional societies and organizations, the judges, schools and teachers, all our hard working fair volunteers, and last, but certainly not least, the parents.

We have a lot of talented young people in the tri-state area who can excel when given the chance. I feel honored to be part of this exciting program. I strongly believe that if we provide the opportunity for the natural curiosity of our young people to blossom, they will provide us with a future that is bright and prosperous.

Good Luck to you all,

Henry Disston
PRESIDENT AND EXECUTIVE DIRECTOR

LETTER FROM THE PRESIDENT





COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE GOVERNOR



GREETINGS:

It is my pleasure to welcome all those gathered for the Delaware Valley Science Fairs (DVSF).

Pennsylvania is shaped and strengthened by the character and leadership of extraordinary young people. Science and engineering have been cornerstones of the commonwealth's economy for generations. Educating and encouraging youth to continue this legacy is fundamental to prosperity and progress. I commend DVSF and its partners for endeavoring to provide inspiration and opportunity for participation in STEM fields. During this competition, students will demonstrate not only innovation in their projects, but tremendous ambition and dedication beyond the classroom. I applaud the students here today for their outstanding achievements, and I am confident that this event and those gathered will create positive change in the commonwealth and inspire others for many years to come.

As Governor, and on behalf of all the citizens of the Commonwealth of Pennsylvania, I am honored to welcome all those gathered for the Delaware Valley Science Fairs. Please accept my best wishes for a memorable event and continued success.



Tom Wolf
TOM WOLF
Governor
April 2-4, 2019



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OFFICE OF THE MAYOR
215 City Hall
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JAMES F. KENNEY
MAYOR

April 2, 2019

Dear Friends:

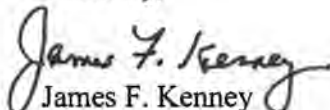
It is a pleasure to welcome you to the 71st annual Delaware Valley Science Fairs (DVSF) and Competition, which will be held from Tuesday, April 2 to Thursday, April 4, 2019.

I congratulate this organization for reaching such an impressive milestone and for the past seven decades of recognizing the impressive accomplishments of the students in our region who excel in these essential academic disciplines. As a national leader in science education and research, it is imperative that we properly educate and prepare our students for potential careers in Science, Technology, Engineering and Mathematics (STEM), and that Philadelphia's STEM education leaders devise creative and innovative ways to motivate children and youth to pursue their interest in science.

I commend the DVSF for hosting 1,000 students in grades 6 to 12 from Southeastern Pennsylvania, Southern New Jersey, and Delaware who will compete for over \$2 million in scholarship funds and prizes. These young people completed STEM research projects in 15 scientific categories and have already won their local fairs. The top students will advance to the Intel International Science and Engineering Fair in May where 1,500 students from across the nation and 65 countries around the world will compete for more than \$4 million in scholarships and prizes.

On behalf of the City of Philadelphia, I wish all of the competing students the very best of luck and salute them for their interest in science. I encourage you to continue to pursue your passion in these subjects and consider the many rewarding and challenging careers they can open for you.

Sincerely,


James F. Kenney
Mayor

A number of organizations and individuals have contributed gifts of cash, services and facilities to the 2018 Delaware Valley Science Fairs. We extend our thanks to all of you, who through your support, have underwritten the costs of conducting this program.

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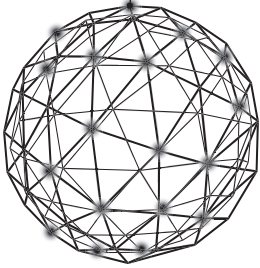
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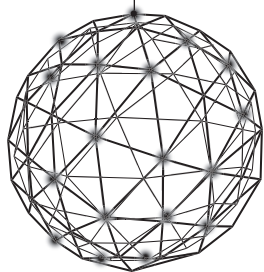
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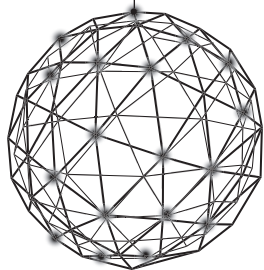
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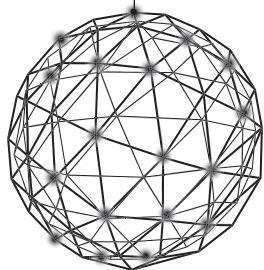
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Delaware Valley Science Fairs, Inc. (DVSF) was founded in 1949. Today, DVSF is a non-profit entity located at and partnering with Drexel University. It is now also one of the largest and oldest fairs in the country. The Fairs were designed as a vehicle for stimulating interest in STEM (Science, Technology, Engineering and Mathematics) among students in middle and high schools in the tri-state area. The philosophy behind the Fairs is that students learn science by *doing* science.

The Delaware Valley Science Fairs comprise five separate competitions: with a fair each for 6th through 8th, 9th, 10th, 11th and 12th Grades. Society for Science and the Public provides a uniform structure and rules, and franchises all regional fairs at the high school level in the United States and in over 70 foreign countries.

In the fall of each school year, teachers introduce the science fair program as an extracurricular activity or as part of the curriculum. Students choose from one of 15 categories (these categories are listed in the Table of Contents). Along the way, their topics and methodology are reviewed by the DVSF Scientific Review

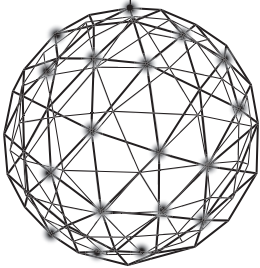
Committee to guarantee that proper scientific safety procedures and federal guidelines are being followed.

Within each category, First, Second, and Third Place winners are chosen by teams of judges who sometimes also designate Honorable Mention awards. After category winners are selected in each grade, separate teams of Medals judges select Gold, Silver, and Bronze Medal winners from among the category winners.

All medal winners in the 9th through 12th grade earn an all-expense-paid trip to the 70th Intel International Science and Engineering Fair (ISEF), to be held this year in Phoenix, Arizona on May 11 through 18. At the ISEF, Delaware Valley's twelve high school medal winners, and first place high school team winners will compete against winners from other regional fairs in the United States, American Samoa, Argentina, Australia, Austria, Azerbaijan, Belarus, Brazil, Bulgaria, Canada, Chile, China, Chinese Taipei, Columbia, Costa Rica, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia Republic, Germany, Ghana, Guam, Guatemala, Hungary, India, Indonesia, Iraq, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Latvia, Luxembourg, Malaysia, Mexico, Netherlands, Nigeria, Northern Ireland, North Mariana Islands, Norway, Pakistan, Palestine, Panama, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Republic of Moldova, Romania, Russian Federation, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, the United Kingdom, Uruguay, U.S. Virgin Islands and Vietnam and Zimbabwe.

Teachers are selected from a pool of applicants to attend ISEF, along with our teacher award winners all expenses paid.

FOREWORD



DELAWARE VALLEY SCIENCE FAIRS:

A CULMINATION OF THIRTEEN REGIONAL FAIRS THROUGHOUT THE DELAWARE VALLEY

Each student who competes in the Delaware Valley Science Fairs (DVSF) is already a winner. They have won the right to compete in the DVSF by winning in one of thirteen regional fairs in Delaware, Southern New Jersey and Southeastern Pennsylvania.

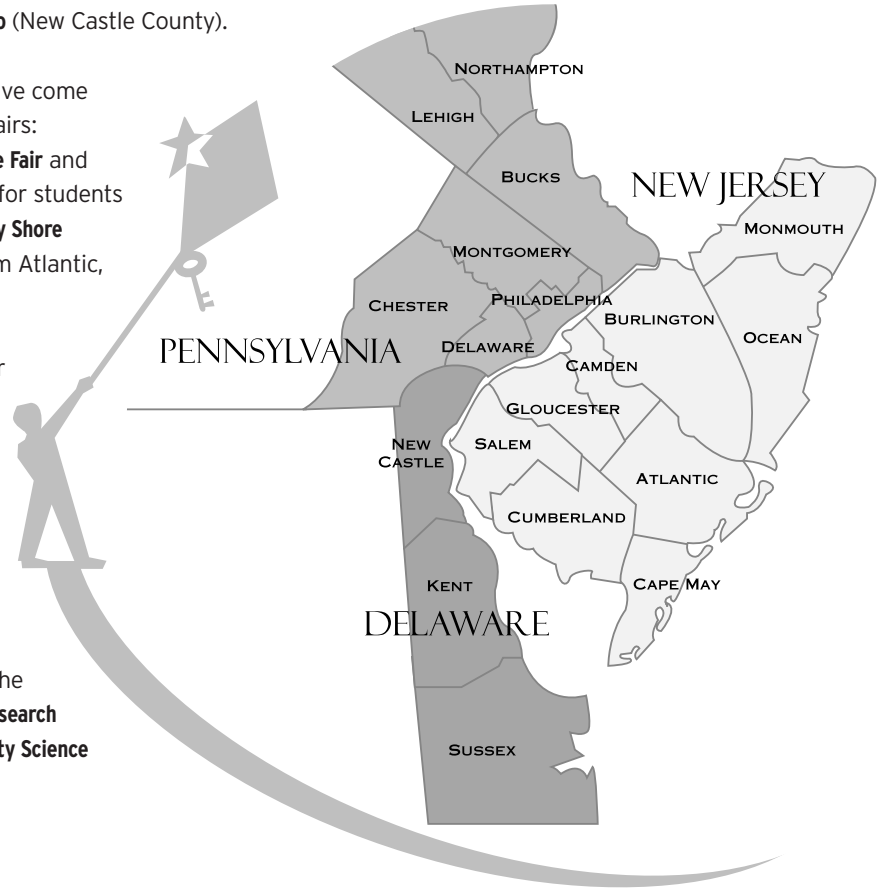
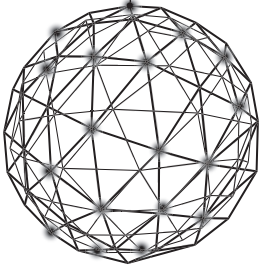
Fair, the **George Washington Carver Science Fair** for Philadelphia County, and the **Lehigh Valley Science and Engineering Fair** for Lehigh and Northampton Counties. Many students were honored as winners in earlier fairs held at their schools and by their school districts.

Delaware competitors have come from the **Sussex County Science Fair**, **Kent County Science Fair**, and from the **Delaware Tech Science Expo** (New Castle County).

New Jersey competitors have come from one of four regional fairs: the **Cumberland County Science Fair** and the **Salem County Science Fair** for students in those counties, the **Jersey Shore Science Fair** for students from Atlantic, Cape May, Monmouth, and Ocean Counties and the **Coriell Institute Science Fair** for students from Burlington, Camden, and Gloucester Counties.

Students from Southeastern Pennsylvania have come from the **Bucks County Science Fair**, the **Delaware County Science Fair**, the **Montgomery County Science Research Competition**, the **Chester County Science**

THIRTEEN REGIONAL FAIRS



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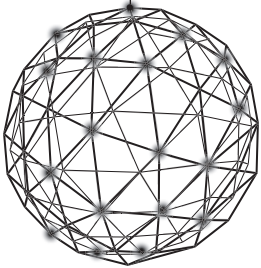
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Teacher Workshop

The sponsors of the Delaware Valley Science Fairs (DVSF) provide several kinds of awards to student winners. These awards are intended to demonstrate the high value sponsors place on achievement by middle and high school students in STEM.

MEDALS

Gold, Silver and Bronze Medals will be presented to three individuals in each grade, selected from the first place category winners.

ALL-EXPENSE-PAID TRAVEL TO THE INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR (ISEF)

The Gold, Silver and Bronze Medal Winners of the 9th, 10th, 11th and 12th grade Fairs will receive an all-expense-paid trip to the 70th ISEF in Phoenix, Arizona from May 11th - 18th, 2019. The Medal Winners will compete at ISEF representing DVSF. The first place team project from the 9th through 12th grades will also receive an all expense paid trip and compete at ISEF. Selected teachers will also receive an all-expense-paid trip to the ISEF. Approximate value: **\$1,500 per person.**

CATEGORY AWARDS

Each of the first place winners in the five Delaware Valley Science Fair's categories of the competition will receive \$100, second place winners will receive \$75 and third place winners will receive \$50 along with their medal and certificate. Approximate value: **\$15,300**

SCHOLARSHIPS

Drexel University will offer **five partial tuition** scholarships valued at \$8,000 per year to students in the 11th Grade for use at Drexel University when the student enrolls and is renewable for up to five years pending maintenance of a 3.0 grade point average and full-time status. All scholarships go into effect upon the recipients meeting university admissions criteria. Approximate value: **\$200,000 per student**

University of the Sciences will award scholarships to first, second and third place winners of the 11th Grade Fair. Scholarships are to be allocated toward tuition only and become effective upon enrollment in the incoming class of fall 2018 in any undergraduate or first-professional program offered at University of the Sciences. Each scholarship is renewable for up to four years provided the recipient is enrolled as a full-time undergraduate or first-professional student in good academic standing with the University. The awards will be distributed as follows:

1st Place Winners - \$9,250 per year
2nd Place Winners - \$7,500 per year
3rd Place Winners - \$6,250 per year
Approximate value: **\$1,196,000**

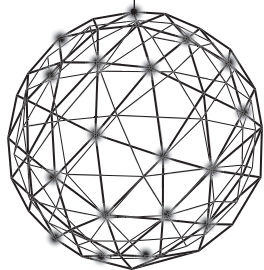
The Dietrich W. Botstiber Foundation offers an **\$8,000** unrestricted scholarship to a 12th grader with a project related to aviation. The student will be awarded a \$2,000 per year, for 4 years pending maintenance of full-time status.

Science and Technology Award to Harrisburg University of Science and Technology: The Science and Technology Scholar Award will cover up to \$15,000 for four (4) Academic Years at Harrisburg University of Science and Technology. This award is given to high school seniors and juniors participating in STEM fairs in the Commonwealth.

The university recommends recipients to file the Free Application for Federal Student Aid (FAFSA) before the start of the academic year, and complete any state grant applications by their deadlines. Once we have received the FAFSA data, we will provide recipients with a complete financial aid package that details their overall aid eligibility, including the scholarship as well as any state and federal grants for which they qualify. This award is not transferable and nor is it stackable with any other scholarship from Harrisburg University.

Special Awards: DVSF partners with area Professional Societies and Organizations. Many of whom give additional special awards to selected students whose projects reflect the mission and goals of the societies and organizations. (See page 7)
Approximate value: **\$32,725**

MEDALS, SCHOLARSHIPS AND AWARDS

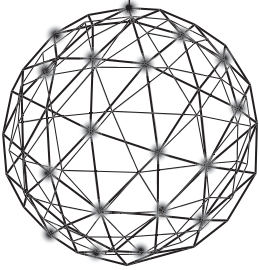


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Contributions that local companies, foundations and community sponsors give go directly to benefit the students' participation and do not pay for salaries. Inquiry-based/hands-on learning works! Please help us nurture our future scientists and engineers.

**YES!
I WANT TO SUPPORT DVSF**



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President and Executive Director
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For questions: 215-895-5840, disstonh@drexel.edu

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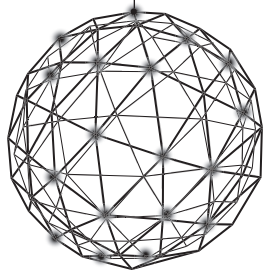
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Amount of contribution enclosed \$ _____

Make checks payable to: **Delaware Valley Science Fairs, Inc.**

You can now make a gift through PayPal through our website at www.dvsf.org

CATEGORY DESCRIPTIONS



Behavioral and Social Sciences

Human and animal behavior, social and community relationships - psychology, sociology, anthropology, archaeology, ethology, ethnology, linguistics, learning, perception, urban problems, reading problems, public opinion surveys, educational testing, etc.

Biochemistry

Chemistry of life processes - cell biology, molecular genetics, enzymes, photosynthesis, blood chemistry, protein chemistry, food chemistry, hormones, etc.

Botany

Study of plant life - agriculture, agronomy, horticulture, forestry, plant taxonomy, plant physiology, plant pathology, plant genetics, hydroponics, algae, etc.

Chemistry

Study of nature and composition of matter and laws governing it - physical chemistry, organic chemistry (other than biochemistry), inorganic chemistry, materials, plastics, fuels, pesticides, metallurgy, soil chemistry, etc.

Computer Science

Study and development of computer software and hardware and associated logical devices.

Earth and Space Sciences

Geology, mineralogy, physiography, oceanography, meteorology, climatology, astronomy, geology, speleology, seismology, geography, etc.

Engineering

Technology; projects that directly apply scientific principles to manufacturing and practical uses - civil, mechanical, aeronautical, chemical, electrical, photographic, sound, automotive, marine, heating and refrigerating, transportation, environmental engineering, etc.

Environmental Sciences

Study of pollution (air, water, and land) sources and their control; ecology.

Mathematics

Development of formal logical systems or various numerical and algebraic computations, and the application of these principles - calculus, geometry, abstract algebra, number theory, statistics, complex analysis, and probability.

Medicine and Health

Study of diseases and health of humans and animals - dentistry, pharmacology, pathology, ophthalmology, nutrition, sanitation, pediatrics, dermatology, allergies, speech and hearing, etc.

Microbiology

Biology of microorganisms - bacteriology, virology, protozoology, fungi, bacterial genetics, yeast, etc.

Physics

Theories, principles, and laws governing energy and the effect of energy on matter - solid state, optics, acoustics, particle, nuclear, atomic, plasma, superconductivity, fluid and gas dynamics, thermodynamics, semiconductors, magnetism, quantum mechanics, biophysics, etc.

Zoology

Study of animals - animal genetics, ornithology, ichthyology, herpetology, entomology, animal ecology, paleontology, cellular physiology, circadian rhythms, animal husbandry, cytology, histology, animal physiology, invertebrate neurophysiology, studies of invertebrates, etc.

Team Projects

All disciplines - multidisciplinary or interdisciplinary. Projects consist of 2 or 3 team members.

Consumer Science (grades 6-8, only)

Study of various consumer products like batteries, soaps, detergents, foods, paper towels, cosmetics, etc. These are usually, but not always, comparison studies.

FREE WORKSHOP OFFERINGS AT THE GREATER PHILADELPHIA EXPO CENTER

WEDNESDAY, APRIL 3, 2019 • FREE AND OPEN TO ALL TEACHERS, PARENTS, AND INTERESTED PERSONS

INSIDE SCIENCE FAIR JUDGING

12:30 - 1:30 PM

The judging of science fair projects at Delaware Valley Science Fairs involves judges of three different types, each working to identify the best projects within specific criteria. The bulk of this presentation will focus on the judging process, the criteria that judges use in making selections, and what the students can do to improve the judges' impressions and evaluations of the project.

Presented by Bob Hranek, MS Computer Science, Senior Systems Engineer at Lockheed Martin, DVSF Medals Judge, ISEF Category Co-Chair, and ISEF Top-Awards Judge.

COLLEGE ADMISSIONS AND FINANCIAL AID FROM THE INSIDERS

1:30 - 2:30 PM

The college admissions and financial aid processes are often overwhelming and confusing for both students and parents but a proper understanding of these areas will help you and your student avoid the common pitfalls. Learn about college admissions and financial aid from two experienced insiders. Which is better, applying through Early Admission, Early Action, Early Decision or Early Action? What is the FAFSA and what is the difference between a scholarship and a grant? When should your student start to look at colleges and when do you submit the FAFSA? These and many other questions will be answered.

Presented by: Louis Hegyes, Director of Admissions, Rosemont College and Joseph Alaimo, Director of Financial Aid, Rosemont College.

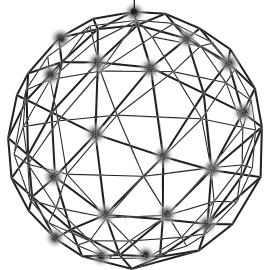
THE HOW-TO'S OF MOVING PROJECTS UP TO THE "NEXT" LEVEL

2:30 - 3:30 PM

This workshop is designed to enable teachers to help their students who are highly motivated to pursue their science research on a higher level. Tips will be given on project selection, the value of finding a mentor, how to make the project appeal to judges and on how to set the project up for statistical analysis. We will also discuss how to present mathematical, computer or engineering projects, which follow different formats from lab research.

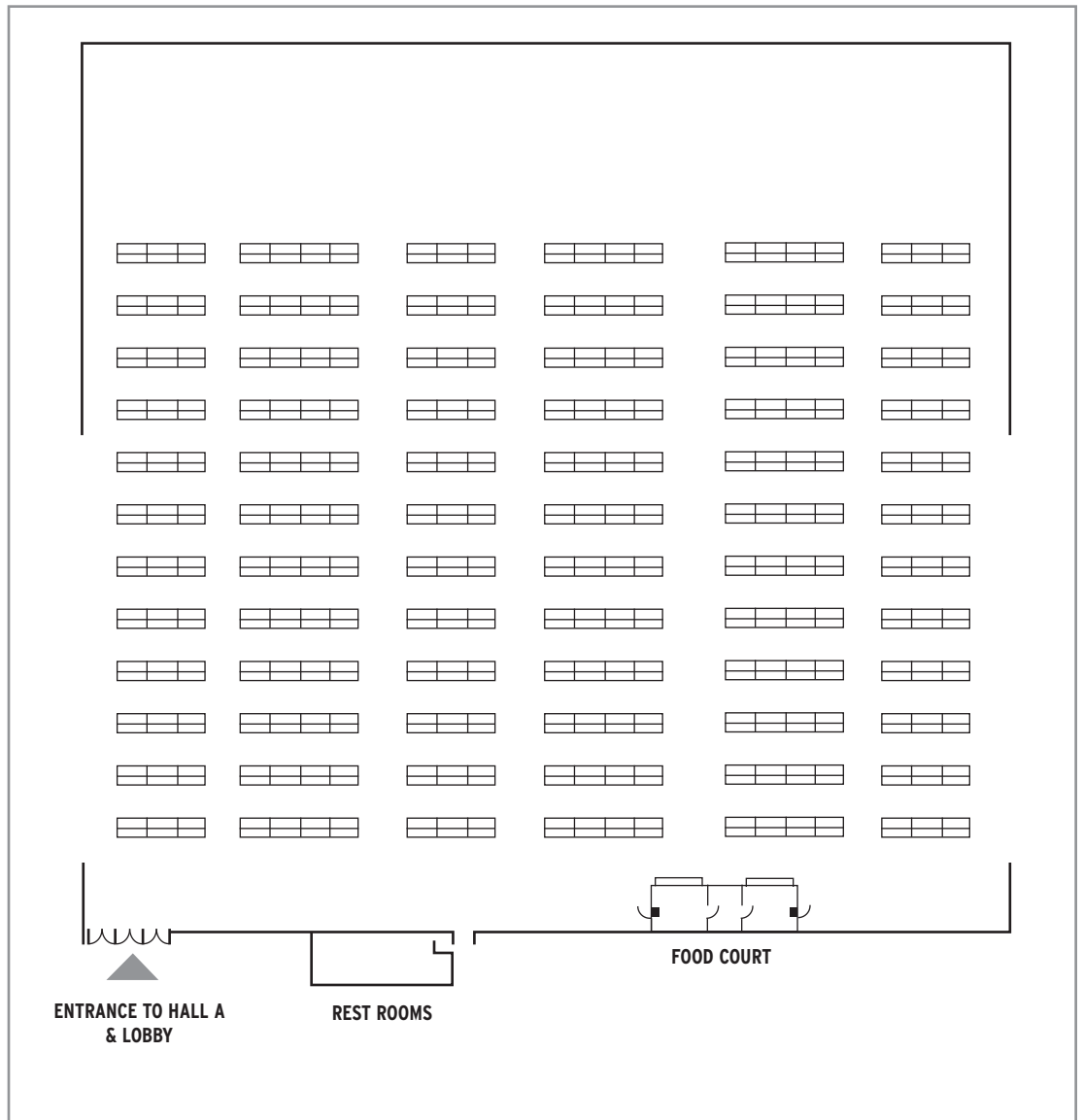
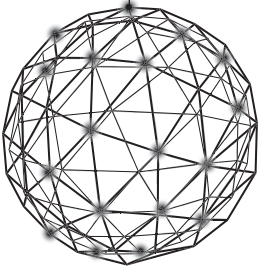
Presented by Dr. Sue Johnston, Director of Student Research, Delaware Valley Science Fairs, Inc.

FREE WORKSHOPS



Workshops funded in part by The Dow Chemical Company, GlaxoSmithKline, Janssen Biotech.

THE GREATER PHILADELPHIA
EXPO CENTER
2019 FLOOR PLAN



PRESENTER**TITLE****SCHOOL & SPONSOR****BEHAVIORAL/SOCIAL SCIENCES**

A0101	Rebecca de Heer	Where Did the Time Go?	Archmere Academy Glenn Hartman
A0102	Sarah Quigley	The Analysis of the Effectiveness of the Marketing Strategy of Colleges on High School Students	Marine Academy of Technology & Environmental Science John Wnek
A0103	Kanyia Thomas	The Fault in Our Stars	Charles E Brimm Medical Arts High School Charles Lewis
A0104	Stephen Fratamico	Comparing Rote Memorization to Memorization by Linking Memories to Places	Malvern Preparatory School Jim Fry
A0105	Havyn Steele	The Difference Between Handwriting And Typing Notes For Memory Retention	Bangor Area High School Robert Hachtman
A0106	Eric Sweeney	Should Eating While Driving Be Illegal?	Bishop Shanahan High School Sister Kathleen Eagan
A0107	Amelia Shaddinger	Effect of Self-Efficacy on Performance	Upper Dublin High School Dawn Edelman
A0108	Margaret Zheng	Affective Political Polarization in the U.S.	Council Rock High School-North Terese Grateful

BIOCHEMISTRY

A0201	Gillian Porter	Becoming Your Own Organ Donor: Selecting the Most Effective Transcription Factor for Direct Programming	Bishop Shanahan High School Sister Kathleen Eagan
A0202	Helen Li	Do JAK/STAT and Robo2 Work Together in the Central Nervous System in Drosophila	Central High School Robert Herbstritt
A0203	Sindhura Siddapureddy	An In-Silico Approach to Immuno-Oncology: Novel Small Molecule Inhibitors of the PD-1 Immune Checkpoint	Central Bucks High School-West Mark Hayden

BOTANY

A0301	Claudia Schreier	Demonstrating the Performance of Biofertilizer Derived from Algae Through an Analysis of Dune Grass Health	Marine Academy of Technology & Environmental Science John Wnek
A0302	Annie Cao	Coagulative and Antibacterial Properties of Moringa oleifera for Sustainable Water Clarification	Holmdel High School Josephine Blaha

CHEMISTRY

A0401	Bailey Fanaro	Influence of Fatty Acid Chain Lengths on Soap Solubility	Coventry Christian School Josh Oliver
A0402	Gabriel Wingert	The Effect of Different Metal Alloy Thin Films on the Thermal Conductivity of Germanium, Calcium, and Manganese	Central Bucks High School- West Mark Hayden
A0403	Vedont Subramanian	Non-Symmetric N-Alkyl-N-Methyl-N-Oxides For Aromatic Functionalization	Charter School of Wilmington Jennifer Toner
A0404	Hammed Sylla	The Effect of Ultrasound on the Hydrolysis of Water	Upper Darby High School Roseann Burns
A0405	Kate Killian	The Effect of Hydrophobic Coatings on Saltwater Corrosion Prevention Techniques	Marine Academy of Technology & Environmental Science John Wnek

2018 12TH GRADE ENTRIES

PRESENTER	TITLE	SCHOOL & SPONSOR
COMPUTER		
A0501 Len Huang	Sentiment Analysis of Text Reviews Compared to Respective Star Ratings	Holmdel High School Josephine Blaha
A0502 Jack Kelly	Predictive Habitat Modelling of <i>Illex illecebrosus</i>	The Marine Academy of Science and Technology (MAST) Liza Baskin
A0503 Brandon Sharkey	Non-Axiomatic Reasoning Predicting Stock Market Stability	Central High School Robert Herbstritt
A0504 Kaleb Sherrill	RSA Encryption	Upper Darby High School Roseann Burns
A0505 Rauf Makharov	Artificial Intelligence in Astronomy	Lower Moreland High School Richard Becker
A0506 Gulnur Avci	Implementation Of Radio-Frequency Identification (RFID) Technology For Student Information Within Public School Buildings	Bangor Area High School Robert Hachtman

EARTH & SPACE SCIENCES

A0601 Fiona McGinley	Effectiveness of Using <i>Caltha palustris</i> as a Soft Structure to Protect Against Shoreline Erosion	Council Rock High School-South Megan Mohl
A0602 Haotian Cao	Is it Vivianite? A Chemical Analysis of Soil from a Historic Cemetery in Olde City Philadelphia	Springside Chestnut Hill Academy Scott Stein
A0603 Savannah Miller	The Correlation Between Coronal Mass Ejections and the Sunspot Cycle	Upper Darby High School Roseann Burns
A0604 Mikolaj Ciszewski	Optimal Material For Seismic Activity	Central High School Robert Herbstritt
A0605 Jay Holland	Alternate Materials Demonstrating Cerenkov Radiation	Lacey Township High School John Kuzan

ENGINEERING

A0701 Hannah Xiao	Testing Compostable Composites' Strength and Durability	Upper Dublin High School David Price
A0702 Leonora Krajewski	The Feasibility of a Wind Powered Kite Sail on Reducing Cargo Ship Fuel Consumption on a Voyage From Shanghai to LA	Toms River High School South Christine Girtain
A0703 Eric Holst	Lemonized MXenes for EnergyStorage	Council Rock High School-North Terese Grateful
A0704 Amanda Ahteck	A Novel Low Cost Resistive Soft Crochet Stretch Sensor as Applied to a Wearable Bluetooth Keyboard Text Input Device - midiKEY	Holmdel High School Josephine Blaha
A0705 Jason Won	Using an iPhone Spectrophotometer to Detect Pure Water	Upper Dublin High School Dawn Edelman

ENVIRONMENTAL

A0801 Cassidy Pitts	Bioremediation of Bitumen with Naturally Present Bacteria	Central Bucks High School-West Mark Hayden
A0802 Connie Liu	Determining Runoff Toxicity	Upper Dublin High School Dawn Edelman
A0803 Riley Plosica	Degradation of Environmental DNA of Black Sea Bass (<i>Centropristus strata</i>)	The Marine Academy of Science and Technology (MAST) Liza Baskin

PRESENTER	TITLE	SCHOOL & SPONSOR
A0804 Kate LaVallee	Comparison of Estuarine Habitat Types and Species Size in Barnegat Bay	Marine Academy of Technology & Environmental Science John Wnek
A0805 Rachel Kromer	The Effect of Riparian Buffers Size on the Concentration of Nitrate In Streams	Bangor Area High School Robert Hachtman

MATHEMATICS

A0901 Vince Tran	Investigation of the Mandelbrot Set	Upper Darby High School Roseann Burns
A0902 Stefan Obradovic	Clustering Retail Sales Time-Series with Missing Data	Upper Dublin High School Dawn Edelman
A0903 Baiting Zhu	Proving Lagrange's Theorem and Fermat's Little Theorem (Using Redefined Concepts in Abstract Algebra)	Westtown School Leslie Barr
A0904 Jasmine Carter	The Problem Solver	OIC Workforce Academy Cherica Onyango
A0905 Walker Anderson	Computational Complexity of Polyomino Packing Problems	Central Bucks High School- West Mark Hayden
A0906 Frank D'Agostino	Modeling the Barnegat Bay Utilizing Hydrodynamic Programs and Algorithms	Marine Academy of Technology & Environmental Science John Wnek

MEDICINE/HEALTH

A1001 Adam Zhang	Urine as an Alternative to Blood for Cancer Liquid Biopsy and Precision Medicine	Methacton High School Robert Helm
A1002 Loreen Fanek	Determining the Negative Health Effects of Nicotine Infused E-Cigarette Aerosol, Flavored E-Cigarette Aerosol, and CBD Oil Aerosol	Cherry Hill High School West Brian Grillo
A1003 Olivia Lavin	Which Blood Pressure Monitor Gives the Most Consistent Readings?	Bishop Shanahan High School Sister Kathleen Eagan
A1004 Alexandra Smythe	Epigenetics in Alzheimer's Disease	Central High School Robert Herbstritt
A1005 Jonathan Huang	Development and Validation of Predictive Models for Depression Using PHQ-9 Data	The Episcopal Academy Shane Huang
A1006 AuCiel Hicks	Sneaky Sodium	Hicks Homeschool Anthony Hicks
A1007 Dimple Patel	Anti Tumor Characteristics of Conjugated Linoleic Acids on Cancer Cell Lines	Central High School Robert Herbstritt
A1008 Sriyaa Suresh	Direct Aviation of GABA Receptor by Citrus Aurantium Bergamia Utilizing Xenopus Laevis Oocytes Extracted Via Laparoscopic Surgery: Characterization of a Novel Modulator Comparable to Benzodiazepines	Parkland High School Michael Post
A1009 Sabrina Antonucci	SMAC Mimetic Induces Hepatitis B Virus Surface Antigen-Mediated Apoptosis in Hepatocytes	Central Bucks High School-East Mark Hayden

PRESENTER**TITLE****SCHOOL & SPONSOR****MICROBIOLOGY**

A1101	Nicola Kaye	The Effects of Sugar Alcohol on Gastrointestinal Normal Flora	Bangor Area High School Robert Hachtman
A1102	Abbie Chan	Cytotoxicity and Efficacy of Fluorescent Carbon Dots on Buccal Epithelial Cells and <i>C. elegans</i>	Marine Academy of Technology & Environmental Science John Wnek
A1103	Casey Jones	The Effectiveness of Wild Fungi on <i>Staphylococcus</i>	Cherry Hill High School West Brian Grillo
A1104	Arotica Charles Cooper	Gale Forced Germs	Charles E Brimm Medical Arts High School Charles Lewis
A1105	Grace Enright	Screening a Natural Products Library for <i>Listeria</i> Growth Inhibitors	Central Bucks High School- West Mark Hayden
A1106	Morgan Shriver	The Importance of Completing Your Antibiotic Regimen	Bangor Area High School Robert Hachtman
A1107	Cynthia Mathai	The Effect of Curcumin on the Growth of <i>Escherichia coli</i> and <i>Serratia marcescens</i>	Council Rock High School- South Megan Mohl
A1108	Isabel Smith	Effects of Caffeine on Gut Bacteria	Bangor Area High School Robert Hachtman

PHYSICS

A1201	Isha Mohapatra	Heat Loss Through a Wall Made With Optimized Insulating Bricks	Moravian Academy Gabriella Dee
A1202	Elizabeth Berzin	Closed Null Geodesics and Transformation Optics	Lower Moreland High School Richard Becker
A1203	Jake Strycharz	How Height Affects an Object	Coventry Christian School Josh Oliver
A1204	Mark Blair	Generating Power with a Thermopile	Upper Darby High School Roseann Burns
A1205	Matthew Billemeier	An Analysis of the Thermodynamic Properties of Germanium Thin Films with Varying Thicknesses	Central Bucks High School- West Mark Hayden

ZOOLOGY

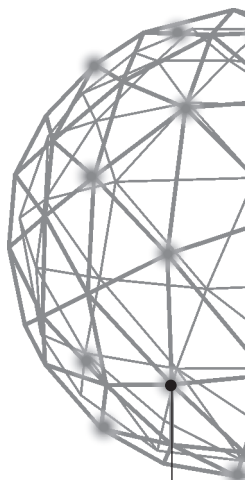
A1301	Grace Dougherty	The Effect of Essential Oil Scents on Cricket Respiration	Bangor Area High School Robert Hachtman
A1302	Seth Donnelley	Radiotolerance Capabilities of Damage Suppressor (Dsup) Modeled in <i>Caenorhabditis elegans</i>	Donnelley Homeschool Judith Donnelley
A1303	Aditya Pillai	Effects of Curcumin and Sodium Nitrite-Induced Inflammation on Fruit Flies	Moorestown High School Sean Watson
A1304	Doug Toth	Resource Holding Potential In Blue Gill Sunfish	Bangor Area High School Robert Hachtman
A1305	Steven Douglass	Investigating Effective Repellents for the Milkweed Bug (<i>Oncopeltus fasciatus</i>)	Cherry Hill High School West Brian Grillo
A1306	Paige Aldred	The Effect of Color Illumination on the Bioluminescence of <i>Dinoflagella</i>	Owen J Roberts High School Laura George
A1307	Abigail Lustig	The Effects of E-Cigarette Vapor on <i>Drosophila</i> at Different Stages in the Life Cycle	Council Rock High School- North Terese Grateful
A1308	Ava Sulkowski	Dogs' Ability to Be Trained with Colors Based on Breed	Bishop Shanahan High School Sister Kathleen Eagan
A1309	Jessica Baggett	The Effects of Salinity on the Photosynthetic Performance of <i>Zooxanthellae</i> in Sea Anemones	Bangor Area High School Robert Hachtman

PRESENTER**TITLE****SCHOOL & SPONSOR****BEHAVIORAL/SOCIAL SCIENCES**

B0101	Zoe Frantz	Testing of the Future	Avon Grove High School Nora Radu
B0102	Avi Singh	Hatred of Sound: An Investigation Into the Effects of Misophonia	Moravian Academy Gabriella Dee
B0103	Emilio Kamanousa	Photography's Effect on Memorization	Upper Darby High School Susan Beck
B0104	Donna Hopkins	Ancestry Tests and Their Credibility	Maritime Acad. Charter High School Abigail Cruz
B0105	Eli Weisman	Validity of Political Parties	Methacton High School Robert Helm
B0106	Charlie Larkin	The Effect of Exercise on Your Brain	Springside Chestnut Hill Academy Scott Stein
B0107	Lucas Botelho Pettersen	Group Polarization and Disagreement: The Effect of Social Phenomena Amongst High Students	Cherry Hill High School East Nicholas Wright
B0108	Nina Hoback	Effectiveness of Writing Notes on Paper vs. Typing on a Computer	Upper Darby High School Roseann Burns
B0109	Brandon Vu	Can an Adaptive N-back Task be an Alternative for Mental Math Training?	North Penn High School Melody Leithold
B0110	Alexa Quindlen	Impact of Anti-Speeding Signs Regarding Speed Reduction	Charter School of Wilmington Rose Lounsbury
B0111	Taaliyah Melton	Battle of the Sexes: Gender Difference in Hearing	Camden Acad. Charter High School Madeline Fenner
B0112	Maksim Shi	Development and Validation of a Predictive Model of E-cigarette Use	George School Betty Wang
B0113	Taja Mazaj	A Novel Technique for Improving Facial Recognition	Perkiomen Valley High School Julie Mest
B0114	Alyssa Thomas	The Effects of Caffeine and Whey Protein on Alcohol-Induced Impairment in <i>C. elegans</i>	Biotechnology High School Julie Nowicki
B0115	Stephanie Sipics	What Can Rock-Paper-Scissors Tell Us About Cheating and Game Theory?	Emmaus High School Brent Landrum
B0116	Sergio Ulloa	Does Language Familiarity Affect Memory?	Bishop Shanahan High School Sister Kathleen Eagan
B0117	Sunny Liang	Tackling Future Female Underrepresentation in STEM: The Effect of STEM-focused High School Environments on the Gender-Science Bias of High Schoolers	High Technology High School Michael Roche
B0118	Katherine Huggett	How Your Alarm Clock Affects Your Pulse	Springside Chestnut Hill Academy Scott Stein
B0119	Nina Caprice	In One Ear; Out the Other	Vineland High School Vicki Yeager

BIOCHEMISTRY

B0201	Srish Chenna	Mass Spec vs. NMR Through Denaturant Dependent HX in Equine Cyt C Studies	Charter School of Wilmington Rose Lounsbury
B0202	Emma Stern	The Effects of Cooking Conditions on Broccoli's Vitamin C Retention Rate	Springside Chestnut Hill Academy Ann Zalasky
B0203	Ling Xu	The Effect of Almond Phytochemicals on Tumor Development in Planaria	Central Bucks High School-East Judy Elinow



2018 11TH GRADE ENTRIES

PRESENTER	TITLE	SCHOOL & SPONSOR
B0204 Rebecca Mastrola	Mosquito Attraction to Apocrine and Endocrine Gland Secretions	Marine Academy of Technology & Environmental Science John Wnek
B0205 Jake Brooks	Possible Evolutionary Implications of Myosin Heavy Chain 16 Mutations in the Human Genotype	Cherry Hill High School East Nicholas Wright
B0206 Maira Asif	DNA Vaccine for Colorectal Cancer	George Washington High School Anita Abraham
B0207 Elijah Mack	Blood! Rob? Diabetes	Pennsauken High School Tim Gilbride
B0208 Rhea Malhotra	Using Optical Coherence Tomography to Cardiovascular Diseases In Drosophila Melanogaster	Moravian Academy Gabiella Dee
B0209 Annika Agarwal	A Novel Method: Sunscreen Infused with Phenolic Compounds derived from Fruit Sources as a Protectant from Ultraviolet Radiation in C. elegans	Biotechnology High School Julie Nowicki
B0210 Andy Yun	Examining the Correlation Between pH and Vitamin C Concentration in Fruit	Coventry Christian School Josh Oliver
B0211 Andrew Yang	Antioxidative Effects of Ascorbic Acid on Cisplatin-Induced Cytotoxicity	Central Bucks High School-East Judy Elinow
B0212 Sophia Shah	The Anatomical Recruitment of Spinal V0c Interneurons into the Phrenic Motor Circuitry after High Cervical Spinal Cord Injury	Charter School of Wilmington Rose Lounsbury
B0213 Aman Singh	Effect of Synbiotics Treatment on Nnos Neurons in Mice with IBS	Charter School of Wilmington Jennifer Toner
B0214 Cameron Jengo	The Promotion of Longevity Through the Influence of Nicotinamide Riboside and Resveratrol in D. melanogaster in Discovering an Alternative to the Effects of Cakoric Restriction	Biotechnology High School Julie Nowicki

BOTANY

B0301 Alexis Chang	Comparing Dutch Bucket and Deep Water Culture Hydroponic Systems	Charter School of Wilmington Rick Schuder
B0302 Tara Czekner	How Can Changing the Makeup of a Propagation Gel Affect Growth?	Villa Joseph Marie High School John Gentile
B0303 Alexis Nappa	Little Green Men and Little Green Plants	Vineland High School Vicki Yeager
B0304 Claudia Zhang	Production of Bioplastics from Duckweed	Holmdel High School Josephine Blaha
B0305 Zhixuan Li	Effect of the Spectrum of Artificial Lighting on the Photosynthesis Rate of Chlorella	Springside Chestnut Hill Academy Scott Stein
B0306 Matt Sandifer	A Study of Banana Peel Bioplastics	Germantown Academy Sarah Kesten
B0307 Kathryn Zhang	The Effects of Chinese Mugwort on Mosquitoes	Charter School of Wilmington Michael Katz
B0308 Joey Chan	The Effect of Acute Supplemented UV-A Radiation on L. minor Photosynthetic Rate	Central High School Robert Herbstritt
B0309 Cassidy Poon	Exploring Antioxidant Activities Within Potato Peel Waste	Charter School of Wilmington Rick Schuder
B0310 Lynn Larabi	An Environmental Solution to an Economic World	Central High School Robert Herbstritt
B0311 Joseph Malfara	Different Light Wavelength's Affect on Plant Growth	Coventry Christian School Josh Oliver

PRESENTER	TITLE	SCHOOL & SPONSOR
CHEMISTRY		
B0401 Krishna Dihora	Oil-Based Cleaning	Southern Lehigh High School Rachel Saber
B0402 Selene Washington	Color-Changing Cabbage	Calvary Christian Academy Keri-Lyn LaFountain
B0403 Erin Murphey	Feasibility of Desalination using an Electrodialysis Filter	Marine Academy of Technology & Environmental Science John Wnek
B0404 Corinne Motl	Essential Oils Effect on Polypropylene Plastic	Springside Chestnut Hill Academy Ann Zalasky
B0405 Annalisa Quinn	Cellulase Concentration Needed to Disperse a Clog of Wipes	Central High School Robert Herbstritt
B0406 Janice Chen	Potassium Bicarbonate and Sodium Bicarbonate as an Additive Fire Retardant in Paint	Central Bucks High School-East Judy Elinow
B0407 Shinhwa Park	Differences in Enthalpy of Combustion Between Biofuels and Nonrenewable Fuels	Charter School of Wilmington Greg Darone
B0408 Chenkai Mao	Unmelting Ice Cream	Malvern Preparatory School Agnese Abate
B0409 Joshua Johnson	Meat Substitutes	Salem County Vocational Technical School Carly Chaapal
B0410 Kevin Liao	Cooling Effects of Xylitol and Applications	Unionville High School Sandra Litvin
B0411 Dora Lau	Does the pH of Lipstick Vary by Finish?	Upper Dublin High School Dawn Edelman
B0412 Aiden Sawyer	Different Polarity Solvents Effects on Swell Rate of Polymer	Coventry Christian School Josh Oliver
B0413 Victoria Deng	Effects Of Temperature And Acidity On Cellulose Depolymerization In A Molten Salt Hydrate (MSH) Media	Charter School of Wilmington Rose Lounsbury
B0414 Eduardo Espinal	Lemon vs. Salt Battery	Vineland High School Luzmila Badillo
B0415 Shimin Cai	Enhanced Photocatalytic Activity of Carbon Dots Grafted TiO ₂ Nanorods	Choate Rosemary Hall Betty Wang
B0416 Lawrence Tsai	Effect of pH on Iron Corrosion	Council Rock High School-North Stacey Gould
B0417 Martha Victoria	The Digestion of Starch and the Effect on pH and Temperature	Carver High School of Engineering and Science Lisa Franchetti
B0418 Sourish Jasti	Low-Cost and Effective Wastewater Purification: Removal of Heavy Metal Ions in Wastewater Using Waste Biosorbents	Holmdel High School Josephine Blaha
B0419 Bethany Kline	The Method of Flocculation in the Treatment of Water	Calvary Christian Academy Keri-Lyn LaFountain
COMPUTER		
B0501 Aviel Resnick	Phylogenetic Reconstruction via Levenshtein Distance of rRNA	Lower Moreland High School Richard Becker
B0502 Vincent Yang	Ramsete: State/Space Control	Central High School Robert Herbstritt
B0503 Stefania Schoen	Computer Generated Music - Can it Pass the Turing Test?	Emmaus High School Brent Landrum
B0504 Weitong Li	Image Recognition with Machine Learning	Friends Central School Betty Wang

PRESENTER		TITLE	SCHOOL & SPONSOR
B0505	Neil Deshmukh	Low-Cost Device for Automatic Diagnosis Using Deep Learning Methods	Moravian Academy Gabriella Dee
B0506	Aakhil Kassim	Training a Neural Network with Electroencephalography	Council Rock High School-North Terese Grateful
B0507	Ashrit Verma	The Quantum Food Computer: Developing Portable Classical Mechanisms for Nitrogen-Fixing Bacteria to Contrive Quantum-Annealing Based Algorithms	Moorestown High School Sean Watson
B0508	Kavish Senthilkumar	CaPGeNe: A Novel Platform for Inferring Gene Networks in Disease with Sparse Bayesian Network Inference and Clustering Algorithms	Conestoga High School Scott Best
B0509	Arjun Vedantham	Predicting Glioblastoma Progress and Response Using Machine Learning	Parkland High School Michael Post
B0510	Ryan Young	A Novel Implementation of a Convolutional Neural Network for the Early Detection of Alzheimer's Disease	Council Rock High School-North Terese Grateful
B0511	Connor Bramhall	The Effect of Mislabeled Data on Neural Network Classification Accuracy	Charter School of Wilmington Rick Schuder
B0512	Charlie Shen	A Computer-Aided Food Ingredient Recognition and Chinese Recipes Recommendation Method Based on Transfer Learning from GoogleNet	Westtown School Tom Gilbert
B0513	Dominique Regli	Plant Identification Using Python Programming	Springside Chestnut Hill Academy Ann Zalasky
B0514	Rohan Agarwal	Computer Vision and Artificial Intelligence Integrated Eye Glasses to Aid the Memory and Visually Impaired	High Technology High School Michael Roche
B0515	Dylan Sheils	Machine Learning: Learning Nonlinearly Separable Problems (XOR)	Council Rock High School-North Stacey Gould
B0516	Nickolas Casalnuovo	How Accurate are Technical Stock Market Indicators?	CCTEC Tyler Davenport
B0517	Will Knipe	Predicting the Spread of the Spotted Lanternfly, <i>Lycorma delicatula</i> , with Machine Learning	Unionville High School Sandra Litvin
B0518	Jinay Jain	Effects of Future Reward Prediction on Deep Reinforcement Learning in Atari Breakout	Charter School of Wilmington Rick Schuder
B0519	Rohit Chatterjee	Developing an Online Service to Educate New Drivers Through Simulation of Driving Scenarios	Conestoga High School Scott Best
B0520	Sofiya Lysenko	Autonomous DNA Origami Structures for Diagnostic Computational Swarm Control	Abington Junior High School Ed Steinhardt
B0521	Raghav Garg	The Development of a Generalized Toxicity Model Based on Nanoparticle Structure	Charter School of Wilmington Rick Schuder

EARTH & SPACE SCIENCES

B0601	Miti Patel	Analyzing the Morphology of Mercury's Craters	Methacton High School Robert Helm
B0602	Emma Riley	Success Rate of Malaclemys Terrapin Nests Based on Soil Composition, Moisture, and Organic Content at Barnegat Bay, NJ	Marine Academy of Technology & Environmental Science John Wnek
B0603	Lyla Nachimson	Climate Change on Mars	Upper Darby High School Roseann Burns
B0604	Jack Kollmar	Effects of Planetary Rotation on Plant Growth	Springside Chestnut Hill Academy Ann Zalasky
B0605	Michelle Mei	UV Radiation: Blocking Clouds	Central High School Robert Herbstritt
B0606	Ashmitha Sivakumar	Evaluation of Methods for Bioremediation of Petroleum Contaminated Soil	Methacton High School Robert Helm

PRESENTER	TITLE	SCHOOL & SPONSOR
B0607 Christopher Dwyer	Determining Redshift of Galaxies Photometrically	Upper Darby High School Roseann Burns
B0608 Matthew Curry	Recording Epicenter Dist. and Mag. with a Budget Seismograph	Central Bucks High School-East Judy Elinow
B0609 Justin Zhang	Building With Nature (BWN): Analyzing the Effect of Street Trees on Net Vehicle CO2 Emissions in Urban Areas	Holmdel High School Josephine Blaha
B0610 Diamond Hassler	The Cool Path	Pennsville High School Jennifer Paul

ENGINEERING

B0701 Cecilia Quirk	The Efficacy of Different Sound Barriers	Academy of Notre Dame de Namur Daniel Cushing
B0702 Zeydi Perez	Hydraulic Elevator	Vineland High School Luzmila Badillo
B0703 Arianna Arditi	Predicting and Examining the Breaking Points of Bracing Member Designs	Owen J Roberts High School Catherine Booth
B0704 Luke Finley	Perforated Wood Blocking Sound Waves	Upper Darby High School Roseann Burns
B0705 Sacora Anderson-Green	Recyclable Bot	OIC Workforce Academy Cherica Onyango
B0706 Nathan Nazareth	Environmentally Efficient Method of De-icing Railroads Using Bomimicry	Central Bucks High School-West Mark Hayden
B0707 Evan Wang	A First Principles Study on Improvement of Perovskite-based Solar Cells Materials	Unionville High School Sandra Litvin
B0708 Punya Bhasin	Developing Greater Protective and Preventative Measures to Mitigate the Detrimental Effects of Chronic Traumatic Encephalopathy and Initial Contact Head Injuries	Parkland High School Michael Post
B0709 Albert Xing	The Relationship Between Reinforcing Element Separation and Compression Strength in Mechanically Stabilized Earth Applications	Charter School of Wilmington Rick Schuder
B0710 Paul Ringenbach	Effect of Viscosity of Liquids on Tuned Liquid Column Damping	Bishop Shanahan High School Sister Kathleen Eagan
B0711 Kelly Qiang	Modeling the Motion of a Multi-Segmented Caterpillar Model Using Soft Robotics	High Technology High School Michael Roche
B0712 Christophros Kontomaris	Robots On The Road: Quantifying Fuel Efficiency Advantages of Connected and Automated Vehicles	Charter School of Wilmington Rick Schuder
B0713 Christopher Gerhart	Electromagnetic Coil Object Control	Souderton Area High School Karen Wolfe
B0714 Harper Chisari	Microfabrication Rapid Prototyping Machine	Parkland High School Michael Post
B0715 James Darcy	Obstacle Avoidance with an Arduino	Central Bucks High School-West Mark Hayden
B0716 Harry Green	Implementation of Weapon Stabilization and Navigation Technology to Support Precision-Guided Firearm Systems	Cherry Hill High School East Nicholas Wright

ENVIRONMENTAL

B0801 Shannon Baker	Microfiber Contamination	Bishop Shanahan High School Sister Kathleen Eagan
B0802 Vylinh Duong	Determining the Toxicity of PVC, HDPE, and LDPE on Daphnia magna	Cherry Hill High School West Brian Grillo

PRESENTER	TITLE	SCHOOL & SPONSOR
B0803 Shreya Patil	Enhancing Chemical and Mechanical Properties of Bioplastics	Methacton High School Robert Helm
B0804 Gad Raganas	Microplastics and the Microbiome	Biotechnology High School Julie Nowicki
B0805 Shan Yu	Observing the Effects of Hydrogels on Soil Moisture	Charter School of Wilmington Rose Lounsbury
B0806 Luhao Li	PM2.5 Concentration and Its Influents in Beijing, Shanghai, and Guangzhou	Georgetown Preparatory School Jinan Liu
B0807 Ruoyang Wang	Resistance to Chlorine of Blepharisma	Springside Chestnut Hill Academy Scott Stein
B0808 Jordan Checkoff	Comparing Ideal Salinities of Potential Oil-Eating Bacteria <i>Pseudomonas putida</i> and <i>Bacillus subtilis</i> for Oil Degradation for More Efficient Bioremediation	Council Rock High School-South Megan Mohl
B0809 Ethan Daguian	The Effect of Socioeconomically-Determined Housing Patterns on Asthma and Air Quality	Central High School Robert Herbstritt
B0810 Pranay Jaggi	Physico-Chemical Properties of Water Bodies Around Burlington and Camden Communities	Eastern High School Ramu Yajamana
B0811 Ryan Crowl	Pollution Of Ground Water Resources Due to Repetitive Hydraulic Fracturing	Charter School of Wilmington Rose Lounsbury
B0812 Saikrishna Manojkumar	Understanding How Arbuscular Mycorrhizal Fungi Affects Phytoremediation of Lead in the Environment	Central Bucks High School-West Mark Hayden
B0813 Huda Hagos	Filtering Out Change	Carver High School of Engineering and Science Amanda Burau
B0814 Shannon McBride	Re-purposing Textiles to Create a Stronger, More Sustainable Concrete	McBride Homeschool Carolyn McBride

MATHEMATICS

B0901 Francis Peng	Relating Combinatoric Identities with Logical Inspection	Central Bucks High School-West Mark Hayden
B0902 Pranav Garimidi	Computing Fair Allocations According to PropX	Conestoga High School Scott Best
B0903 Nate Polidoro	Investigation of Fibonacci Variations	Upper Darby High School Roseann Burns
B0904 Doreen Valmyr	The Geometry of Banking a Basket	Central High School Robert Herbstritt
B0905 Jason Yan	A Mathematical Model Predicting the Outcome of the 2020 Electoral College	High Technology High School Michael Roche
B0906 Tiffany Zhang	Model Outcomes of a Tennis Game using Markov Chain	Germantown Academy Sarah Kesten
B0907 Xinyan Deng	Special Educational or Early Intervention Services Among Students in 2017	The Madeira School Betty Wang
B0908 Oliver Berman	The Organization and Limitations of Future Elements	Upper Dublin High School John Tralie
B0909 Samantha Remmey	A Variation of the Monty Hall Problem	Central Bucks High School-West Mark Hayden
B0910 Kevin Zhang	Differences in the Impact of Financial Crisis on Employment by Education Level	The Shipley School Betty Wang
B0912 Rishab Nandan	Hidden in Plain Sight: Multi-Layer Data Encryption with Enigmatic Math	The Episcopal Academy Kavita Goverdhanam

PRESENTER	TITLE	SCHOOL & SPONSOR	
MEDICINE/HEALTH			
B1001	Vani Parthiban	The Effects of Foods High in Tyrosine on the Dopamine Levels of Mus Musculus	Charter School of Wilmington Rose Lounsbury
B1002	Ariel Baiano	Developing a Novel Non-Reliance Posture Trainer	Marine Academy of Technology & Environmental Science John Wnek
B1003	Claire Tse	Targeting Fibrodysplasia Ossificans Progressiva with Small Molecule Therapeutics	Methacton High School Robert Helm
B1004	Dennis Chu	Determining the Advantages of Oncolytic Viruses Combined with Cytokines by Creating an Interleukin-2 Recombinant MVA Virus	Charter School of Wilmington Rick Schuder
B1005	Briana Malik	Auto-AI Method That Self-Learns By Looking at Minimal Amount of Medical Images	Parkland High School Michael Post
B1006	Jessica Wang	Development of EnCore Lipid Nanoparticles to Facilitate the Delivery of β -catenin Targeting siRNA to Tumor Cells for Cancer Therapy	Council Rock High School-South Matthew Ciaudelli
B1007	Rhea Arya	The Effect of Common Food Additives on the Heart Rate of Daphnia magna as an Indication of Toxicity	Biotechnology High School Julie Nowicki
B1008	Kevin Guo	Comparison of Different Version of Cell Penetrating Peptide and Anti-HER2 Antibody Fusion Protein Enhancement of Target Delivery of Gold Nanoparticles into Breast Cancer Cells and Efficiency Radiation	Great Valley High School Bonnie Wu
B1009	Arushi Tiwari	Allosteric in vivo Modulation with dFBr: A New Treatment for Alcoholism	Methacton High School Robert Helm
B1010	Diprodev Ray	Genomics of Gender Disparities in Cancers	Moorestown High School Sean Watson
B1011	Pierre Yan	Analysis of Mammalian 3' and 5' Gene Loops	Haddonfield Memorial High School Lindsey Fernandez
B1012	Timani Clement	Differences in Regulatory T Cell Populations in Young and Aged Melanoma Patients	Central High School Robert Herbstritt
B1013	Aatirah Small	Improving a Fruits Life	Carver High School of Engineering and Science Lisa Franchetti
B1014	Karen Li	Natural vs. Synthetic Acne Medication: Which Can You Trust?	Methacton High School Robert Helm
B1015	Erica Yasharpour	The Effects of Chronic vs. Short Term Treatments of Various Sleep Aids on the Duration of Seizures in <i>Caenorhabditis elegans</i>	Biotechnology High School Julie Nowicki
B1016	Anna Quinones	Using Brain Waves to Control a Robotic Arm for Smart Phone Use	Bishop Shanahan High School Sister Kathleen Eagan
B1017	winter Whitfield	Testing the Legitimacy of Pharmaceutical and Natural Antibiotics on Drug Resistant Bacteria	Carver High School of Engineering and Science Lisa Franchetti
B1018	Marissa Marchese	You are What You Reheat	Vineland High School Vicki Yeager
B1019	Rishi Vaidyanath	The Kinetics of G10 Induced Apoptosis in hSTING Producing Hepatocytes	Central Bucks High School-East Mark Hayden

MICROBIOLOGY

B1101	Miyu Mudalamane	The Antimicrobial Effects of Various Toads Native to America	Charter School of Wilmington Rick Schuder
B1102	Sabrina Wang	Bioprinting Alginate "Microbeads" as a Biodegradable Antibacterial Exfoliate: Simultaneously Promoting Cleaner Skin and Cleaner Oceans	Springside Chestnut Hill Academy Ann Zalasky

PRESENTER		TITLE	SCHOOL & SPONSOR
B1103	Rachel Wang	Which Location Has More Antibiotic Resistant Bacteria: Home, School or Hospital?	Charter School of Wilmington Rose Lounsbury
B1104	Annie McDonald	Vitamin C's Validity as an Antiviral: A Study of the Effects of Ascorbic Acid on T4 Bacteriophage Infected Escherichia coli	Springside Chestnut Hill Academy Scott Stein
B1105	Isabelle Beatus	The Prevalence of Antibiotic Resistance in the Environment	Cheltenham High School Russel Wolff
B1106	Shreya Gupta	The Anthelmintic Effect of Natural Compounds on Adult and Dauer C. Elegans Longevity	Biotechnology High School Julie Nowicki
B1107	Abigail Diaz	The Antibacterial Capability of Various Flavonoids on the Escherichia Coli Bacteria Cell	Charter School of Wilmington Rick Schuder
B1108	Kush Chaudhari	Understanding the Kinetics of Apparent Necrotic Cell Death to Induce Strengthened Antigen Presentation in JAWSII Cells	Biotechnology High School Jurgen Brojatsch
B1109	Arnav Goel	Effect of Different Diet Components on Various Species of Human Gut Bacteria	Cherry Hill High School East Ramu Yajamana
B1110	Alec Maraska	Programmed Apoptotic Hepatocellular Death Induced by SMAC Mimetic on SHB-Producing Cells	Central Bucks High School-West Mark Hayden
B1111	Madison Charnigo	Exosomal Haptoglobin Potential as Protein Biomarker for Hepatocellular Carcinoma	Central Bucks High School-East Mark Hayden
B1112	Megha Varghese	Effectiveness of Garlic on Bacterial Growth	Methacton High School Robert Helm
B1113	Caden Traversari	The Effect of Endocytosis Altering Substances on Vacuole Formation in Tetrahymena	Springside Chestnut Hill Academy Scott Stein
B1114	Brainna Smith	Apple Cider Vinegar & Benzoyl Peroxide Mixing it Up	Cheltenham High School Russel Wolff

PHYSICS

B1201	Nayeli Ramirez-Jiminez	Altered Attraction	CCTEC Tyler Davenport
B1202	Tara Wilson	Singing Wine Glasses	Northeast High School Amanda Burau
B1203	Sohaib Nauman	The Most Effective Implementation of a Certain Airfoil That Will Allow for More Lift	Parkland High School Michael Post
B1204	Anderson Rodriguez	Does Temperature Affect a Tennis Balls Bounce?	Mariana Bracetti Academy Molly Maldonado
B1205	Phillip Grabovsky	Simulating Large Multiparticle Systems	Lower Moreland High School Richard Becker
B1206	Alexander Zhu	Effect of Baseball Spin Rate on Pitch Speed And Movement	Charter School of Wilmington Rose Lounsbury
B1207	Joy Wong	Measuring the Speed of Light with a Microwave Oven	Central High School Robert Herbstritt
B1208	Ayush Upadhyay	The Efficiency of Various Voltages in Prohibiting the Growth of Saccharomyces cerevisiae	Biotechnology High School Julie Nowicki
B1209	Ishaan Lal	Are Fluorescent Lights and LED Lights Harmful to Your Eyes?	Emmaus High School Brent Landrum
B1210	Arielle Touitou	The Efficiency of Recycled Materials Used as Insulation	Marine Academy of Technology & Environmental Science John Wnek
B1211	Rushil Duggal	The Effect of Silica Top Cladding on the Propagation of Light Through Lithium Niobate Ridge Waveguides	Charter School of Wilmington Rick Schuder

PRESENTER	TITLE	SCHOOL & SPONSOR
B1212 Haley Korwan	Alternative Materials in Nano-Materialized Field Hockey Sticks Based on Compatible Bending Moments, Deformation, and Young's Modulus Values	Marine Academy of Technology & Environmental Science John Wnek
B1213 Teresa Klugewicz	The Science of Photography and Aperture, Focal Length and Depth of Field	CCTEC Tyler Davenport
B1214 Chau Tran	How Does Surface Color Brightness Affect Surface Temperature?	Pennsauken High School Tim Gilbride
B1215 Keralis Rivera	Levitating with Static Electricity	Vineland High School Luzmila Badillo

ZOOLOGY

B1301 Riley Farbstein	Impact of JUUL Pod Solution on Planarian Growth	Springside Chestnut Hill Academy Ann Zalasky
B1302 Maureen O'Rourke	Shining a Light on Egg Production	Bishop Shanahan High School Sister Kathleen Eagan
B1303 Sophia Kamien	Effects of Chemical Food Dye on Fruit Flies	Springside Chestnut Hill Academy Scott Stein
B1304 Elissa Bulkin	Can Learning be Detected in <i>Gromphadorhina portentosa</i> ?	Council Rock High School-South Matthew Ciaudelli
B1305 Sylvia Cho	Effects of Ultraviolet Radiation on Planarian Regeneration	Central High School Robert Herbstritt
B1306 Ethan Zheng	An Analysis on the Effects of CNS stimulants and Depressants on the Heart Rate and Development of Zebrafish Embryos	Biotechnology High School Ann MacLean
B1307 Logan Anema	The Effects of Temperature on The Relationship Between Zooxanthellae and Sea Anemone	Bangor Area High School Robert Hachtman
B1308 Tyler Polon	Preliminary Assessment of Microplastics Present in Deep Sea Scallops	The Marine Academy of Science and Technology (MAST) Liza Baskin
B1309 Aditya Gunturi	Role of Nitric Oxide in Heart Rate Modulation in <i>Daphnia Magna</i>	Central Bucks High School- East Judy Elinow
B1310 Sophi Schneider	Male <i>Centris Pallida</i> Bees and Brain Development	Upper Dublin High School Joanne Lilliendahl
B1311 Nicole Sportelli	How an Excess Amount of Sugar in a Snails Diet Affects its Memory	Holmdel High School Josephine Blaha



PRESENTER**TITLE****SCHOOL & SPONSOR****BEHAVIORAL/SOCIAL SCIENCES**

C0101	Mia Ladolcetta	The Effect of Differently Tempoed Music on Productivity	High Technology High School Michael Roche
C0102	Sadie Furgiuele	Is There a Behavioral Difference in Believability of a Statement Said by an Expert vs. a Celebrity	Central Bucks High School-West Mark Hayden
C0103	Ummayh Siddiqua	The Impact of Fragrances on Long Term Memory	Upper Darby High School Roseann Burns
C0104	Madeline Hou	The Effect of Pink Noise on Sleep Quality	Cherry Hill High School East Nicholas Wright
C0105	Stephen Padlo	Does Free Shipping Make an Item Sell Better?	Woodstown High School Chris Rickard
C0106	Autumn Bryan	Brain Wave Effects with First and Second Languages	Bishop Shanahan High School Sister Kathleen Eagan
C0107	Allison Reed	Rethinking the Runway	Methacton High School Robert Helm
C0108	Jared Daniel	Children with Early Mental Illness: A Surveyed Study of the Impact of the School Environment	Central Bucks High School-West Mark Hayden
C0109	Jordan Grossman	Changes in Barometric Pressure and Ultraviolet Radiation can Affect Student Academic Performance	Cherry Hill High School East Nicholas Wright
C0110	Pandora Schoen	How Good are People at Multitasking? And, What is the Effect of Cognitive Dissonance on Their Self-Perception on Multitasking Ability?	Emmaus High School Brent Landrum
C0111	Kyle McCain	The Effect of Musical Tempo on Memory	Vineland AMSA Marie Donato
C0112	Anam Ali	Incentives: The Impetus for Performing Well	Parkland High School Michael Post
C0113	Jayden Williamson	Athletes vs. Non Athletes Reaction Time	Carver High School of Engineering and Science Lisa Franchetti
C0114	Rachel Treffeisen	Gender Bias in the Classroom	Philadelphia Academy Charter Brian Schweizer
C0115	Alyssa Noval	Spotify While Studying?	Archmere Academy Glenn Hartman
C0116	Kush Soni	Notes vs. Doodles: Which is More Effective?	Burlington Township High School Ketan Soni
C0117	Snehal Gupta	Wait... Am I Right?	Parkland High School Michael Post
C0118	Grace Pluemacher	Analyzing Circadian Disruption When Reading a Book on a Blue Light-Emitting Device vs. Reading a Paper Book Before Bedtime	Marine Academy of Technology & Environmental Science John Wnek

BIOCHEMISTRY

C0201	Eileen Xiao	Wound Healing Acceleration in a Diabetic Cell Model	Upper Dublin High School Joanne Lilliendahl
C0202	Mia Bialecki	Burning Calories	Woodstown High School Carol Althouse
C0203	Jocelyn Jones	How do Different Drinks Affect How Your Blood Flows	CCTEC Tyler Davenport
C0204	Sarah Young	Alleviating Acne	Methacton High School Robert Helm

2018 10TH GRADE ENTRIES

PRESENTER	TITLE	SCHOOL & SPONSOR
C0205 Purva Gupta	PeriTect: Early Detection and Prevention of Peritonitis in Kidney Dialysis Patients	Parkland High School Michael Post
C0206 Deepak Gopalakrishnan	Exploring the Effect of Stereoisomeric Identity on the Insulin Receptor Binding Affinity of Chaetochromin	High Technology High School Michael Roche
C0207 Ashley Hawkins	Will it Plastic?	Mariana Bracetti Academy Molly Maldonado
C0208 Saakshi Girotra	The Effects of Ultraviolet Rays on Yeast Colony Growth	Parkland High School Michael Post
C0209 Tanya Mehta	Text Box	Parkland High School Michael Post
C0210 Kendra Jones	Got Milk?	Mariana Bracetti Academy Molly Maldonado
C0211 Imani Dixon	The Anaerobic Digestion of Bananas	Carver High School of Engineering and Science Lisa Franchetti
C0212 Abhay Rao	The Effects of Beetroots on Oxygenation in Living Organisms	High Technology High School Michael Roche

BOTANY

C0301 Katelyn Schuchardt	How Do Organic and Synthetic Insecticides Affect Marigold Health?	Souderton Area High School Karen Wolfe
C0302 Magen Swartley	The Impact of Acid Rain on the Effectiveness of Fertilizers	Souderton Area High School Karen Wolfe
C0303 Isabella Onofrietti	The Inhibitory Effects of Fruit Seed Extracts on Cariogenic and Periopathogenic Bacteria	Toms River Intermediate North Christine Girtain
C0304 Arsh Singhal	The Effect of Hydroponic Farming vs. Traditional Soil Systems on the Biomass of Lettuce Plants (<i>Lactuca sativa</i>)	High Technology High School Michael Roche
C0305 Alejandro Vega	Simulation Nation: Is Urban Gardening the Way of the Future?	Vineland AMSA Marie Donato
C0306 Julia Wepler	The Effect of pH on the Photosynthetic Rates of <i>Zostera Marina</i>	Marine Academy of Technology & Environmental Science John Wnek

CHEMISTRY

C0401 Nyima Banutu-Gomez	The Juice Abused by the Youth	Youth Achievers Committee Sherita Singleton
C0402 Lillian Larrabee	The Effect of Road Salt Runoff in Our Soil	Woodstown High School Carol Althouse
C0403 Jim Gazi	Rust On... Rust Off	Pennsauken High School Tim Gilbride
C0404 Hyunjin Lee	Novel Design of Functional Membranes Using Covalent Organic Frameworks for Nanofiltration	Conestoga High School Scott Best
C0405 Prem Modi	Jatropha Biodiesel: Ethanol-Based	Central High School Robert Herbstritt
C0406 Mustapha Salau	The Effect of Temperature on Fuel Cell Efficiency	Parkland High School Michael Post
C0407 Benjamin Lin	Testing the Tensile Strength of Bioplastics Made from Varying Plant Starches	Holmdel High School Josephine Blaha
C0408 Caitlin O'Brien	The Effects of Radiation on the Decomposition of Silver Chloride	Emmas High School Brent Landrum
C0409 Akshatha Manjunatha	Selective Deuteration of Heterocycles Using A Sm ² -H ₂ System	Parkland High School Michael Post

PRESENTER	TITLE	SCHOOL & SPONSOR
C0410 Ishika Patel	Is There a Relation Between Specific Heat and Density?	Middle Township High School Anne Berkey
C0411 Jade Rivera	Chemistry Crime Scene	Mariana Bracetti Academy Molly Maldonado
C0412 Zeel Patel	How Does the Absorbency of Hydrogel Compare with Sodium Polyacrylate?	CCTEC Tyler Davenport

COMPUTER

C0501 Amanda Heil	Python vs. Ruby	Bishop Shanahan High School Sister Kathleen Eagan
C0502 Udit Garg	A Geometric Analysis of Protein Structures to Predict Mutations That Cause Drug-Resistance	Parkland High School Michael Post
C0503 Bradley Xu	Comparing the Room Navigation Capabilities of Simulated Robots	High Technology High School Michael Roche
C0504 Joseph Gulian	Quaternion Neural Networks for Natural Language Processing	Methacton High School Robert Helm
C0505 Jessica Kuo	Data Analysis of HBV with Python	Central Bucks High School-West Mark Hayden
C0506 Shivam Singh	Affordable Blind Spot Detection	Council Rock High School-North Stacey Gould
C0507 Arya Tschand	Effectiveness of Micro-Irrigation Controlled by Artificial Intelligence Software vs. Human Watering on Spinacia oleracea Growth	High Technology High School Michael Roche
C0508 Kevin Cui	Automatic Song Recognition: Siri for Musicians	Germantown Academy Sarah Kesten
C0509 Thomas Makin	An Analysis of the Differences in Electronic Device Geolocation Accuracy Using Network Ping vs. Global Positioning System	High Technology High School Michael Roche
C0510 Michael Dadak	Destroying the Caesar Cipher	Mariana Bracetti Academy Molly Maldonado
C0511 Michael Rybalkin	An Autonomous Self-Driving Survey Car for Assistance in Search and Rescue Missions	Central Bucks High School-East Judy Elinow
C0512 Rohan Mehta	Artificial Time Layer	Souderton Area High School Karen Wolfe

EARTH/SPACE SCIENCES

C0601 Ethan Kerr	Accurately Predicting the Short-Term Intensity of Tropical Cyclones	Marine Academy of Technology & Environmental Science John Wnek
C0602 Autumn Newman	An improved Method for Determining Percent Coverage Using Imaging Software	Marine Academy of Technology & Environmental Science John Wnek
C0603 Erin Gavin	The Effect of Dark Energy on Galaxy Momentum	Souderton Area High School Karen Wolfe
C0604 Jordan Weikel	The Effects of Lunar Phases on Birth Rates	Philadelphia Academy Charter Robert Mottershead
C0605 Maab Taha	Effects of X-Ray on Drosophila Melanogaster	Central High School Robert Herbstritt
C0606 Madison Surette	The Effects of Beach Erosion Observed Through Profiling	Marine Academy of Technology & Environmental Science John Wnek
C0607 Max Peters	The Rotation of the Milky Way Galaxy	Upper Darby High School Roseann Burns
C0608 Manav Singh	Modeling the Effects of Climate Change	Lower Moreland High School Richard Becker

PRESENTER	TITLE	SCHOOL & SPONSOR
ENGINEERING		
C0701 Olivia Austin	Can a Tesla Coil Work with Solar?	Dover High School Veronica Austin
C0702 Emily Wang	Origami Magic Ball Swimmers: Optimal Structure for Movement	Germantown Academy Sarah Kesten
C0703 Ee-Ning Ooi	High Data Rate Non-Line-Of-Sight Underwater Wireless Optical Communication	Parkland High School Michael Post
C0704 Sophia Grace Capili	Simulating Red and White Muscles Using Networks of Identical, Linear Artificial Muscle Units	Marine Academy of Technology & Environ. Science John Wnek
C0705 Sydney Smith	Build a Circuit to Detect Ripe Produce Through Color	Woodstown High School Carol Althouse
C0706 Jeremy Gamble	Determining the Resistivity of Alloys on the Molecular Level	Central Bucks High School-East Mark Hayden
C0707 Dharshan Tharumia	A Novel Implementation of Localized Protuberances on the Leading Edge of a Hydrofoil	Parkland High School Michael Post
C0708 Carter Gassler	Multi-Terrain Robot	Avon Grove Charter School (lower) Kelly Sweeney
C0709 Jeffrey Min	Building and Testing a Lego Polymerase Chain Reaction Thermal Cyclor	High Technology High School Michael Roche
C0710 Addison Liu	Towards Active Morphing Structure Using Self-Folding Hypar Tessellations	Unionville High School Sandra Litvin
C0711 Dennis Koh	RF Feedback Control System for Simultaneous Transmit and Receive Communications	Conestoga High School Scott Best
C0712 William Clapham	What Packaging Material Provides the Best Protection from G-Forces	Upper Dublin High School Leanne Jones
C0713 Marissa Teitelbaum	Alteration of Bicycle Handlebar Grip Design to Decrease Impact Force as Measured by Depth of Penetration into Home-Made Ballistic Gel	High Technology High School Michael Roche
C0714 Matthew Selwood	Effect of Paraffin on Concrete	Upper Darby High School Roseann Burns
C0715 Brendan Lewis	Prototyping a Networked Automatic Cat Feeder	Caesar Rodney High School Kim Lewis
C0716 Amanda Cao	Recharge or Be Charged: Powering Flashlights with Piezoelectricity	Vineland AMSA Marie Donato
C0717 Kevin Sanchez	Wind Power Generator	Vineland High School Luzmila Badillo
C0718 Ronak Singh	Computational Modeling of a Waveguide Using FDTD	Parkland High School Michael Post
C0719 Jacob Donnini	Charging Your Phone Through the Power of Running	Woodstown High School Chris Rickard
C0720 Benjamin Newman	Building a Laser Distance Measure	Newman Homeschool Lora Newman

ENVIRONMENTAL

C0801 John Cobin	Microplastics and Microbeads: What's the Damage	William Henry Middle School Cheryl Tyrell
C0802 Anthony Miranda	How Much Could You Save?	STEMUP DE, Delaware Tech Keith Dunn
C0803 Taran Anantasagar	Using a Leaf-Based Electrolyte to Generate Energy With a Photovoltaic Light Sensitive Dielectric Capacitor	Parkland High School Michael Post
C0804 Angelina Lewis	Under the Waves: The Effects of Acid Rain on Elodea	Vineland AMSA Marie Donato

PRESENTER	TITLE	SCHOOL & SPONSOR
C0805 Jane Cohen	The War on Plants: 2,4- dichlorophenoxyacetic acid vs. the Hydrophytes	Moorestown High School Sean Watson
C0806 Raj Kansara	Efficiency of Various Microplastic Filtration Systems for Tap Water	Council Rock High School-North Terese Grateful
C0807 Charlotte Selover	The Effects of Salinity on Tomato Plant Growth	Middle Township High School Anne Berkey
C0808 Giovanna Onofrietti	Bioengineering E. coli to Produce Safer Dyes	Toms River High School North Christine Girtain
C0809 Lauren Young	Which Starch Plant Produces the Most Fuel?	Bishop Shanahan High School Sister Kathleen Eagan
C0810 Cameron Schmidt	Usability of Recycled Polylactide and Acrylonitrile Butadiene Styrene via Filament Extrusion for 3D Printing Applications	Central Bucks High School-West Mark Hayden
C0811 Sameera Sullivan-Williams-El	Devastating Effects of Overpopulation	Philadelphia High School for Girls Amanda Burau
C0812 Mose Skolnick	Optimization of a Sustainable Passive Cooling System	Upper Dublin High School Leanne Jones
C0813 Anna Zhou	Comparing Biodegradability and Durability of Food Waste-Based Bioplastics	Upper Dublin High School David Price
C0814 Philip Raine	Determining the Degree of Deterioration of Cooking Oil by Assessing Polar Compound Content-Implications for Environmental Science	Friends Select School Jeffrey Field
C0815 Sanjiv Parthasarathy	Identifying the Best Liquid Organic Hydrogen Carrier for Transportation	Parkland High School Michael Post
C0816 Zara Elahi	Acidification Allies: Creating a Sustainable Robotic Brine Shrimp to Help Save the Ocean	Vineland AMSA Marie Donato
C0817 Jillian Peslak	Determining the Effects of the Canada Goose, Branta Canadensis, on Pine Lake	Marine Academy of Technology & Environ. Science John Wnek
C0818 Gabriel Warren	Using Red Amaranth (Amaranthus cruentus) and Ruby Red Lettuce (Lactuca sativa) to Phytoremediate Heavy Metals Found in Water	Cherry Hill High School West Brian Grillo
C0819 Lillian Miller	Effect of Micronized Plastics on Daphnia	Perkiomen Valley High School Julie Mest
C0820 Aashika Shah	Fuel It Up: Converting Trash and Biofuel	Parkland High School Michael Post

MATHEMATICS

C0901 Joan Lodge	An Analysis of Super Bowl Prediction Accuracy Based on 20 Analysts Predictions Over 5 Years	Woodstown High School Chris Rickard
C0902 Suchir Agarwal	Applications of Stokes' Theorem on Complex Manifolds	Parkland High School Michael Post
C0903 Jiaao (Wabsono) Bao	Development of a Model for National Football League Games	George School Betty Wang
C0904 Neha Skandan	A New Perspective of Geometry: The Projective and Hyperbolic Spaces	Moravian Academy Gabriella Dee
C0905 Jeffrey Gong	Supersingular Isogeny Key Exchange as a Quantum-Resistant Algorithm	Methacton High School Robert Helm
C0906 Oluwadamilare Olaniyi	Thermal Efficiency of a Stirling Engine	Carver High School of Engineering and Science Lisa Franchetti
C0907 Baoer Li	Predictive Models for Marijuana Use in National Health and Nutrition Examination Survey	The Haverford School Betty Wang
C0908 Minseo Oh	Creating Fractals and Determining the Hausdorff Dimensions	Central Bucks High School-West Mark Hayden

PRESENTER	TITLE	SCHOOL & SPONSOR
MEDICINE/HEALTH		
C1001	Witt Phillips The Effect of Apitoxin Exposure on Photoreception Pathways in <i>Drosophila melanogaster</i>	Unionville High School Sandra Litvin
C1002	Michael Loughlin Posture Problem	Bishop Shanahan High School Sister Kathleen Eagan
C1003	Udeerna Tippabhatla Neuroprotective Effects of Linoleic Acid in an In vitro MPP+ Model of Parkinson's Disease	Charter School of Wilmington Rick Schuder
C1004	Ganesh Selvakumar Bacoside A: A Novel Synaptic Plasticity Enhancer to Overcome Memory Impairment in Alzheimer's Disease	Marple Newtown High School Asha Lakshmikuttyamma
C1005	Anyae Scott Concussion Prevention	Simon Gratz High School Mastery Charter Amanda Burau
C1006	Lena Dougherty The Biochemistry of the Inner Ear as it Pertains to Meniere's Disease	Middle Township High School Anne Berkey
C1007	Elizabeth Alarcon The Effect of Whitening Toothpaste on Enamel	Vineland AMSA Marie Donato
C1008	Griffin Smith Biological Profile of a Skeleton	Central Bucks High School-West Mark Hayden
C1009	Grace Abbud The Inhibition of Bell, Jalapeño, and Habanero Peppers on <i>Bacillus cereus</i>	Biotechnology High School Ann MacLean
C1010	Michelle Zheng The Effect of Fat Burning Cream on a Saturated Fat Sample	Vineland AMSA Marie Donato
C1011	Cerise Walker Generic or Name Brand: Which Type of Ibuprofen Dissolves the Quickest?	Methacton High School Robert Helm
C1012	Samudrika Mohanta Tackling the Obesity Epidemic: Computational Studies on the Genetic Aspects of Obesity	Downingtown West High School Wendy King
C1013	Sophia Briseno The Effect of Competitive Stress on the Human Body: Separating Mental vs. Physical Sources of Stress	Woodstown High School Carol Althouse
C1014	Prathysha Kothare Re Envisioning Erythrocyte Dynamics: Computational vs. Experimental Modeling of RBC In Capillary Shearing	Parkland High School Michael Post
C1015	Veronika Durr Comparative Study of Efficacy of a Variety of Sunscreen Lotions	Quakertown Community High School Mark Hayden
C1016	Sharif Salim Tooth or Die	Academy at Palumbo Melissa Soffer

MICROBIOLOGY

C1101	Lana Van Note Implications of Poly(1-phenylethylene) upon Generational Biodegradation Rates of <i>Pseudomonas</i> sp. in vitro	Marine Academy of Technology & Environmental Science John Wnek
C1102	Sarah Rojas The Effect of a Vegan Diet on an Omnivorous Gut Microbiome	Germantown Academy Sarah Kesten
C1103	Rachel Li Efficacious and Effectual Antifungal Natural Remedies?	Parkland High School Michael Post
C1104	Gianna Fiduccia Will Four Common Antibiotics (Penicillin, Ampicillin, Neomycin, and Erythromycin) Have the Same Effect on Both Gram-Negative and Gram-Positive Bacteria?	Villa Joseph Marie High School John Gentile
C1105	Emily Downs The Effects of Seasonal and Temperature Changes on <i>Escherichia coli</i> (<i>E. coli</i>)	Marine Academy of Technology & Environmental Science John Wnek
C1106	Saadya Rao Mighty Microorganisms	Methacton High School Robert Helm
C1107	Jack McCandless Bioremediation by Oil Eating Microbes	Cherry Hill High School West Brian Grillo

PRESENTER	TITLE	SCHOOL & SPONSOR
C1108 Megan Pedrick	Does Eco Friendly Equal Effective?	Woodstown High School Carol Althouse
C1109 Milton O'Brien	How Does Temperature Affects the Growth of Mold on Bread?	Philadelphia Academy Charter Robert Mottershead

PHYSICS

C1201 Steven Huynh	Manipulating the Leidenfrost Effect	Pennsauken High School Tim Gilbride
C1202 Shawn Li	The Effects of Temperature on Pitch and Amplification	Upper Dublin High School Brian Palme
C1203 Xavier Etienne-Mcleod	Defining the Relationship Between Marketed Wheel Durometer and Required Force to Slide	High Technology High School Michael Roche
C1204 Ankhitha Manjunatha	Efficient Computational Electromagnetics Modeling for the Optimization of Nanoscale Devices	Parkland High School Michael Post
C1205 Bode Wildgrube	The Effects of a Curved Wingtip on Lift	Council Rock High School-North Stacey Gould
C1206 Mia Ottaviano	Frequency Dependent Sound Absorption	Woodstown High School Carol Althouse
C1207 Dov Presby	Aerodynamic Jet Affects	Foxman Torah Institute Martin Weiss
C1208 Oreoluwa Alao	The Effect of the Surface-Area-to-Volume Ratio of a Container on the Amount of Ultrasonic Cavitation Produced in it During Indirect Sonication	High Technology High School Michael Roche
C1209 Khushi Sabuwala	The Effect of Pyrolytic Graphite Stabilizing Distance on the Diamagnetic Levitation Strength of Neodymium Iron Boron	High Technology High School Michael Roche
C1210 Dilangiz Hakberdieva	Effect of Length on Period of a Simple Pendulum	George Washington High School Anita Abraham
C1211 Margaret Atkins	Jumpin' Jupiter! The Effects of Intense Gravity on the Cellular Respiration of Yeast	Archmere Academy Glenn Hartman
C1212 Eric Zhong	Reducing the Attenuation of SPR Induced Plasmonic Signals	Upper Dublin High School Brian Palme
C1213 Charles Washington	X-ray Vision: Seeing Into Space	Calvary Christian Academy Nancey Cannon
C1214 Vivian Tran	Paper Airplane	Central High School Amanda Burau
C1215 John Porter	The Protective Planet	Bishop Shanahan High School Sister Kathleen Eagan
C1216 Helena Joy	Finding the Measure of the Speed of Light Using a Microwave	George Washington High School Anita Abraham

ZOOLOGY

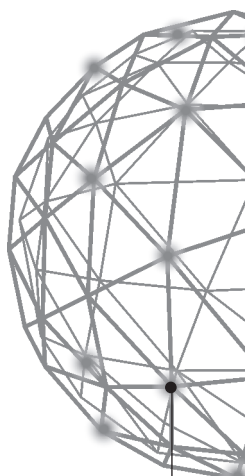
C1301 Yolande Yan	The Effect of Artificial Light at Night on the Reproductive Rate of Drosophila Melanogaster	Westtown School Leslie Barr
C1302 Mackenzie Fries	The Effect Various Bycatch Reduction Device Shapes Have on the Malaclemys terrapin and Callinectes sapidus	Marine Academy of Technology & Environmental Science John Wnek
C1303 Carolyn Almonte	The Effect of Chronic Exposure to Artificial Light at Night on the Development Fecundity of Manduca sexta	Youth Achievers Committee Sherita Singleton
C1304 Brandon Chorzelewski	A Study of the Effectiveness of Deer Repellents on the Eating Habits of White-tailed Deer	Cherry Hill High School West Brian Grillo
C1305 Samantha Glover	Examining Shifts in Seasonal Diversity of Species of Zooplankton in the Northern and Southern Barnegat Bay	Marine Academy of Technology & Environmental Science John Wnek

PRESENTER**TITLE****SCHOOL & SPONSOR****BEHAVIORAL/SOCIAL SCIENCES**

D0101	Sarah Zampino	Left Paw or Right Paw	Salem County Vocat. Tech. School Kristen Redkoles Polk
D0102	Brianna Lowery	The Relevance of Time and Temperature in Baking	Upper Dublin High School Dawn Edelman
D0103	Mackenzie Nash	The Effect of Technology on Homo Sapien Sleep Cycles	Vineland AMSA Miriam Jamil
D0104	Anna Fattizzo	The Effect of Gender Stereotypes on Adjective Selection	Upper Darby High School Roseann Burns
D0105	Megan Bradley	Rolling, Rolling, Rolling Through a Stop Sign	Bishop Shanahan High School Sister Kathleen Eagan
D0106	Amanda Breslin	How is a Chicken Nugget Best Cooked?	Upper Dublin High School Dawn Edelman
D0107	Joshua Schindler	I'm Positive...You're Going to Fail	Avon Grove High School Nora Radu
D0108	Kera McCarthy	Personality vs. Peppers	Masterman School Kathleen Tait
D0109	Cameron Morgan	How a Beverages Color Affects How Much People Like Said Beverage	Woodstown High School Amelia Adams

BIOCHEMISTRY

D0201	Owen Smith	Energy In Food	Woodstown High School Jennifer Sorbello
D0202	Gary Yu	Eucalyptus Oil as a Natural Food Preservative: Application in Blueberry Jam	Cherry Hill High School East Nicholas Wright
D0203	Katie Burke	Measurement of Substrate Binding Affinity and Catalytic Efficiency of Invertase	Council Rock High School-South Matthew Ciaudelli
D0204	Isha Dev	What is the Optimal pH for Catalase?	Council Rock High School-North Terese Grateful
D0205	Hyunkyung Lee	How the Retinal Chromophore Detects Color	Conestoga High School Scott Best
D0206	Sophia Ramos	Why Aren't Medicine Pills?	Salem County Vocat. Tech. School Kristen Redkoles Polk
D0207	Maya Butani	Putting the Plant in Transplant: Plant Decellularization for Tissue Scaffolds	Moorestown High School Sean Watson
D0208	John Riley	The Influence of Temperature and Salinity on Yeast Fermentation	Upper Dublin High School Judy Winship
D0209	Katherine Daniels	Effects of Carvedilol on Drosophila Social Interaction	Council Rock High School-North Terese Grateful
D0210	Kathryn DePasquale	Testing The Toxicity of Guarana, Caffeine and Taurine on Daphnia Magna	Cherry Hill High School West Brian Grillo
D0211	Aishwarya Gowrishankar	The Effect of Light on Yeast	Parkland High School Michael Post
D0212	Gwen Ericson	Synergistic Effects of Essential Oils and Olfactory Lures as Attractive Toxic Sugar Baits (ATSBs) on Culex and Aedes Species	Marine Academy of Technology & Environmental Science John Wnek
D0213	Paige Melvin	Which Decaffeinated Tea Type Contains the Least Amount of Caffeine?	Bishop Shanahan High School Sister Kathleen Eagan
D0214	Jason Chang	The Science of UYeast! Effects of UV Light on Yeast Fermentation	Upper Dublin High School Joanne Lilliendahl
D0215	Shayl Chetty	Comparison of the Effect of Competitive, Uncompetitive and Mixed Inhibition of the Enzyme Sucrase	Conestoga High School Scott Best



2018 9TH GRADE ENTRIES

PRESENTER	TITLE	SCHOOL & SPONSOR
BOTANY		
D0301 Devesh Bungatavula	The Effect of Sound Frequency on Spinach Seeds	Souderton Area High School Karen Wolfe
D0302 Hannah McCann	Hot Peppers as Preservatives	Salem County Vocational Technical School Kristen Redkoles Polk
D0303 Cody McBride	Enhancing Farming Technology with Hydroponics	McBride Homeschool Carolyn McBride
D0304 Elsie Kaas	Fertilization Intervals on Ornamental Crops	Bishop Shanahan High School Sister Kathleen Eagan
D0305 Julietta Onofrietti	The Effects of Mangifera indica and Cinnamomum zeylanicum Evergreen Tree Bark Extracts on Oral Bacteria Causing Caries and Periodontal Disease	Toms River High School North Christine Girtain
D0306 Virginia McCullough	Malicious Microwaves	Upper Dublin High School Megan Gallagher
D0307 Christine Mathew	Best Fertilizer in High Salinity	Northeast High School James Finley
D0308 Annetta Yuwono	Growing on Eggshells	Masterman School Kathleen Tait
D0309 Lilian Boffin	Visible Wavelengths of Light and Plant Growth	Woodstown High School Amelia Adams
D0310 SeVaughna Borck	How Sounds Affect Plant Growth	Salem County Vocational Technical School Kristen Redkoles Polk
D0311 Ruth Elahi	Using Soundwaves to Treat Plants with Separate Mindsets	Vineland AMSA Miriam Jamil
D0312 Veronica Swartz	The Effect of Lighting Conditions on Anthocyanin Expression in Leaf Lettuce	Tamanend Middle School Mark Hayden

CHEMISTRY

D0401 Dylan Kuang	Starch Based Bioplastics Reinforced with Cellulose	Methacton High School Robert Helm
D0402 Aidan Beelitz	The Effect of Temperature Over an Extended Period of Time	Marine Academy of Technology & Environmental Science John Wnek
D0403 Aniruddh Mutnuru	The Effectiveness of Various Polar and Non-Polar Chemicals in Check Washing	Unionville High School Sandra Litvin
D0404 Charlotte Qi	How Does Time Affect the Thickness of an Edible Water Bottle Membrane?	Upper Dublin High School Brian Palme
D0405 Emily Marshall	The Effect of the Type of Orange Juice on Vitamin C Content	Upper Dublin High School Brian Palme
D0406 Vorith Tadjibaev	Effects of Surface Tension on pH	Central High School Robert Herbstritt
D0407 Valarie Rubinstein	Analyzing the Fire Resistance of Various Household Fabrics	Villa Joseph Marie High School Jamie Weiss
D0408 Sarah Gallo-Crelin	pH Levels of Different Water Types	Salem County Vocational Technical School Kristen Redkoles Polk
D0409 Jaleah Bowman-Blanton	Dissolve the Rainbow	Coatesville 9-10 Center Shannon Downing
D0410 Jack Ringenbach	The Effect of Salinity on Hydrophobic Coatings	Bishop Shanahan High School Sister Kathleen Eagan
D0411 Karen Song	Watering Plants	Holicong Middle School Carrie Bannon

PRESENTER	TITLE	SCHOOL & SPONSOR
D0412 Riley Fulmer	Using the Stefan-Boltzmann Formula to Determine How Much Radiant Energy is Absorbed and Re-emitted by Different Colors	Woodstown High School Amelia Adams
D0413 Urvi Patel	The Effect of Boiling Gallus Gallus Domesticus Eggs in Different Solutes	Vineland AMSA Miriam Jamil

COMPUTER

D0501 Noor Boukari	Predicting and Understanding Colony Collapse Disorder Through Machine Learning	Caesar Rodney High School Hacene Boukari
D0502 Daniel Luo	Text Analysis Using Patterns in Text	Upper Dublin High School Brian Palme
D0503 Sudhish Reddy	Using Machine Learning Algorithms to Predict Parkinson's Disease Progression	Methacton High School Robert Helm
D0504 Eeshwar Krishnan	Comparing Different Computer Algorithms to Solve the Traveling Salesman Problem	PA Leadership Charter School Katherine Przeworski
D0505 Samiha Zarin	Computerized Translation	Upper Darby High School Roseann Burns
D0506 Uma Purani	Learning Science Through Virtual Reality	Parkland High School Michael Post
D0507 Lalitha Loka	Unmasking Parkinson's Disease in a Patient Using R	Parkland High School Michael Post
D0508 Carter Hancock	The Human Mind vs. Artificial Intelligence	Souderton Area High School Karen Wolfe
D0509 Mikail Jaffer	Developing Flexible Circuit Boards Using Graphene	Moravian Academy Gabriella Dee

EARTH/SPACE SCIENCES

D0601 Manas Date	The Effects of Preservation on the Vitamin C Contents of Brussel Sprouts	Germantown Academy Philip Rittenhouse
D0602 Alexia Lange	Can Water Float on Water?	Pennsville High School Jennifer Paul
D0603 Megan Kraunelis	Which Area has Less Light Pollution	Villa Joseph Marie High School Megan Preedy
D0604 Matthew Sparling	Evaluating Pollution Concentrations with a Drone	Penncrest High School Jay Sparling
D0605 Jenna Yocco	Effect of Pulsar Age on Nulling Frequency	Upper Darby High School Roseann Burns
D0606 Shayne Ventura	The Trigonometric Real-Size Calculations of Craters in Various Sectors on Mars and its Effects on Possible Settlement	Haddonfield Memorial High School Jeanne Scardilli
D0607 Faith Penn	How Salty Does the Sea Have to be for an Egg to Float?	Pennsville High School Jennifer Paul
D0608 Elena Tawa	What Is Gravity, and How Does it Effect the Trajectory of Galactic Objects?	Holicong Middle School Carrie Bannon
D0609 Charles Gillam	Basalt Thickness of Mare Imbrium	Upper Darby High School Roseann Burns
D0610 Yashi Patel	The Effect of Carbon Dioxide on the Nutritional Levels of a Plant	Central High School Robert Herbstritt

PRESENTER	TITLE	SCHOOL & SPONSOR
ENGINEERING		
D0701 David Yan	Implementation of Unmanned Aerial Vehicles For Package Delivery in a Scaled Smart City	Charter School of Wilmington Michael Katz
D0702 Laurel Decker	Designing a Wall with Framing Similar to a Brace Frame That is Cost Effective and Earthquake Resistant	Cherry Hill High School East Nicholas Wright
D0703 Zach Finley	Drag Coefficient	Upper Darby High School Roseann Burns
D0704 James Donnelly	Is it Stable? Depends on the Cable!	Freedom High School Graceanne Ruggiero
D0705 Leo Wylonis	High-Efficiency Shape-Shifting Airplane Wing Design Using Novel Independently Moving Ribs Actuated by Heat Activated and Air-Cooled Polymer Artificial Muscle	Conestoga High School Scott Best
D0706 Nicole Wealand	Increasing Wood Strength	Upper Dublin High School Brian Palme
D0707 Victor Cai	Design a Nonlinear Battery Charging System for a Sun Tracking Solar Panel	Parkland High School Michael Post
D0708 Veda Vundela	Air Pollution Detector	Parkland High School Michael Post
D0709 Nicholas Worrall	What is the Best Base Isolator for a Bridge During an Earthquake?	Lenape Middle School Mark Hayden
D0710 Robert Kinney	How Does Increasing the Capacitance Used in a Railgun Affect its Propulsion?	Woodstown High School Amelia Adams
D0711 Ethan Anderer	Turning Methane into Methanol Using Methanotrophs That are Strategically Placed in a Filter	Cherry Hill High School East Nicholas Wright
ENVIRONMENTAL		
D0801 Yitian Xu	Utilizing Mangroves to Bioremediate Mass Algae Blooms	Cherry Hill High School East Nicholas Wright
D0802 Helena Saven	Oil Spills: The Effect on Aquatic Plants	Masterman School Kathleen Tait
D0803 Maria Karakousis	Nature's Water Filters: The Impact of Global Warming on the Filtration Efficiency of Mussels	Masterman School Lance Butler
D0804 Prithvi Parthasarthy	Analyzing the Physicochemical Parameters of Water Bodies in Chester County	Great Valley High School Heather McGovern
D0805 Nick Fattizzo	Bioassay of Fluoride Using Daphnia magna	Upper Darby High School Roseann Burns
D0806 Jose Gabriel Castro	Biofuel Production Capabilities	Vineland AMSA Miriam Jamil
D0807 Cayla Beasley	Destructive Landslides	Woodstown High School Jennifer Sorbello
D0808 Sophia Jarrar	Think Before You Drink: To Salt or Not to Salt?	Upper Dublin High School Dawn Edelman
D0809 Abigial McFarland	The Contact Solution: Will Increased UV Light Exposure Breakdown Contact Lenses?	Pennsville High School Robert Belding
D0810 Lea Wang	Observing Differences in Air Quality Through the Identification of Lichens	Council Rock High School-South Matthew Ciaudelli
D0811 Chloe Hess	Does Artificial Light Affect Chicken Egg Production?	Salem County Vocational Technical School Kristen Redkoles Polk
D0812 Reese Koch	Solving the Fresh Water Issue	Methacton High School Robert Helm
D0813 Ashlyn Odenwald	What's in the Soil?	Souderton Area High School Karen Wolfe

PRESENTER	TITLE	SCHOOL & SPONSOR
D0814 Samit Mohapatra	Heavy Metal Removal From Wastewater by Activated Carbon Derived From Maple Leaf	Moravian Academy Gabriella Dee
D0815 Molly Doppler	Detergent Degradation	Sussex Technical High School Michelle Thomas
D0816 Sera Ko	Plant Friendly Dechlorinators for Fish Culture in Aquaponics	Cherry Hill High School East Nicholas Wright

MATHEMATICS

D0901 Kevin Quiroga	How Does the Angle of Where You Kick the Ball Affect its Performance?	Salem County Vocational Technical School Kristen Redkoles Polk
D0902 Sheikh Mahmud	Developmental Mathematics: Can it be Used to Acquire a Better Understanding of Specific Problems in Arithmetic?	Egg Harbor Township High School Etzel Brower

MEDICINE/HEALTH

D1001 Chirag Choudhary	Bacteriophages as a Potential Treatment for Antibiotic Resistant Bacteria	Unionville High School Sandra Litvin
D1002 Chloe Cuzzupe	What Antacid Works the Best?	Woodstown High School Amelia Adams
D1003 Flavien Moise	Drug to Defeat Diabetes	Council Rock High School-North Terese Grateful
D1004 Sara Rathore	The Time-Dependent Effects of a Radiomimetic on Oral Epithelial Cells	Cherry Hill High School East Nicholas Wright
D1005 Olivia Takla	The Effect of Different Insole Cushioning Material on Posture and Gait	Marine Academy of Technology & Environmental Science John Wnek
D1006 Cathleen Fisher	Do You See What Eye See?	Bishop Shanahan High School Sister Kathleen Eagan
D1007 Gabriella Kantor	Do Colors Affect Heart Rate?	Avon Grove Charter School (lower) Kelly Sweeney
D1008 Allyson Kershner	Which Gas Reduction Medicine Decreases the Most Bubbles?	Salem County Vocational Technical School Kristen Redkoles Polk
D1009 Ivana Luu	Determining the Strength of Memory Metal	Upper Darby High School Roseann Burns

MICROBIOLOGY

D1101 Samuel Telsey	Musical Bacteria	Woodstown High School Amelia Adams
D1102 Kristina Krishna	What Really Kills Those Germs?	Woodstown High School Jennifer Sorbello
D1103 Prisha Srivastava	The Effect of Antibiotics on Bacterial Growth	Parkland High School Michael Post
D1104 Norah Alavi	Identification of an Optimal Energy Source for Yeast Respiration	Upper Dublin High School Joanne Lilliendahl
D1105 Ansh Malik	Microbial Fuel Cell	Emmaus High School Brent Landrum
D1106 Isabel Portner	Can Essential Oils Lower Yeast Growth?	Masterman School Kathleen Tait
D1107 Peter Liu	Using CRISPR-Cas9 to Create Streptomycin Resistant E. coli	Upper Dublin High School Joanne Lilliendahl
D1108 Amir Kurbanov	Virus vs. Bacteria	Central High School Robert Herbstritt
D1109 Nicole Duprey	Peridinium React to Light Sources	Avon Grove Charter School (lower) Kelly Sweeney

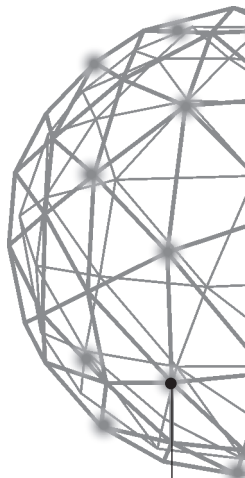
PRESENTER	TITLE	SCHOOL & SPONSOR
D1110	Igor Avanesov What Acne Medication Can Really Zap That Zit?	Central High School Robert Herbstritt
D1111	Jonas Andrulonis The Effects of NaCl on Bacterial Growth on <i>Gadus morhua</i>	Upper Dublin High School Joanne Lilliendahl
D1112	Danielle Murat Bacterial Analysis of Circulated Paper Currency	Marine Acad. of Technology & Environ. Science John Wnek
D1113	Samara Pritchett Testing the Antimicrobial Properties of Plants in the <i>Amaryllidaceae</i> Genus	Cherry Hill High School West Brian Grillo
D1114	Saakhi Ray DNA Damage	Delran High School Kimberly Brewster
D1115	Shivani Kumar Sunlight vs. Clay Pots: Cheap Water Decontamination	Council Rock High School- South Megan Mohl

PHYSICS

D1201	Jen Parsons Optimal Impact Location for Paddle Ball Energy Transfer	Upper Dublin High School Brian Palme
D1202	Elizabeth Bowe Wi-Fi's Range	Villa Joseph Marie High School John Gentile
D1203	Kaylyn Paige Rosa How will Changing the Amount of Salt in Soil Affect a Microbial Fuel Cell's Power Output?	Salem County Vocational Technical School Kristen Redkoles Polk
D1204	Luke Price The Effect of Air Pressure on Distance of Ball Skip on Water	Upper Dublin High School Judy Winship
D1205	Abigayle Heathwaite Shielding Ionizing Radiation	Woodstown High School Jennifer Sorbello
D1206	Antonio Fiorentino Wong The Effect of Weight on Levitation Distance of Maglev Train	Upper Darby High School Roseann Burns
D1207	Aditi Maheshwari Semiconductor Laser	Parkland High School Michael Post
D1208	Allison Courtenay Sticky Note Friction	Upper Dublin High School Judy Winship

ZOOLOGY

D1301	Taylor Emanuel-Jackmon Use of Fossil Evidence to Study the Formation of the Isthmus of Panama	Upper Darby High School Roseann Burns
D1302	Keiran Santos The Effects of Colored Light Towards Ant Foraging	Cherry Hill High School East Nicholas Wright
D1303	Shealyn Lawless The Effects of Various Deicing Agents on Shore Shrimp (<i>Palaemonetes vulgaris</i>)	Marine Acad. of Technology & Environ. Science John Wnek
D1304	Kasey Beal Guinea Pig Maze	Salem County Vocational Technical School Kristen Redkoles Polk
D1305	Mariela Carroll-Lubrano How Will a Horse's Hooves be Affected if You Give Them Supplements?	Woodstown High School Amelia Adams
D1306	Vaishnavi Joshi Remediation of Melatonin-Induced Cardiac Distress In <i>Daphnia Magna</i> Using a Natural Antioxidant	Parkland High School Michael Post
D1307	Keira Trout Effect of Proximity of Male/Female Zebrafish on Clutch Size	Perkiomen Valley High School Julie Mest
D1308	Aziyah Reed Factors Affecting the Route of Cetaceans	Upper Darby High School Roseann Burns
D1309	Bridget Magee Olfactory Stimulant Effect on Calorie-restricted Gryllidae	Souderton Area High School Karen Wolfe
D1310	Aum Patel Effects of NSAIDs on Planaria Regeneration	Central High School Robert Herbstritt
D1311	Lydia DeHart Which Dog Size is Best at Agility?	Woodstown High School Amelia Adams



**2018 TEAM PROJECTS
9TH - 12TH GRADES**

	PRESENTER	TITLE	SCHOOL & SPONSOR
T1401	Maya Joseph Emily Verespy	Soil Erosion Experiment	Villa Joseph Marie High School Karen Scott
T1402	Zhixian Liding Skanda Sai Alan Rza	The Effect of Different Combinations of CaCl ₂ , MgCl ₂ , and NaCl on the Efficiency of Bacterial Transformation	Biotechnology High School Ann MacLean
T1403	Run Jia Pan Giulia Pascucci	Determining the Identity of an Unknown Human Skeleton	Central Bucks High School-West Mark Hayden
T1405	Jasleen Jaswal Aaliyah Ayala	Deadly Detergents	Vineland AMSA Miriam Jamil
T1406	Amy Bloesch Emily Dwyer	Ocean Acidification: How CO ₂ Emissions are Affecting the Ocean's Wildlife	Villa Joseph Marie High School Karen Scott
T1407	Anisha Singh Ashley Wang	Inhibition of S.epidermidis Using Over-the-counter Medications and Medicinal Plant Extracts for Acne Treatment	Biotechnology High School Ann MacLean
T1408	Kiera Karve Emma Browning	Using Operant Conditioning to Increase Participation in a High School Classroom	Nazareth Area High School Lindsay Hoff
T1409	Grace Moore Sarina Wen	Enzyme Concentration and Liver Catalase	Middle Township High School Angela Quintana
T1410	Patrick Carbone Jimmy McCullough	Effects of UV Light on Disposable Plastic Water Bottles	Malvern Preparatory School Agnese Abate
T1411	Isabella Milano-Harrah Tyrek Jones	The Relationship Between Enzyme Activity and Various pH Levels	Middle Township High School Angela Quintana
T1412	Alyson Lorence Chloe Swift	Lima Bean Baby: Part 2	CCTEC Tyler Davenport
T1413	Harsha Santhanam Jason Qiu	Deep Learning Approach and Sparse Reconstruction for Locating Defects on Pipes	Methacton High School Robert Helm
T1414	Claire Brodish Alexa Horvath	The Effect of Fruit Extract on the Growth of E. Coli	Central Bucks High School-East Judy Elinow
T1415	Robert Duncheskie Keenan Kirk	Best ODT for Me	Bishop Shanahan High School Sister Kathleen Eagan
T1416	Vijay Ramu Riya Chaturvedi Saarth Chaturvedi	Antimicrobial and Antibiotic Activities of Flora From the Burlington and Camden Counties Against Aerobic and Anaerobic Bacteria	Eastern High School Ramu Yajamana
T1417	Grace Moore Sarina Wen	Enzyme Concentration and Liver Catalase	Middle Township High School Angela Quintana
T1418	Sanjay Long Andrew MacWilliams Rohit Mathur	Stressed Out?	Archmere Academy Glenn Hartman
T1419	Winston Li Sai Vedagiri Nicholas Lee	Utilization of Low Frequency Ultrasound to Minimize Risks of Robotic Assisted Surgery	High Technology High School Michael Roche
T1420	Frances Yu Angel Zhang	The Effects of Supplements on Memory Retention in Planaria	Central High School Robert Herbstritt
T1422	Dia Lee Alonzo Lawrence	Performance of a Low-Cost Upper Extremity Prosthesis in a Hand Function Test	Carver High School of Engineering and Science Lisa Franchetti

PRESENTER	TITLE	SCHOOL & SPONSOR
T1423 Julia Kuzan Elizabeth Piatkowski	Temporal Variations in Light Attenuation in Altered Coastal Estuarine Systems	Marine Academy of Technology & Environmental Science John Wnek
T1424 Paras Chand Morgan Philpot	The Effect of Invertase on the Conversion of Sucrose to Glucose Concentrations on Conventional Household Foods	Freedom High School Graceanne Ruggiero
T1425 Madeline Plummer Jane Baker	ATP Production by Yeast during Alcoholic Fermentation	Norristown Area High School Kathleen DeMedio
T1426 Isabella Milano-Harrah Tyrek Jones	The Relationship Between Enzyme Activity and Various pH Levels	Middle Township High School Angela Quintana



PRESENTER**TITLE****SCHOOL & SPONSOR****BEHAVIORAL/SOCIAL SCIENCES**

E0101	Rayonna Hampton	What Makes You Yawn?	Cherry Street School Heather Engler
E0102	Keyan Vojdani	Screen Time in Sleep: A Study of How Changing a Person's Screen Time Affects Their Sleep Duration	William Allen Middle School Kenneth Lynch
E0103	Varoon Joshi	Correlating Birth Order to Parent Perceptions on Various Child Qualities	Patton Middle School MaryJo Knauer
E0104	Morgan Rumpp	Think Fast	Pittsgrove Township Emily MacNeill
E0105	Dante LoSasso	Who can Improve the Most? Examining How Initial Skill Level Relates to Performance Improvement	St. Andrew School M. Kinson
E0106	Autumn Foote	Does Text Color & Font Affect Readability	Elsinboro Township Joe Sarbello
E0107	Sameeha Ershad	How Does Weather Affect Mood?	St. Andrew School M. Kinson
E0108	Kanchan Gupta	Music: Help or Distraction for Testing?	Moravian Academy Middle School Joanne Daniels
E0109	Adelle Leebel	Teens, Anxiety, and the Body Politic	Sussex Academy Lauren Hvorecny
E0110	Brighton Risch	Placebos, Prestige, and Halos: Organic by Any Other Name	Great Valley Middle School Heather McGovern
E0111	Christopher Garrabrant	Effect of Sound on Reaction Time	Eugene Tighe School Chelsi Crompton
E0112	Isabelle Mitrev	Do You See What I See?	French International School of Philadelphia Valerie Denny
E0113	Johanna Schwachter	Read Between the Lines	Jordan Road Elementary School Liz Lichtenstein
E0114	Lily Schindler	Is it Contagious?	Avon Grove Intermediate School Candice Holohan
E0115	Faith Lam	Stressful Test? Which Learning Style Helps You Study Best?	Cedarbrook Middle School Beth Kenna
E0116	Duncan Spencer	Pick a Card any Card	Meredith School Christopher Leshock
E0117	Shay O'Connor	Stress in Middle Schoolers vs. Adults	Haddonfield Friends School Earlene Sorrento
E0118	Sophia Ortiz	Eyewitness Errors and the Brain	McCall School Scott Knoflicek
E0119	Julia Trumbo	Analyzing Ability of Different Species on Maze Completion	Lenape Middle School Jennifer Yeager
E0120	Owen Huy	Will Color Affect Tastes in Different Drinks	St. Jude School Anita Marko
E0121	Madalynn Smith	Can You Taste Without Smell?	Avon Grove Intermediate School Michelle Smith



**2018 6TH-7TH-8TH
GRADE ENTRIES**

BIOCHEMISTRY

E0201	Gavriela Kalish-Schur	Fingerprints through the Generation	Masterman School Kathleen Tait
E0202	Alicia Garcia	The Effect of Electromagnetic Field on Euglenoids Algae Cells	Haddonfield Friends School Earlene Sorrento

PRESENTER	TITLE	SCHOOL & SPONSOR
E0203	Callie Ardoline	Smells So Good I Can Taste It St. Elizabeth School Jennifer Nangle
E0204	Loghan Dougherty	Cookies Are Red Ursuline Academy Eileen Koenig
E0205	Henry Gartland	Helping, Not hurting Haddonfield Friends School Earlene Sorrento
E0206	Anirudh Akula	Picky Planaria Penndale Middle School Matthew Wendell
E0207	Anthony Michael	The Effects of Soda Holicong Middle School Robert Meletti
E0208	Kyleigh Carty	Producing Electricity Pittsgrove Township Emily MacNeill
E0209	Vidhi Desai	Oil From Algae Springhouse Middle School Noel Mahmood
E0210	Sofia Trone	Herbs: Sustainable Biofuels? Fred S Engle Middle School Richard Trone
E0211	Alessandra Fusaro	Water Disinfection Ancient vs. Modern St. Mary Interparochial School Judy Crossan-Sannicky
E0212	Analise Myles	How to Remove the Smell of Pepe Le Pew Odor Galloway Township Middle School Debra Sommers
E0213	Aishwarya Suresh	Optimizing Algae Growth For Sustainable Environment Springhouse Middle School Scott Bauer
E0214	Julia Carroll	Fractions of Fat Immaculate Heart of Mary Nichol Carroll
E0215	Marcus Smith	Impact of Protein Isolation and Environment on Catalase Indian Valley Middle School Amy Welsh
E0216	Rebekah Vonderahe	Calcium Carbonate to the Rescue Vonderahe Homeschool Elisabeth Vonderahe
E0217	Audrey Boggs	What Happens to the Eggshell if I Change the Type of Staining Liquid? Lower Alloways Creek Township Melissa Elwell
E0218	Max Lin	Pineapple Pandemonium Newtown Middle School Mary Joy Troxel
E0219	Kieran Chetty	Improving Lactose Intolerance: Factors that Affect Lactose Tredyffrin-Easttown Middle School Kristen Connelly
E0220	Lily Ferriola	Under the Sea: Effects from Ocean Acidification on Brine Shrimp Population Alder Avenue Middle School Jeffrey Warner

BOTANY

E0301	Brianna Reino	Erosion: Can it be Controlled? Villa Maria Academy Lower School Lauren Lutfy
E0302	Maren Muller	Plants on the Move! St. Mary Interparochial School Hannah Morgan
E0303	Harry McCobb	Green Electricity McCall School Scott Knoflicek
E0304	Lidhu Arakkal	The Effect of Substrates in a Nutrient Film Hydroponic System Howell Middle School South Michael Roche
E0305	Tedra Robins	Real Soil vs. Artificial Soil Philadelphia Academy Charter Jeffery Pagliaro
E0306	Alexandra McCulloch	The Effect of Different Waters on Seed Growth Academy of Notre Dame de Namur Daniel Cushing
E0307	Nia McCloud	Will the Eggshell Water Make the Plant Grow Faster than Plain Water? William Henry Middle School Cheryl Tyrell

PRESENTER	TITLE	SCHOOL & SPONSOR
E0308 Zacc Rittman	Hydroponic vs. Soil	Owen J Roberts Middle School Mark Hofer
E0309 Jada Fennell	Capillary Action of Water in Plants	Calvary Christian Academy Nancey Cannon
E0310 Riya Patel	Can a Micro-Wave You the Wrong Way: The Effect of Microwave Radiation on Plant Growth	Academy of Notre Dame de Namur Daniel Cushing
E0311 Mujtaba Jaffer	How Much Water Should Plants Receive?	Springhouse Middle School Troy Minarovic
E0312 Nathan Fickert	Hydroponic Lettuce	Indian Crest Middle School Jennifer Odenwald
E0313 Katelyn Kulig	The Genius of Germination	Pittsgrove Township Emily MacNeill
E0314 Taylor Downey	Color Changing Roses	Aura Elementary School Melissa Tanski
E0315 Daniela Fernandez	What Type of Meal Fertilizer Produces Fastest Plant Growth?	Orefield Middle School Brian Holtzhafer
E0316 Sydney Herr	Turn Up the Heat	Classical Conversations of Souderton Lisa Reichley
E0317 Klement Swartz	Effects of Tannin Seed Coating on Germination	Tamanend Middle School Mark Hayden
E0318 Carter Philo	Studying Mushrooms Ability to use Melanin in Their Skin to Produce Food from Radiation	Lenape Middle School Deborah Wysocki
E0319 Keily De La Rosa	Do Magnets Affect Plant Growth?	Oldmans Township Jason Winistorfer
E0320 Thomas Easterday	What is the Effect of Gravity on Root Growth?	Alder Avenue Middle School Jeffrey Warner

CHEMISTRY

E0401 Raya Perate	How to Control Damage from Laundry Pods	St. Andrew School Tracy Boedewig
E0402 Thomas Reale	Ready Set Grow Sweet Science	Oldmans Township Jason Winistorfer
E0403 Carrington Allen	How Does Changing pH Affect Spherification?	Wyndcroft School David Johnson
E0404 Bella Romeo	The Science Behind the Tiny Crystals	Baldi Middle School Bonita Gondo
E0405 Siddhant Khandelwal	The Effect of Potassium Permanganate Infused Zeolites on Ethylene	Springhouse Middle School Susan Stern
E0406 Jakobe Jeans	Does the Temperature Impact the Elasticity of a Rubber Band?	William Henry Middle School Cheryl Tyrell
E0407 Andrew Zhang	Protein Proteolysis by Protease-Containing Fruit and Nutrition	Arcola Intermediate School Cathy Stewart
E0408 Maxime Guillot	Hot or Not	Meredith School Christopher Leshock
E0409 Lindsay McBride	Light It Up: Investigating the Effect of Varying Temperatures on Chemoluminescence	Academy of Notre Dame de Namur Daniel Cushing
E0410 Kaisy Guerrero Lucero	Acids Give You Pain But Antacids Save the Day	ExCEL School Deena Osmer
E0411 Clare Farrington	Bomb Calorimeter	Classical Conversations of Buckingham Gloria Bayne
E0412 Christina Broadwater	Saltwater vs. Chemistry	Pittsgrove Township Emily MacNeill

PRESENTER	TITLE	SCHOOL & SPONSOR
E0413 Khushi Faldu	How Does the Temperature Affect the Reaction Rate of Alka-Seltzer®?	Manalapan-Englishtown Middle School Dawn Danza
E0414 Joaquin Weeks	How Acids Affect the Rate of Corrosion	McCall School Scott Knoflicek
E0415 Alexis Wachter	Which Liquids Evaporate Faster?	Delran Middle School Amy Yodis
E0416 Nivriti Chaudhuri	Reefs are Nature's Magic - Why Make Their Lives Tragic?	Downingtown Middle School Wendy King
E0417 Gianna Elliott	Soda and Mentos Explosion	St. Dorothy School William Elliott
E0418 Riya Verma	Water Purification Using Adsorption	Springhouse Middle School Noel Mahmood
E0419 Andrew Carver	Cold Pack Chemistry	Collegium Charter School Kassandra High
E0420 Alexis Parkinson	Citrus Pennies	Towle Institute Donna Chandler
E0421 Genevieve Hagen	The Effect of the Amount of Rennet on Mozzarella's Density	Sussex Academy Elaine Maggioli
E0422 Brianna Thompson	What Leavener Works Best for Chocolate Chip Cookies?	Milford Central Academy Jasqueline Mullikin-Powers
E0423 Sarai Torres	Apples, Don't Brown	ExCEL School Deena Osmer
E0424 Daniel Sorokin	What Bipolymer Makes the Best Bioplastic?	Haddonfield Friends School Earlene Sorrento
E0425 Ella Miller	Ice, Ice Maybe - Will Ice Melt in Different Substances	Newark Charter School Andrea Narvaez
E0426 Kristen Weppler	Which Kind of Apples Changes Most in Beneficial or Non-beneficial Ways After Being Removed from Cold Storage?	Toms River Intermediate East Sylvia Piznik

COMPUTER

E0501 Conner Hiles	What Will Teach Basic Carpentry Skills Better - A Computer Game or Textbook?	Lower Alloways Creek Township Melissa Elwell
E0502 Alyssa DeSantis	The Effect of Virtual Reality on Heart Rate	Wyndcroft School David Johnson
E0503 Rohan Mehta	Virtual Vote: A Decentralized, Democratic Voting Application	Moravian Academy Middle School Joanne Daniels
E0504 Weishan Liu	Keywords Research of the SEO	McCall School Scott Knoflicek
E0505 Ryan Vanderhoff	PING Pong	Alder Avenue Middle School Jeffrey Warner
E0506 Krithi Ramnath	Identifying the Best Sort Algorithm	Newtown Middle School Mary Joy Troxel
E0507 Sean Blizard	Measuring the Accuracy and Confidence of Facial Recognition	Holicong Middle School Ashley Gresko
E0508 Noah Verucci	What Objects Can Effect a Wifi Signal	Newark Charter School Andrea Narvaez
E0509 Ella Prinsen	Air Mail	Pilesgrove Middle School Don Dunner
E0510 Clara Korley	Material Matters: Speed of Wifi	Ursuline Academy Eileen Koenig
E0511 Saachi Chakravarty	Smart Digital Assistant	Owen J Roberts Middle School Mark Hofer

PRESENTER	TITLE	SCHOOL & SPONSOR
E0512 Aditya Dora	Password Security: How Easily Can Your Password Be Hacked?	Valley Forge Middle School Christy Saddic-Cosgrove
E0513 Jack Caselle	What Materials Block a Wi-Fi Signal?	McCall School Scott Knoflicek
E0514 Timmy Woodward	The Effect of VR on Memory Recall	Wyndcroft School David Johnson
E0515 Jacob Maldonado	Preventing SQL Injection Attacks	Quinton Township Shane Manuel
E0516 Amin Boukari	Voice Activated and Controlled System	Postlethwait Middle School Fatima Boukari
E0517 Natalie Lewis	Password Safety: What Makes a Secure Password	Stonegate Academy Kim Lewis
E0518 Jatin Punjabi	Is Your Password Strong?	Galloway Township Middle School Debra Sommers

EARTH/SPACE SCIENCES

E0601 Shashwat Sharma	How Does the Angle Affect the Efficiency of Photovoltaic Cells?	Springhouse Middle School Troy Minarovic
E0602 Michael Chollis	Battle of the Salinites	Elsinboro Township Joe Sarbello
E0603 Arushi Patel	How Does Water Depth Affect Wave Velocity?	Manalapan-Englishtown Middle School Dawn Danza
E0604 Liliane May	Analyzing Spectral Lines Using a Homemade Spectrometer	Lenape Middle School Jennifer Yeager
E0605 Alexis Dowd	How do Oil Spills Affect the Land?	Upper Pittsgrove Middle School Danielle Taulane
E0606 Shaely James	Beach Bum Science: Does Compression of Wet Sand Depend on Salinity	Abington Junior High School Ed Steinhardt
E0607 Athena Emnace	How Does a Comet's Size Affect How Fast it Melts?	Toms River Intermediate North Katie Keller
E0608 Alexandra Marroquin	Where Did the Stars Go?	Quarter Mile Lane Kitty Sharp
E0609 Caroline Taylor	How Does Distance Affect the Brightness of a Star	Lenape Middle School Jennifer Yeager
E0610 Isabella Esteban	How Does the Type of Soil Affect How Much it Compressed?	Springhouse Middle School Daniel Christman
E0611 Brooke Cano	Rip Current Detection and Warning	Owen J Roberts Middle School Mark Hofer
E0612 Jacob Mono	Suck It Up	Meredith School Christopher Leshock
E0613 Lyle Smith	Solid to Liquid?	Avon Grove Charter School (lower) Kristin Smith
E0614 Luke Stokes	Go With the Flow	St. Maximillian Kolbe School Mary Riccardo
E0615 Oscar Wolfe	Treacherous Tsunamis: Can Seawalls Save Us?	Penn Alexander School Charles Foster
E0616 Alycea McBride	Self-Healing Roads	McBride Homeschool Carolyn McBride
E0617 Holly Binkowski	Significant Tsunami Solutions	Holy Cross Regional Catholic School Jennifer Hitchner

PRESENTER	TITLE	SCHOOL & SPONSOR
ENGINEERING		
E0701 Jayla Bowman	Keeping You in Suspension	Quarter Mile Lane Kitty Sharp
E0702 Ian Lee	Low-Cost and Energy Efficient Audio Based Security System	The Episcopal Academy Hannah Bae
E0703 Eva Kuri	The Effects of Dam Sizes on Number of Turbine Rotations	Toms River Intermediate South Kayley Pagano
E0704 Grace Ferrante	Bearings Matter	Pittsgrove Township Emily MacNeill
E0705 Lars Trone	Pitch Perfect	Avon Grove Intermediate School Richard Trone
E0706 Edward Greenwood	What is Hydraulic Pressure?	Abington Junior High School Ed Steinhardt
E0707 Nathan Mutchler	How Does the Design of a Paper Airplane Effect it's Flying Distance and Speed?	Holicong Middle School Ashley Gresko
E0708 Addison Hurst Blaskovitz	Understanding the Smear	Ursuline Academy Eileen Koenig
E0709 Kenneth Miller	What A Drag!	Collegium Charter School Monica Miller
E0710 Caitlin Alfaro	The Science of Sound	St.Mary of the Lakes Edward Alfaro
E0711 Julianna Cobin	Fallen Arches: The Surprising Strength of Eggshells	Oldmans Township Jason Winistorfer
E0712 Abigail Pamplona	Dyneemo-Bulletproof?	Sussex Academy Lauren Hvorecny
E0713 Joshua Vallabhaneni	Baby Saver - Hot Car Alert Device	Patton Middle School MaryJo Knauer
E0714 Alaina Gassler	Improving Automobile Safety by Removing Blind Spots	Avon Grove Charter School (lower) Kelly Sweeney
E0715 Riley Osborne	Building Better Archery Targets	Sussex Academy Lauren Hvorecny



PRESENTER	TITLE	SCHOOL & SPONSOR
E0716	Diya Agarwal	Impact of Power of Pedaling Moorestown Upper Elementary School April Sullivan
E0717	Sebastian Malaver	Gear Up For Speed Moravian Academy Middle School Joanne Daniels
E0718	Tristan Conlan	How Much Weight Can My Boat Float? Avon Grove Intermediate School Karen Conlan
E0719	Lily Manlove	Pedal Power Sussex Academy Lauren Hvorecny
E0720	Sarah M. Whalen	Keeping it Cooler Ursuline Academy Eileen Koenig
E0721	Saanvi Mehta	Cellphone Anti-Radiation Case Belhaven Avenue School Carmen Faia
E0722	Varun Pandian	Contactless Detection of Vibrations Like Vital Signs Using Doppler Radar Springhouse Middle School Susan Stern
E0723	Erick Doyle	Tale of Three Bridges Meredith School Christopher Leshock
E0724	Patricia Bieter	Can the Shape of an Electric Wire Prevent Ice Build Up? St. Dorothy School Daniel Bieter
E0725	Vrishti Yadav	Motor Assisted Stabilizing Arm Brace for Parkinson's Patients Pennbrook Middle School Carol Ward
E0726	Katie Monaghan	The Effectiveness of Sunglasses Against UV Radiation Holicong Middle School Robert Meletti
E0727	Brontë Short	A Tale of Two Housewraps: Drainable vs. Flat Masterman School Kathleen Tait
E0728	Tra'Suf Bennett	Kill That Sound Indian Avenue School Jared Vena

ENVIRONMENTAL

E0801	Samantha Irwin	The Florida Red Tide Folsom Elementary School Christopher Roth
E0802	Evan Biddle	Blame it on the Acid Rain Elsinboro Township Joe Sarbello
E0803	Ellis Jack	Microplastics Matter Jefferson School Jennifer Chowdhry
E0804	Chester Kempinski	How Green Algae Can Bioremediate a Source of Waste Water Holicong Middle School Carrie Bannon
E0805	Anya Dunn	Practical Water Filtration for People in the Developing World Pope John Paul II Elementary School Julie Bigelow
E0806	Chloe Smith	The Effect of the Greenhouse Effect on Soil Academy of Notre Dame de Namur Daniel Cushing
E0807	Jessica Carlini	Heavy Metal Plants Jennifer Hitchner Holy Cross Regional Catholic School
E0808	Pooja Menon	Making Clean Water a Global Reality Collegium Charter School Kassaundra High
E0809	Jason Croly	H2O2W: Will Hydrogen Peroxide Affect Seeds and Plants? Delran Middle School Jonathan Skvir
E0810	Rylee Hussey	Grass Height Affected by Acid Rain in Ocean County, NJ Toms River Intermediate South Kayley Pagano
E0811	Srijay S. Chenna	Desalination of Water via Low Cost Method H.B. DuPont Middle School Dana Wisnoski
E0812	Kathy Zhang	Dripping Desert Sand and Watching Soybeans Expand Sussex Academy Lauren Hvorecny

PRESENTER	TITLE	SCHOOL & SPONSOR
E0813 Megan Lim	Effectiveness of Using Natural Filters with Fabric as Water Filters	Sandy Run Middle School Jeanie Kellock
E0814 Reva Gandhi	Saving the Planet and People: A Bio-Degradable Plastic	Springhouse Middle School Susan Stern
E0815 Jackson Whitcomb	Degrading the Problem of Plastic Pollution	Sussex Academy Lauren Hvorecny
E0816 Mikaiya Humphreys	Do Certain Types of Plants Reduce the Chemicals in Cigarette Smoke?	Oldmans Township Jason Winistorfer
E0817 Selena Bonilla	In With a Twisty Whisty	Indian Avenue School Jared Vena
E0818 Rayna Malhotra	Testing the Effect of Various Chemicals on the Spotted Lantern Fly	Moravian Academy Middle School Joanne Daniels
E0819 Jeremy Sheau	H2O, Is It Clean?	Sheau Homeschool Jessica Sheau
E0820 Kaveena Ponamgi	Water Filtration With Green Materials	Holicong Middle School Ashley Gresko
E0821 Cierra Lyles	Algae...To the Rescue	Shawmont Elementary Charlene Jablow
E0822 Caroline Peach	Nature's Water Filter	Ursuline Academy Eileen Koenig
E0823 Hannah Thompson	In a Pickle?	Haddonfield Friends School Earlene Sorrento
E0824 Lena Johnson	The Battle of the Chips	Penn Alexander School Charles Foster

MATHEMATICS

E0901 Clair Cardea	Eggciting Experiment	Meredith School Christopher Leshock
E0902 Kyle Cahill	Mathematical Mystery: What Really are the Odds?	Pennsville Middle School Melanie Polk
E0903 Jack Atwood	The Brachistochrone	Alder Avenue Middle School Jeffrey Warner
E0904 Samantha Williams	Counting Critters: Testing The Accuracy of the Lincoln Index Formula	Alloway Township Tara Reinerth
E0905 Anna Laible	The Batting Battle	Classical Conversations of Souderton Lisa Reichley
E0906 Pranavi Marella	The Josephus Problem	Moravian Academy Middle School Joanne Daniels
E0907 Leah Kirkpatrick	Order at the Poll	Classical Conversations of Souderton Lisa Reichley
E0908 Michael Alcher	Pascal's Triangle in Cell Division	Moravian Academy Middle School Joanne Daniels
E0909 Clyde Clouser	Revising a Rubiks Cube Algorithm to Solve a Rubiks Cube	St Peters School Laura Butler
E0910 Monica Levis	Rubik's Rubrics	Levis Homeschool Barbara Ann Levis
E0911 Sela Newman	An Exploration in Voting Theory	Newman Homeschool Lora Newman
E0912 Samuel Blick	Best Possible Opening Buys in Dominion Based on Buying and Gaining Power	Newtown Middle School Dave Curry
E0913 Joshua DeStefano	You'll Get a Kick Out of These Stats	SS. Philip & James School Katelyn Starr

PRESENTER		TITLE	SCHOOL & SPONSOR
E0914	Krishna Patel	The Natural Beauty of Math	Alder Avenue Middle School Jeffrey Warner
E0915	Charley Wan	Analyzing Performance of Different Catapults Through Component Adjustments	Holicong Middle School Robert Meletti
MEDICINE/HEALTH			
E1001	Ryan Anderson-Fitzgerald	Are Your Eyes Playing Tricks on U?	McCall School Scott Knoflicek
E1002	Clare Rajapakse	Dissolution Efficiency of Pain Medications	Cedarbrook Middle School Beth Kenna
E1003	Ella Berger	Just Keep Breathing	Pittsgrove Township Emily MacNeill
E1004	Talia Zurinskas	Will Squats Improve Your Vertical Jump?	Springhouse Middle School Noel Mahmood
E1005	Vishruth Hanumaihgari	A Novel Approach to Combating Cancer Using Chelation Therapy (EDTA)	Springhouse Middle School Scott Bauer
E1006	Anand Shah	Nitrates - A Possible Carcinogen Lurking in Our Drinking Water	Patton Middle School MaryJo Knauer
E1007	Kayla Cooper	Qualitative vs. Quantitative Investigations: Cranial and Pelvic Material	Galloway Township Middle School Debra Sommers
E1008	Marissa Almonte	Does Runoff From Pavement Sealants Used on Our Roads, Parking Lots, and Playgrounds Induce Tumorigenesis in Planaria?	Youth Achievers Committee Sherita Singleton
E1009	Garrett Maneri	Does Aerobic Exercise Improve Perceptual Ability?	Moorestown Upper Elementary School April Sullivan
E1010	Osariemen Unuigbo	Peripheral Vision: Losing Degrees as You Age?	Alder Avenue Middle School Jeffrey Warner
E1011	Daryl Fernandez	Mind Over Matter	Oldmans Township Jason Winistorfer
E1012	Angelina M. Pezzuto	The Effects of Adrenal Response on a Natural Human Electromagnetic	Immaculate Heart of Mary Nichol Carroll
E1013	Callie M. Raftovich	Do You Want the Perfect Smile?	Ursuline Academy Eileen Koenig
E1014	Ally Cenci	Testing the Effectiveness of Sunscreen	Holicong Middle School Robert Meletti
E1015	Yasani Leftwich	Quick Pain Relief	Cherry Street School Heather Engler
E1016	Horacio Garcia	Carbon Magic	ExCEL School Deena Osmer
E1017	Mary Kate D'Ambrosio	Is it the Lichen?	Fred S Engle Middle School Nora Radu
E1018	Elisabeth Davis	The Effects of the Amount of Sleep One Receives on One's Body	Holicong Middle School Carrie Bannon
E1019	Marley Sullivan	Rotten to the Core	St. Mary Interparochial School Judy Crossan-Sannicky
E1020	Danny Rovi	Fitbit vs. Apple Watch: Heart Rate Accuracy	Wyndcroft School David Johnson

PRESENTER	TITLE	SCHOOL & SPONSOR	
MICROBIOLOGY			
E1101	Grace Burns	Mold Growth on Cupcakes	Ursuline Academy Eileen Koenig
E1102	Mekayla Petion	Pedigree: Family Tree of Traits	Calvary Christian Academy Nancey Cannon
E1103	Molly Frith	Disinfectant Wars	Delran Middle School Tara Horvath
E1104	Olivia Marynowicz	Cafeteria Bacteria	Pittsgrove Township Emily MacNeill
E1105	Alyssa Calabrese	Scrub-a-Dub-Dub: Germs in the Dishtub!	Oldmans Township Jason Winistorfer
E1106	Lilian Raccuia	What Can We Learn About the Effects of Caffeine on the Heart from Studying Daphnia?	Toms River Intermediate East Sylvia Piznik
E1107	Logan Brannan	How Does Dog Saliva Affect Bacterial Growth?	Lenape Middle School Deborah Wysocki
E1108	Devyn Stek	Monthly Toxocara Contamination Levels in Montgomery County, PA	St Teresa of Calcutta Elaine Loughnane
E1109	Lucy Wang	Can Probiotic Bacteria Improve Protein Digestion?	Arcola Intermediate School Cathy Stewart
E1110	Ye Lin	How Does Glucose Concentration Affect the Growth of Physarum Polycephalum?	McCall School Scott Knoflicek
E1111	Maxine Pallante	Back to the Teria...Bacteria	St. Mary Interparochial School Dana Grossi
E1112	Isha P. Kanchana	Comparing the Antibacterial Properties of Naturally Occurring Herbal Supplements	Newark Charter School Andrea Narvaez
E1113	Vivianna Onofrietti	Cranberry and Blueberry Extracts Ability to Act as Natural Therapeutic Agents to Inhibit Periopathogenic Bacteria F. nucleatum	Toms River Intermediate North Katie Keller
E1114	Mariam Sahraoui	From Genes to Genetic Disease: What Kind of Mutations Matter?	Calvary Christian Academy Nancey Cannon
E1115	Trinity Meehan	Which Hand Sanitizer Inhibits K 12 E. coli	St. Jude School Anita Marko



Student tour of DuPont

PRESENTER	TITLE	SCHOOL & SPONSOR
PHYSICS		
E1201 Kate Poole	What Heating Method Keeps Soup Hot Longest	Ursuline Academy Eileen Koenig
E1202 Nathaniel Schwenker	How Does the Shape of a Bottle Rocket Nozzle Affect its Efficiency?	Newtown Middle School Mary Joy Troxel
E1203 Aarian Selby	Cooling with Evaporation	Avon Grove Charter School (lower) Aaron Selby
E1204 James Garrow	What's That Noise and How Can I Stop it?	Green Woods Charter Erin Richards
E1205 Michael Ciarmoli	The Effect of Bridge Design on Weight Bearing Capacity	St. Aloysius Academy Jennifer Ciarmoli
E1206 Anna Miriello	Crime Scene Science: Measure the Spatter	Our Lady of Hope Andrew Miles
E1207 Rafael Merino Castro	Can a Plane Fly With Different Wing Sizes?	ExCEL School Deena Osmer
E1208 Arthur Armaing	The Tension Between Us	French International School of Philadelphia Valerie Denny
E1209 Emily Drejza	DO-RE-MI With Straws	Ursuline Academy Eileen Koenig
E1210 Bhavesh Mantrabuddi	A Successful Bank Shot	Downingtown Middle School Wendy King
E1211 Jerrod Harris	"Wright" or Wrong: Are Two Wings Better Than One?	Orefield Middle School Brian Holtzhafer
E1212 Cameron Rider	How Does Tee Height Affect the Driving Distance of a Golf Ball?	St Mary of the Lakes Kara Pley
E1213 Mason Matich	Shake, Rattle, and Roll: Seismic Design Effectiveness	Holicong Middle School Robert Meletti
E1214 Ryan Decker	Going the Distance	French Creek Elementary School Amy Hess
E1215 Homare Yamashita	Aerodynamics in the Wheels	Springhouse Middle School Daniel Christman
E1216 Kara Beardsley	Charging the Stars	Lower Alloways Creek Township Melissa Elwell
E1217 Holton Frank	Get Your Motor Running	Mannington Township Destiny Leoni
E1218 Vanessa Santiago	Fighting Friction	Buckshutem Road School Kristian Torchia
E1219 Daniela Astuto	Does the Shape of the Parachute Matter?	St. Dorothy School Dolores Astuto
E1220 Michael Jusko	R U Attracted 2 Me?	Aura Elementary School Melissa Tanski
E1221 Sophia Weber	How Does Temperature Affect the Bounce of a Tennis Ball?	Abington Junior High School Ed Steinhardt
E1222 Aleksander Garbuz	What is the Effect of Different Objects on the Strength of a WiFi Signal?	Manalapan-Englishtown Middle School Dawn Danza
E1223 Jack Jawork	Toothbrush Take Cover	Meredith School Christopher Leshock
E1224 Adwaith Hariharan	How Will the Mean and Standard Deviation of the Data Change if the Launch Settings of the Catapult are Changed?	Manalapan-Englishtown Middle School Dawn Danza

PRESENTER	TITLE	SCHOOL & SPONSOR
ZOOLOGY		
E1301 Hannah Elrod	Barrel Racing Arenas	Pittsgrove Township Emily MacNeill
E1302 Yu Lin	Do You Use Left or Right Dominance?	McCall School Scott Knoflicek
E1303 Rachel Bergey	Spotted Lanternflies: Stick'em or Trick'em?	Classical Conversations of Souderton Lisa Reichley
E1304 Savannah Burmaster	Can You Train Guinea Pigs by Sound	Holicong Middle School Carrie Bannon
E1305 Dhriti Kumari	Migratory Species: How to Save Them	Pierce Middle School Beth Valitski
E1306 Megan Brooks	Grooming to Relax	Pittsgrove Township Emily MacNeill
E1307 Annarose Hogan	All Jacked Up!	Abington Junior High School Ed Steinhardt
E1308 Pascale Sorg	The Makeup of Your Makeup: Makeup Toxicity on Blackworms	Academy of Notre Dame de Namur Daniel Cushing
E1309 Alexandra Lundgren	Do Guinea Pigs Prefer Junk Food Like We Do?	Ursuline Academy Eileen Koenig
E1310 Nana Liu	Taste the Smell	McCall School Scott Knoflicek
E1311 P.J Holden	Flop or Fetch: Canine Preferences in Soft Toys	Ursuline Academy Eileen Koenig
E1312 Ethan Lin	The Effect of Different Amounts of Fertilizer in Soil on Red Worms	Alder Avenue Middle School Jeffrey Warner
E1313 Shea Maxwell	Which Age Group of Dogs is the Smartest?	St. Jude School Anita Marko
E1314 Sarah Pangare	The Effect of Caffeine on the Regeneration of Planaria	Springhouse Middle School Noel Mahmood
E1315 Logan Soltys	Tardigrades...How Tough are They?	Galloway Township Middle School Debra Sommers
E1316 Jimmy Philbin	Food Fight	St. Margaret Regional School Valerie Philbin
E1317 Jacquelyn Fekula	How Does the Incubation of Spotted Lantern Fly Eggs Effect Them Hatching?	Orefield Middle School Brian Holtzhafer

TEAM PROJECTS

E1401 Nichole Vazquez Sage Phelps Thy Tran	Acne Attack	Galloway Township Middle School Debra Sommers
E1402 Mary-kate Oviedo Natalie Rapciewicz	Which Material is Best Used to Increase Friction?	Toms River Intermediate North Katie Keller
E1403 Jaylynn Aragon Abrianna Rodriguez	Candle Carousel for a Spin	Quarter Mile Lane Kitty Sharp
E1404 Kelsey Blackshire Catharine DeGraw	How Temperature Affects the Chemical Reaction Rate of Glow Sticks	St. Andrew School Tracy Boedewig
E1405 Meghan Duffner Kalie Mogg	Does Mindset Change With Age?	St. Jude School Anita Marko
E1406 Riley Bowman Brook Grova Emma Supernavage	Shooting to Keep Clean	Pennsville Middle School Melanie Polk

PRESENTER	TITLE	SCHOOL & SPONSOR
E1407 Rafe Cultrara Advait Wattal	Fending Off Forces	Moorestown Upper Elementary School April Sullivan
E1409 Rohan Kapoor Arjun Suryawanshi	Which Concentration of Oobleck is the Best at Absorbing High Impact?	Patton Middle School MaryJo Knauer
E1410 Vaughn Cultrara Deven Chakrabarti	Tidal Energy Harvesting Using Navigational Buoys	William Allen Middle School Kenneth Lynch
E1411 Jady Dutton Clarissa Lanzas Eleanor Palmer	Five Second Rule	JS Jenks Margaret Conway
E1412 Elliot Dotson James Kennedy	The Hampster Marathon	Immaculate Heart of Mary Nichol Carroll
E1413 Ali Bowman Emily Gratz	Is Your Water Really Clean?	Pennsville Middle School Melanie Polk
E1414 Madeline Ashb Vrindivanni Cannavino	No Yolk About It!	Arts Academy Charter Middle School Carole Ondrovic
E1415 Sarah Litterst Ava Plagge	Wise WIFI	Newark Charter School Andrea Narvaez
E1416 Krish Mendiratta Revant Mendiratta	Healthy Air, Healthy Me!	Great Valley Middle School Heather McGovern
E1418 Dalia Cruz Natalie Ojeda	Pencil Resistors	Quarter Mile Lane Kitty Sharp

CONSUMER SCIENCE

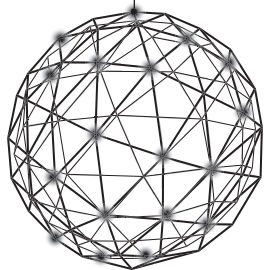
E1501 Justin Orlando	Which Commercial Water Filter Filters Dissolved Solids the Best?	Toms River Intermediate North Katie Keller
E1502 Dylan Thomas	Hi-Frugality	Jefferson School Jennifer Chowdhry
E1503 Benjamin Iskander	Slow as Molasses	William Henry Middle School Cheryl Tyrell
E1504 Steven Flynn	Eat or Retreat	Assumption Regional Catholic School Patricia Naples
E1505 James McAllister	Which Fruit has the Most Juice?	Elsinboro Township Joe Sarbello
E1506 River Somerville	Oh Sugar! How Does the Type of Sugar Affect Sweetness?	Cedarbrook Middle School Beth Kenna
E1507 Audrey E. Frazier	What A Relief!	Ursuline Academy Eileen Koenig
E1508 Bryan Couzens	Dog Toys: What Makes One a Favorite or a Flop to Fido?	Calvary Christian Academy Nancey Cannon
E1509 Genevieve Adamow	Color Me Protected	Our Lady of Mount Carmel School Teresa Yaegel
E1510 Catherine Rowley	Whitening Toothpastes and Their Effects	Philadelphia Academy Charter Jeffery Pagliaro
E1511 Monserrat Hernandez	Dry Spray vs. Solid	Buckshutem Road School Kristian Torchia
E1512 Isabelle Naylor	Skinny of Moisturizers: Which One Holds Moisture Best?	Academy of Notre Dame de Namur Daniel Cushing
E1513 Britania Palma	Say Cheese	Buckshutem Road School Kristian Torchia
E1514 Kaitlyn Walters	How Color Effects Memory	Holicong Middle School Ashley Gresko

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E1517	Madeline Dougherty	The Truth Behind the Label	Ursuline Academy Eileen Koenig
E1518	Rishabh Panse	Microfiber Pollution in Shirts	Avon Grove Intermediate School Amanda Piercey
E1519	Caroline Pascual	Can You Taste the Difference? And is it Worth Your Wallet?	St. Andrew School M. Kinson
E1520	Isaac Perkins	Glue: Does it Hold?	Abington Junior High School Ed Steinhardt
E1521	Angeline Chomo	Which Stain Remover Takes the Stains Out the Best	Pittsgrove Township Emily MacNeill
E1522	Giavanna Rogers	Washing Wars!	Kolbe Academy Homeschool Gina Rogers
E1523	Eva Vanterpool	How Effective are UV Lights for Killing Bacteria?	Haddonfield Friends School Earlene Sorrento



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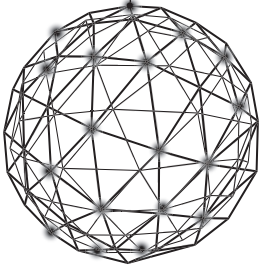
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 George Washington High School
 Woodstown High School
 St. Mary of the Lakes
 Woodstown High School
 St. Dorothy School
 Dover High School
 Vineland High School
 The Episcopal Academy
 Holicong Middle School
 Westtown School
 The Marine Academy of Science and Technology (MAST)
 Springhouse Middle School
 Classical Conversations of Buckingham
 Upper Darby High School
 Lower Moreland High School
 Pennsville High School
 Marsh Creek Sixth Grade Center
 Middle Township High School
 Conestoga High School
 St. Dorothy School
 Pope John Paul II Elementary School
 Holmdel High School
 St. Andrew School
 Owen J Roberts High School
 Postlethwait Middle School
 Caesar Rodney High School
 Delran High School
 Biotechnology High School
 Egg Harbor Township High School
 Philadelphia High School for Girls
 Simon Gratz High School Mastery Charter
 Carver High School of Engineering and Science
 Central High School
 Northeast High School
 Upper Darby High School
 St. Peters School
 Masterman School
 Calvary Christian Academy
 Immaculate Heart of Mary
 Salem County Vocational Technical School
 Towle Institute
 Jefferson School
 Springhouse Middle School
 St. Aloysius Academy
 Council Rock High School-South
 Avon Grove Intermediate School
 Tredyffrin-Easttown Middle School
 JS Jenks
 Eugene Tighe School
 St. Mary Interparochial School
 Maritime Academy Charter High School
 Newtown Middle School
 Academy of Notre Dame de Namur
 Moravian Academy Middle School
 Manalapan-Englishtown Middle School
 Charter School of Wilmington
 CCTEC

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 Christine Girtain
 Christine Girtain
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Moravian Academy
 Norristown Area High School
 French International School
 of Philadelphia
 Vineland AMSA
 Donnelley Homeschool
 Coatesville 9-10 Center
 STEMUP DE, Delaware Tech
 Pilesgrove Middle School
 Bishop Shanahan High School
 Upper Dublin High School
 Central Bucks High School-East
 St. Dorothy School
 Lower Alloways Creek Township
 Cherry Street School
 Belhaven Avenue School
 Camden Academy Charter High School
 Haddonfield Memorial High School
 Friends Select School
 Northeast High School
 Penn Alexander School
 Carver High School of Engineering
 and Science
 Malvern Preparatory School
 Upper Dublin High School
 Villa Joseph Marie High School
 Owen J Roberts High School
 Westtown School
 Pennsauken High School
 Toms River High School North
 Toms River Intermediate North
 Toms River High School South
 Baldi Middle School
 Council Rock High School-North

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 David Johnson
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 Michael Katz
 Katie Keller
 Jeanie Kellock
 Beth Kenna

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 Council Rock High School-North
 Holicong Middle School
 Cherry Hill High School West
 St. Mary Interparochial School
 Bangor Area High School
 Archmere Academy
 Quakertown Community High School
 Tamanend Middle School
 Central Bucks High School-West
 Lenape Middle School
 Central Bucks High School-East
 Methacton High School
 Central High School
 French Creek Elementary School
 Hicks Homeschool
 Collegium Charter School
 Holy Cross Regional Catholic School
 Owen J Roberts Middle School
 Nazareth Area High School
 Avon Grove Intermediate School
 Orefield Middle School
 Delran Middle School
 The Episcopal Academy
 Nazareth Academy Grade School
 Sussex Academy
 Shawmont Elementary
 Vineland AMSA
 Wyndcroft School
 Upper Dublin High School
 Charter School of Wilmington
 Toms River Intermediate North
 Sandy Run Middle School
 Cedarbrook Middle School



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 Jinan Liu
 Elaine Loughnane
 Rose Lounsbury
 Lauren Luffy
 Kenneth Lynch
 Ann MacLean
 Emily MacNeill
 Elaine Maggioli
 Noel Mahmood
 Molly Maldonado
 Shane Manuel

Germantown Academy
 Downingtown Middle School
 Downingtown West High School
 St. Andrew School
 Patton Middle School
 McCall School
 Ursuline Academy
 Lacey Township High School
 Calvary Christian Academy
 Marple Newtown High School
 Emmaus High School
 Carver High School of Engineering
 and Science
 North Penn High School
 Mannington Township
 Meredith School
 Levis Homeschool
 Charles E. Brimm Medical Arts High School
 Caesar Rodney High School
 Stonegate Academy
 Jordan Road Elementary School
 Upper Dublin High School
 Unionville High School
 Georgetown Preparatory School
 St. Teresa of Calcutta
 Charter School of Wilmington
 Villa Maria Academy Lower School
 William Allen Middle School
 Biotechnology High School
 Pittsgrove Township
 Sussex Academy
 Springhouse Middle School
 Mariana Bracetti Academy
 Quinton Township

TEACHER**SCHOOL**

Anita Marko
 Carolyn McBride
 Heather McGovern
 Heather McGovern
 Robert Meletti
 Julie Mest
 Andrew Miles
 Monica Miller
 Troy Minarovic
 Megan Mohl
 Hannah Morgan
 Robert Mottershead
 Jacqueline Mullikin-Powers
 Jennifer Nangle
 Patricia Naples
 Andrea Narvaez
 Lora Newman
 Julie Nowicki
 Jennifer Odenwald
 Josh Oliver
 Carole Ondrovic
 Cherica Onyango
 Deena Osmer
 Kayley Pagano
 Jeffery Pagliaro
 Brian Palme
 Jennifer Paul
 Valerie Philbin
 Amanda Piercey
 Sylvia Piznik
 Kara Pley
 Kristen Redkoles Polk
 Melanie Polk
 Michael Post

St. Jude School
 McBride Homeschool
 Great Valley Middle School
 Great Valley High School
 Holicong Middle School
 Perkiomen Valley High School
 Our Lady of Hope
 Collegium Charter School
 Springhouse Middle School
 Council Rock High School-South
 St. Mary Interparochial School
 Philadelphia Academy Charter
 Milford Central Academy
 St. Elizabeth School
 Assumption Regional Catholic School
 Newark Charter School
 Newman Homeschool
 Biotechnology High School
 Indian Crest Middle School
 Coventry Christian School
 Arts Academy Charter Middle School
 OIC Workforce Academy
 ExCEL School
 Toms River Intermediate South
 Philadelphia Academy Charter
 Upper Dublin High School
 Pennsville High School
 St. Margaret Regional School
 Avon Grove Intermediate School
 Toms River Intermediate East
 St. Mary of the Lakes
 Salem County Vocational Technical School
 Pennsville Middle School
 Parkland High School



DuPont Excellence in Teaching awardees



TEACHER

Megan Preedy
 David Price
 Katherine Przeworski
 Angela Quintana
 Nora Radu
 Nora Radu
 Lisa Reichley
 Tara Reinerth
 Mary Riccardo
 Erin Richards
 Chris Rickard
 Philip Rittenhouse
 Michael Roche
 Michael Roche
 Michael Roche
 Gina Rogers
 Christopher Roth
 Graceanne Ruggiero
 Rachel Saber
 Christy Saddic-Cosgrove
 Joe Sarbello
 Jeanne Scardilli
 Rick Schuder
 Brian Schweizer
 Karen Scott
 Aaron Selby
 Kitty Sharp
 Jessica Sheau
 Sherita Singleton
 Jonathan Skvir
 Michelle Smith
 Kristin Smith
 Melissa Soffer
 Debra Sommers

SCHOOL

Villa Joseph Marie High School
 Upper Dublin High School
 PA Leadership Charter School
 Middle Township High School
 Fred S Engle Middle School
 Avon Grove High School
 Classical Conversations of Souderton
 Alloway Township
 St. Maximillian Kolbe School
 Green Woods Charter
 Woodstown High School
 Germantown Academy
 High Technology High School
 Howell Middle School South
 Colts Neck High School
 Kolbe Academy Homeschool
 Folsom Elementary School
 Freedom High School
 Southern Lehigh High School
 Valley Forge Middle School
 Elsinboro Township
 Haddonfield Memorial High School
 Charter School of Wilmington
 Philadelphia Academy Charter
 Villa Joseph Marie High School
 Avon Grove Charter School (lower)
 Quarter Mile Lane
 Sheau Homeschool
 Youth Achievers Committee
 Delran Middle School
 Avon Grove Intermediate School
 Avon Grove Charter School (lower)
 Academy at Palumbo
 Galloway Township Middle School

TEACHER

Ketan Soni
 Jennifer Sorbello
 Earlene Sorrento
 Jay Sparling
 Katelyn Starr
 Scott Stein
 Ed Steinhardt
 Susan Stern
 Cathy Stewart
 April Sullivan
 Kelly Sweeney
 Kathleen Tait
 Melissa Tanski
 Danielle Taulane
 Michelle Thomas
 Jennifer Toner
 Kristian Torchia
 John Tralie
 Richard Trone
 Richard Trone
 Mary Joy Troxel
 Cheryl Tyrell
 Shannon Tyson
 Beth Valitski
 Jared Vena
 Elisabeth Vonderahe
 Betty Wang
 Betty Wang
 Betty Wang
 Betty Wang
 Betty Wang
 Betty Wang
 Betty Wang
 Carol Ward
 Jeffrey Warner

SCHOOL

Burlington Township High School
 Woodstown High School
 Haddonfield Friends School
 Penncrest High School
 SS. Philip & James School
 Springside Chestnut Hill Academy
 Abington Junior High School
 Springhouse Middle School
 Arcola Intermediate School
 Moorestown Upper Elementary School
 Avon Grove Charter School (lower)
 Masterman School
 Aura Elementary School
 Upper Pittsgrove Middle School
 Sussex Technical High School
 Charter School of Wilmington
 Buckshutem Road School
 Upper Dublin High School
 Fred S Engle Middle School
 Avon Grove Intermediate School
 Newtown Middle School
 William Henry Middle School
 Penns Grove-Carneys Point High School
 Pierce Middle School
 Indian Avenue School
 Vonderahe Homeschool
 George School
 Friends Central School
 The Shipley School
 Choate Rosemary Hall
 The Haverford School
 The Madeira School
 Pennbrook Middle School
 Alder Avenue Middle School



2018 ISEF participants



ISEF

TEACHER

Sean Watson
Martin Weiss
Jamie Weiss
Amy Welsh
Matthew Wendell
Jason Winistorfer
Judy Winship
Dana Wisnoski
John Wnek

Karen Wolfe
Russel Wolff

SCHOOL

Moorestown High School
Foxman Torah Institute
Villa Joseph Marie High School
Indian Valley Middle School
Pennedale Middle School
Oldmans Township
Upper Dublin High School
H.B. DuPont Middle School
Marine Academy of Technology &
Environmental Science
Souderton Area High School
Cheltenham High School

TEACHER

Nicholas Wright
Bonnie Wu
Deborah Wysocki
Teresa Yaegel
Ramu Yajamana
Ramu Yajamana
Jennifer Yeager
Vicki Yeager
Amy Yodis
Ann Zalasky

SCHOOL

Cherry Hill High School East
Great Valley High School
Lenape Middle School
Our Lady of Mount Carmel School
Eastern High School
Cherry Hill High School East
Lenape Middle School
Vineland High School
Delran Middle School
Springside Chestnut Hill Academy



PECO building



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