	Exhibitor	Exhibit	School & Sponsor
		Behavior & Social Sciences	S
A0103	Lauren Bradley	Unconcious Decisions	Bishop Shanahan High School Cheryl Bradley
A0105	Daneyah Claitt	The Distracted Mind	School of the Future Zachary Minken
A0106	Tara Forde	Can Violent Sports Make a Person More Violent in Nature?	Bishop Shanahan High School Laurie Forde
A0107	Adam Maman	Assessing the Efficacy of 3D-Printed Devices on Altering Human Sentiment	Jack M. Barrack Hebrew Academy Arthur Maiman
A0109	Marino Bubba	Money Matters: The Effects of Economic Status on the Political Ideologies of Bangor Area School District Residents	Bangor Area High School Robert Hachtman
		Biochemistry	
A0201	Aleena Alex	Novel Target Against CARM1-high HGSOC Cells	Northeast High School James Finely
A0202	Samantha Zanine	Potential Protein Biomarkers in Hepatocellular Carcinoma Cells and Exosomes	Central Bucks High School- West Mark Hayden
A0203	Claudia Zhang	The Use of Multiplexed Proteomic Approaches to Drive the Design of Personalized Cancer Vaccines	Holmdel High School Josephine Blaha
A0204	Michael Bahner	Opioids: Finding Signs of Reduced Drawbacks	Central Bucks High School- West Mark Hayden
		Botany	
A0301	Isabella Onofrietti	Chlorella and Aloe Vera Plant Gel Effects on Early Childhood Caries	Toms River High School North Christine Girtain
A0302	Kailey Matthews	Sediment Accumulation and Resultant Bedforms around Ammophila breviligulata of Varying Tillered Densities	Marine Academy of Technology & Environmental Science (MATES) John Wnek
		Chemistry	
A0401	Vrishin Patel	Bioplastic Using Chitosan Extracted from Shrimp Shells	Holmdel High School Megan Cantwell
A0402	Evan Wang	Investigating the Effects of Cross-linkers in Flow- Assisted Assembly of Nanocellulose Materials via Rheo- optical Techniques	Unionville High School Cynthia Zhao
A0403	Rutuja Kulkarni	Developing a Transdermal Patch for Sustained Drug Delivery of Tofacitinib to Treat Rheumatoid Arthritis	Central Bucks High School- West Mark Hayden
A0404	Erin Murphey	Desalination of Saltwater using Carbon Electrodes for Electrodialysis	Marine Academy of Technology & Environmental Science (MATES) John Wnek

	Exhibitor	Exhibit	School & Sponsor
		Computer	
A0501	Gabriella Huegel	Creating an Efficient Interface for Consumers to Determine the Most Environmentally Friendly Fast Food Option	Cherry Hill High School West Brian Grillo
A0502	Dylan Sheils	Modernizing the Parallel Bus with Fiber Optics	Council Rock High School- North Stacey Gould
A0503	Luke Finley	Can a Robot Learn?	Upper Darby High School Roseann Burns
A0505	Marshall Miller	A Sixth Sense: Detecting Invisible Bacteria with Artificial Intelligence	Central Bucks High School- West Mark Hayden
A0506	Eda Dervishi	Reduce, Reuse, Recognize	Central High School Robert Herbstritt
A0507	Alissa Amchentseva	Fishious Render: The Seining Prediction Model	The Marine Academy of Science and Technology (MAST) Samantha Moorzitz
A0508	Justin Zhang	An Algorithmic Approach Towards Matching Document Word Usage and Sentence Structure to Corresponding Historical Time Frame	Holmdel High School Josephine Blaha
A0509	Sofiya Lysenko	Non-Invasive Brain Computer Communication with DNA Nano Robotics	Abington Junior High School William Anderson
A0510	Neil Deshmukh	An adaptive, low-cost device for automated offline medical analysis utilizing interpretable neural networks with reinforcement learning optimization	Moravian Academy Gabriella Dee
		Earth & Space Sciences	

A0601	Joyce Mai	Climate Change on Termite-Fishing Behavior From Chimpanzees	Central High School Robert Herbstritt
A0602	Ashmitha Sivakumar	Biofuel from Cellulosic Biomass	Methacton High School Robert Helm
A0603	Miti Patel	Determining the Diameter of Earth's Core Using Seismic Waves Around the Globe	Methacton High School Robert Helm
A0604	Amy Fullington	Soil Quality at Cedar Bonnet Island: Analysis of Various Soil Parameters in the Edwin B. Forsythe Wildlife Refuge	Marine Academy of Technology & Environmental Science (MATES) John Wnek

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	Exhibitor	Exhibit	School & Sponsor
		Engineering	
A0701	Christopher Gerhart	Fueling the Future	Souderton Area High School Karen Wolfe
A0702	Daniel Tobengauz	Proximity Sensor-Based Inflatable Wrist Brace Design	Holmdel High School Josephine Blaha
A0703	Michael Kalman	Testing the Viability of #d Printing Using a Portlan Cement and Silica Sand Blend as a Print Medium	Jack M. Barrack Hebrew Academy Arthur Maiman
A0704	Sophia Shapiro	To Be Alternatine or To Be Direct:Examining Energy Loss in the Conversion of DC Power Transmission	Jack M. Barrack Hebrew Academy Akexander Diehm
A0705	Jasmine Zhang	Controlling a 3D Printed Prosthetic Through Muscle Activity	Council Rock High School- North Terese Grateful
A0706	Arushi Tiwari	Energy Harvesting Using Piezoelectricity in Moving Automobiles	Methacton High School Robert Helm
A0708	Shane Warner	Get Your Power Out of the Gutter	Father Judge High School Joy Kots
		Environmental	
A0801	Shannon Baker	Are There Microfibers in Bottled Water?	Bishop Shanahan High School Stefanie Baker
A0802	Ethan Daguisan	Does Money Buy Healthiness?	Central High School Robert Herbstritt
A0803	Laura-Frances Taylor	Micro-plastics: Behind the Seams	G.W Carver Engineering and Science Lisa Franchetti
A0804	Eric McGivney	Sediment Accumulation of Ammophila breviligulata Across Varying Tiller Densities	Marine Academy of Technology & Environmental Science (MATES) John Wnek
A0805	Shreya Patil	Isolating Lactic Acid from Toxic Whey to Make Biodegradable Plastics	Methacton High School Robert Helm
A0806	Srikar Yelamarthy	Bioremediation of Nitrogen Pollution Using Pseudomonas aeruginosa	Central Bucks High School- South Mark Hayden
A0807	Abigail Foytlin	The Comparison of Aquaponic Lemna Minor to Commercial Supplements for Potassium, Nitrogen,	Toms River High School South Christine Girtain

Phosphorus, pH and Runoff Values

	Exhibitor	Exhibit	School & Sponsor
		Mathematics	
40902	Francis Peng	Derivation and Implementation of Unique Combinatorial Identities	Central Bucks High School- West Mark Hayden
A0904	Rebecca Mastrola	An Analysis of Kepler Mission Data: Planetary and Stellar Properties Within the Milky Way	Marine Academy of Technology & Environmental Science (MATES) John Wnek
40905	Pranav Garimidi	Utilizing Leximin Orderings to Create Fair Allocations	Conestoga High School Vasilis Gkatzelis
A0907	Aidan Choo	Analyzing The Effect of Time Pressure and Constraints on Chess Performance	Holmdel High School Megan Cantwell
40908	Stefania Schoen	Using a computer to teach the world about the fast fashion industry	Emmaus High School Brent Landrum
		Medicine & Health	
A1001	Kiara Haywood-Rivera	Generic vs. Name Brand Pain Relievers	Pennsauken High School Tim Gilbride
41002	Samantha Lafferty	Determining The Role Of Biological Trauma On The Onset Of Hashimoto Thyroiditis	Cherry Hill High School West Brian Grillo
41003	Jessica Holgado	Does a Blue Luminescent Light Affect the Quality of Sleep Differently in Older and Younger Generations?	Bishop Shanahan High School Dennis Holgado
A1004	Hayden Ufberg	The Use of Image Analysis to Correlate Conjunctiva Color with Anemia	Jack M. Barrack Hebrew Academy Arthur Maiman
A1005	Andrew Yang	Selective Killing of Cancer with a ROS-Regulator and Chemotherapeutic Agent	Central Bucks High School- East Mark Hayden
A1006	Synia Boyer	Understanding the Role of IL-6 in Anemia of Inflammation	Central High School Robert Herbstritt
A1008	Claire Tse	Modulating Mechano-Sensing of Stone Man Syndrome (FOP) Embryonic Cells	Methacton High School Robert Helm
A1010	Benjamin Doyle	Investigating the Utilization of Cryotherapy for Muscular Recovery in Competitive Swimming.	Downingtown STEM Academy Darcy Doyle
A1011	Ariel Baiano	Developing a Novel Non-Reliance Posture Trainer	Marine Academy of Technology & Environmental Science (MATES) John Wnek
41012	Madison Charnigo	Analysis of Potential Exosomal Protein and mRNA Biomarkers for Hepatocellular Carcinoma	Central Bucks High School- East Mark Hayden
A1013	Spencer Davis	Using a Thermal Imaging Camera to Detect Temperature Differences Between Normal Stifles and Stifles with Cranial Cruciate Ligament Ruptures in Dogs	Holmdel High School Josephine Blaha
A1014	Rhea Malhotra	Developing a cell sorter for CTCs using surface acoustic waves	Moravian Academy Gabriella Dee

	Exhibitor	Exhibit	School & Sponsor
		Microbiology	
A1101	Kiana Amora	Analysis of the Gut Microbiome of G. mellonella and Their Ability to Degrade Polyethylene	Cherry Hill High School West Brian Grillo
A1103	Rishi Vaidyanath	Investigating Synthetic Compounds to Potentiate SMAC Mimetic Targeting Agent	Central Bucks High School- East Mark Hayden
A1104	Erin Greer	Determining a Protein Biomarker as a Diagnostic Tool for Liver Cancer	Central Bucks High School- South Mark Hayden
A1105	Melody Chen	The Role of Necroptosis and Apoptosis in STING- mediated Cell Death	Central Bucks High School- West Mark Hayden
A1107	Taylor Buie	Characterization of Potential Stress Response Mutants to Conquer Antibiotic Resistance	G.W Carver Engineering and Science Mechtild Pohlschroder
A1109	Ruby Benjamin	Comparative Yeast Fermentation for Application in Small Scale Biofuel Production	Jack M. Barrack Hebrew Academy Arthur Maiman
		Physics	
A1202	Saikrishna Manojkumar	Understanding How Engineered Plasmonic Nanostructures Can be Utilized as Biosensors Using COMSOL Simulation Software	Central Bucks High School- West Mark Hayden
A1203	Helen Rudoler	Peizoelectricity as Alternatiev Energy in Schools	Jack M. Barrack Hebrew Academy Arthur Maiman
A1204	Haley Korwan	An Environmentally Beneficial Alternative for Leading Artificial Turf Infill	Marine Academy of Technology & Environmental Science (MATES) John Wnek
		Zoology	
A1301	Steven Holmberg	Analysis of Crab Pot Entrance Angle Preference of Callinectes sapidus on Varying Dimensions of Bycatch Reduction Devices (BRDs)	Marine Academy of Technology & Environmental Science (MATES) John Wnek

	Exhibitor	Exhibit	School & Sponsor
		Behavior & Social Sciences	
B0101	Jennine Shuti	Forget Me Not	Philadelphia Academy Charter High School Christine Dunne
B0102	Rick Hsu	A Predictive Model for Cyber Bullying in Middle and High School Teens	Holmdel High School Josephine Blaha
B0103	Zhixuan Ye	Self-perceived vs. Actual Weight Status: Which is a Stronger Predictor of Adolescents' Suicide Intent?	Friends Select School Betty Wang
B0104	Phoebe Yu	Prediction of Student Behavior Problems at Home or School	Yu Homeschool Betty Wang
B0107	Hagar Eldeeb	Memorization vs. Comprehension	Souderton Area High School Karen Wolfe
B0108	Lesslie Montiel	Taste According to Gender and Age: Gustatorial Response to Induced Stimuli	Camden Academy Charter High School Madeline Fenner
B0110	Hannah Fasco	Temperature's Effect on Focus	Bishop Shanahan High School Maryanne Fasco
B0111	Anthony Kostacos	Examining the Execution of Protocols Relating to Concussions from Teachers	Germantown Academy Sarah Kesten
B0112	Chuhan Ouyang	How Does Mental Health Affect Employment? The Mediation Effect of Concentration Ability	Green Hope High School Betty Wang
B0113	Rhea Sharma	Determining The Relationship Between Achievement and Goal Orientation in High School Students	Cherry Hill High School East Brian Vernachio
B0114	Lauren Wolstenholme	A Study of the Effects of Deep Pressure Stimulation on Incidents in Students With Special Needs	PA Leadership Charter School Amy Wolstenholme
B0115	Lauren Lepore	The Effects Of Different Genres And Moods Of Music On Short Term Memory	Holmdel High School Josephine Blaha
B0116	Evelyn Toscarelli	Correlation Between the Sequence of High School Math Courses and SAT Math Scores	Holmdel High School Lauren Lepore
B0117	Jocelyn Freed	Does Human Pet Owner Anxiety Transfer to Their Dog?	Springside Chestnut Hill Academy Scott Stein

	Exhibitor	Exhibit	School & Sponsor		
	Biochemistry				
B0202	Julia Lieberman	The Effect of Chlorides on the Stress Response of Daphnia Magna as an Indicator of Stream Health	Springside Chestnut Hill Academy Ann Zalasky		
B0203	Elizabeth Castellanos	Amount of Microplastics in Washing Machine Grey Water Based on Detergent Type and Observation of Cycle Timeline	Springside Chestnut Hill Academy Ann Zalasky		
B0204	Shawn Li	Fiber's Effects on the Digestion of a Polysaccharide	Upper Dublin High School David Price		
B0206	Ganesh Selvakumar	E-cigarettes: A Major Cause of Lung Disease	Marple Newtown High School Dr. Ashakumary Lakshmikuttyamma		
B0207	Kaeli Kaymak-Loveless	Epigenetic Effects of Epigallocatechin Gallate on Health of Drosophila melanogaster and Progeny	Unionville High School Amanda Purdy		
B0208	Bill Zhang	Role of Par3 in Postnatal Dendritic Spine Morphogenesis in the Hippocampal CA1 Region: Implications in Aging and Neurodegenerative Disorders	Holmdel High School Josephine Blaha		
B0209	Elizabeth Zuerblis	The Expression Levels and Epigenetic Control of cGAS in Hepatocellular Carcinoma Cell Lines	Central Bucks High School- South Mark Hayden		
B0210	Hans Shen	Elucidating The Effects Of Direct Physical Contact Between Dental Pulp Stem Cells Cultivated On Polybutadiene with Different Stiffness On Proliferation And Differentiation Behaviors	St. Andrews Dan O'Connell		
B0211	Sarah Young	Silver Nanoparticles - How Much Is "Too Much?"	Methacton High School Robert Helm		
B0213	Bryn Hannah	Will it Glow?	Coventry Christian School Josh Oliver		
B0214	Rohan Patil	Spatial Dirtribution Patterns Of Genes In Intracardiac Neurons	Charter School of Wilmington Susmila Nescrgi		
B0215	Winston Li	Immuno-Metabolic Reprogramming of Macrophage Phenotypes	High Technology High School Michael Roche		

	Exhibitor	Exhibit	School & Sponsor
		Botany	
B0301	Glenda Armas	Seedling Growth Affect on Carrot Root Border Cells	Central Bucks High School- South Mark Hayden
B0305	Nicole Giegerich	The Effect of Plant Type on Carbon Intake as a Possible Guide to Planting for Reducing Global Carbon Dioxide Levels?	Springside Chestnut Hill Academy Scott Stein
B0306	Sophie Kadan	Characterizing the Pea Border Cell Apoptosis Pathway and Its Impact on exDNA Defense	Central Bucks High School- West Mark Hayden
B0307	Aigner Settles	The Effects of Radiation on Radish Seeds and Humans	Pennsauken High School Tim Gilbride
B0308	Katelyn Schuchardt	The Effect of Insecticides on Lettuce	Souderton Area High School Karen Wolfe
B0309	Caitlin Sia	The Effect of Varying Types of Smoke on the Germination Rate of Panicum virgatum	Marine Academy of Technology & Environmental Science (MATES) John Wnek
B0310	Anam Ali	To grow or not to grow	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor
		Chemistry	
B0401	Andrew Zhao	Syntheses And Properties Of Prli3as2, Celi3as2, And Celias2	Charter School of Wilmington Michael Katz
B0402	Benjamin Lin	Relative Tensile Strength of Starch Based Bioplastics: Effective and Biodegradable Materials for Applications in Consumable Manufacturing	Holmdel High School Josephine Blaha
B0404	Matthew Timofeev	Latex Film Performance after Freeze-Thaw Exposure	Central Bucks High School- South Mark Hayden
B0405	Nathan Yang	Safety of Bottled Water	Upper Dublin High School David Price
B0406	Hyunjin Christina Lee	Increasing Efficiency of Clean Energy Generation by Designing a Photocatalyst as an Alternative to Noble Metal Artificial Catalysts	Conestoga High School Choongkeun Lee
B0407	Rokibat Bamidele	Can Natural Substances Replace DEET?	Central High School Robert Herbstritt
B0408	Brian Henesey	Maximizing the Biosurfactant Production of B. Cereus	Springside Chestnut Hill Academy Ann Zalasky
B0409	Ria Medagam	Understanding the Inhibitory Effects of Metal Ions and Metal - EDTA Complexes on Catalase Activity	Downingtown STEM Academy Rasyalakshmi Medagam
B0410	Lauren Young	Determination on the Safe Use of Gel Nails on Humans	Bishop Shanahan High School Michael Dvorchak
B0411	Anisha Mahuli	Nitrogen Enrichment Of Human Urine Using The Freeze-thaw Method	Charter School of Wilmington Suhas Mauli
B0412	Amanda Serjani	The Affect Different Concentrations of Anthocyanins have on the Fertility and Birth Defects of Drosophila Melanogaster	Central High School Robert Herbstritt
B0413	Alan Gonzalez	Separating the Water H2O Electrolysis	Vineland High School Luzmila Badillo
B0415	Akshatha Manjunatha	Experimental investigation of Cp*TiCl3 Reductions	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor
		Computer	
B0501	Rohan Kanchana	DECODR: Establishing A Novel De Convolution Algorithm For Comprehensive Analysis Of Criser+Sanger Sequencing Data	Newark Charter School Andrea Narvaez
B0503	Jeffrey Gong	Using LSTM To Predict Stock Price	Methacton High School Robert Helm
B0504	Atharva Shanbhag	Utilizing Artificial Intelligence And Software To Demonstrate Strategies And Rationality Applied In Behavioral Game Theory	Charter School of Wilmington Sarita Shanbhag
B0505	Rohan Mehta	Using Blockchain	Souderton Area High School Karen Wolfe
B0506	Kevin Cui	Karaoke "Shazam": Audio Processing with Neural Networks	Germantown Academy Sarah Kesten
B0507	Bradley Xu	A Novel Form of Tensor Flow Object Detection to Aid the Blind in Street Crossings	High Technology High School Michael Roche
B0508	Michael Rybalkin	Handwritten Number Recognition using AI and Computer Vision	Central Bucks High School- East Judy Elinow
B0509	Jerry Lu	Signal Processing And User Interface Implementation For Eeg Data Analysis To Facilitate Tdcs Studies	Charter School of Wilmington Jennifer Toner
B0510	Baoer Li	Automated Instance Segmentation and Keypoint Detection for Spine Imaging Analysis	The Haverford School Betty Wang
B0511	Matthew Magee	Enhancing checkout with an Android app	Emmaus High School Brent Landrum
B0514	Ronak Singh	Spherical Symmetric Nanostructure Modeling	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor
		Earth & Space Sciences	
B0602	Partha Debnath	Solar Rotation Rate	Upper Darby High School Roseann Burns
B0603	Erin Gavin	A Comparison of Hubble Constant Indicators	Souderton Area High School Karen Wolfe
B0604	Jerry Ciani	How Our Solar System is Affected by Gravitational Waves	Lacey Township High School John Kuzan
B0605	Sadie Furgiuele	What Locally Available Materials Would Work If Martian Settlers Need to Repair Their Spacecraft?	Central Bucks High School- West Mark Hayden
B0606	Emily Downs	Analyzing the Effects of Light Attenuation on the Productivity of Microphytobenthos	Marine Academy of Technology & Environmental Science (MATES) John Wnek
B0608	Manav Singh	Examining the Effect of Climate Change	Lower Moreland High School Richard Becker
B0609	Andy Lau	Effects of Simulated Martian Soil on Radish Plant Growth	Springside Chestnut Hill Academy Ann Zalasky
B0610	Aidan Kelly	Water Temperature vs. Size of a Tornado	Bishop Shanahan High School Denise Kelly

	Exhibitor	Exhibit	School & Sponsor
		Engineering	
B0701	Ensar Arslan	The Progentabot Experiment	Sussex Technical high School Michele Thomas
B0702	Sophia Grace Capili	Developing Uniform Origami-Inspired Artificial Muscles for Prosthetic Limbs	Marine Academy of Technology & Environmental Science (MATES) John Wnek
B0703	Connor D'Arcy	The Best 3D Printer Infill Settings Relative to Weight	Central Bucks High School- West Mark Hayden
B0704	Sudiksha Panda	Avoid the Shock of Shocks	Methacton High School Robert Helm
B0705	Nikhila Kumar	Building the Best Solar Sail	Unionville High School Doug Vallette
B0706	Yuze Gu	Aerial Photo Analysis on Disturbed Areas	Springside Chestnut Hill Academy Scott Stein
B0708	Dennis Koh	Radio and Radar Cooperation for Sensing while Talking	Conestoga High School Kwang-Jin Koh
B0709	Carter Gassler	Soft Robotics	Avon Grove Charter School (upper) Paul Gassler
B0710	Maya Quinn	A Novel Wind Turbine For Coastal Usage	Marine Academy of Technology & Environmental Science (MATES) John Wnek
B0715	David Zhou	Moving Tennis Ball Launcher	Upper Canada College Betty Wang
B0716	Emily Wang	Wearable Lactate Sensor: Effective Biomarker Monitoring	Germantown Academy Sarah Kesten
B0717	Jake Donnini	Artificial Sonar For The Blind	Woodstown High School Chris Rickard
B0718	Siddhi Date	Modifying a Piezoelectric Device Harvesting Sound Energy	North Penn High School Melody Leithold
B0719	Amadou Gueye	Water Filter	Northeast High School James Finely
B0721	Sujhila Altayeb	The effect of plane shape on weight bearing capability	Freedom High School Graceanne Ruggiero
B0722	Joseph Gromlowicz	Using capillary forces to transport water at high efficiencies	Nazareth Area High School Lindsay Hoff

	Exhibitor	Exhibit	School & Sponsor
		Environmental	
B0801	Cindy Sako	Effect of pH and Ocean Acidification on Algae Photosynthesis	Central High School Robert Herbstritt
B0804	Amanda Wang	Fungi: A Solution to Eutrophication	Methacton High School Robert Helm
B0805	Lillian Miller	Effects of Plastic Leachates on Various Organism	Perkiomen Valley High School Mary Cutillo
B0806	Jeffrey Sun	How Slapping Zea Mays Plants Affects Brace Root Stability	Charter School of Wilmington Dawn Vega
B0807	Anna Zhou	Microplastic Mitigation: Comparing Efectiveness of Extraction Methods	Upper Dublin High School David Price
B0808	Simar Arora	The Effect of Insecticide and Radiation on the Embryonic Development of Danio rerio	Biotechnology High School Ann MacLean
B0811	Lucy Schofield	Locating Sources Of Run-off Using Daphnia Magna	Charter School of Wilmington Rick Schuder
B0812	Julia Cunningham	Recycling Greywater	Villa Joseph Marie High School Megan Preedy
B0814	Aashika Shah	Turning waste into electricity with the microbial fuel cell	Parkland High School Michael Post
		Mathematics	
B0901	Matteo Rogers	\$7.53 Candy!	G.W Carver Engineering and Science Lisa Franchetti
B0902	Ayan Lateef	Using Economic Indicators as a Factor for a Predictive Model to Estimate Potential Future Pollution for Developing Nations	Holmdel High School Josephine Blaha
B0903	Anqi Zhang	An Analysis of Big Data on Price of Wine	Academy of Holy Angels Betty Wang
B0904	Eileen Xiao	Analyzing Energy Use and Various Attributes of Buildings	Upper Dublin High School David Price
B0906	Siyu Shen	Annual Change in Multidensional Poverty Index (MPI): Is It Associated with BAseline MPI-related Measures?	Westtown School Betty Wang
B0907	Annie Wang	Bridging the Air Gap	Central Bucks High School- East Judy Elinow
B0908	Elizabeth Fellinger	Beauty With The Golden Ratio	Pennsville High School Cherie Burns
B0909	Joshua Lee	On evading students by your teacher	Liberty High School Thomas Tancin
B0911	Neha Skandan	A mathematical model to predict optimized solutions to mitigate the opiod crisis	Moravian Academy Gabriella Dee

	Exhibitor	Exhibit	School & Sponsor
		Medicine & Health	
B1002	Pranita Sannidhi	Effect of Different Caffeine and Ethanol Dosages on Ameliorating Beta-Amyloid-Plaque Induced Paralysis in C. elegans	Biotechnology High School Ann MacLean
B1003	Maab Taha	Block the Bitter: Using Sophorolipids to Suppress Bitter Taste in Malaria & HIV Drugs	Central High School Robert Herbstritt
B1004	Elana Agarwal	Chemical Exposed: The Effectiveness Of Antimicrobial Agents On Biofilms	Charter School of Wilmington Rick Schuder
B1005	Claire Moustafellos	Toxicity and LD50 of Magnesium	Springside Chestnut Hill Academy Scott Stein
B1006	Emma Lo	Integrated Analysis of Blood Biomarkers of Major Depressive Disorder Susceptible Genes	The Shipley School Betty Wang
B1008	Wenjin Sun	Near-sighted Work and Myopia Progression Among Chinese Middle School Students	The Episcopal Academy Betty Wang
B1009	Kaliya Bonner	Can Women Hear Higher Frequencies Than Men?	Pennsville High School Cherie Burns
B1011	Dagmar Daniel	Protecting Astronauts' Brains from Alzheimer's Disease	Wissahickon High School Bruce Rothenberger
B1012	Shriya Boyapati	Neurorecovery Effect Of Combination Therapies On Parkinsons Disease In-vitro Models	Charter School of Wilmington Dr. Hwan Kim
B1013	Samudrika Mohanta	Genetic Aspects of Diabetes	Downingtown West Campus High School Pramod Mohanta
B1014	Ishana Baboo	In Vitro Characterization of DNA-encoded PCSK9 Monoclonal Antibodies	Lower Merion High School Sara Campbell
B1016	Azim Shad	Testing Different Microbiological Growth Media For Growth Of Bradyrhizobia Bacteria	Charter School of Wilmington Muhammad Shad
B1017	Eileen Zhang	Analyzing the Effects of the Opioid Crisis on Lifespan	Germantown Academy Sarah Kesten
B1019	Zongren Zhang	Is Weight Status Related to Substance Use Among Adolescents? Findings from United States	Mary Institute and Country Day School Betty Wang

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	Exhibitor	Exhibit	School & Sponsor
		Microbiology	
B1101	Makana Steinmetz	Investigating Bacterial Presence in Total Suspended Solids	Marine Academy of Technology & Environmental Science (MATES) John Wnek
B1102	Shrinija Dandibhotla	Inhibition of Bacterial Growth: Natural vs. Synthetic Antibiotics	Methacton High School Robert Helm
B1104	Giovanna Onofrietti	The Inhibitory Effects of Cannabidiol and Xylitol on Pathogenic Oral Bacteria	Toms River High School North Christine Girtain
B1106	Mary Catherine Ashmore	How Does the Percent of Bleach Affect the Killing of Bacteria?	Bridgeton High School Claudia Angle
B1107	Sarah Rojas	Inducing Dysbiosis in Brown Planaria with the Single Strain Probiotics	Germantown Academy Sarah Kesten
B1108	Carly Valen	<i>How Long After a Single use Does a Disinfectant Wipe Continue to be Effective?</i>	Springside Chestnut Hill Academy Scott Stein
B1109	Jane Cohen	The Antimicrobial Properties of Oligosaccharides: A Natural Antibiotic	Moorestown High School Sean Watson
B1110	Kathleen Antonakakis	Comparison of Bacterial Growth Absorbed Through Artificial Epidermis In Organic vs Non-Organic Cosmetics	Holmdel High School Josephine Blaha
B1112	Rachel Li	The effectiveness of drug synergism between melaleuca alternifolia oil and cocos nucifera oil against fungal infections	Parkland High School Michael Post
		Physics	
B1201	Kayla Bleier	The Effects of Combution Aiding GAs on Model Rocket Engines	Jack M. Barrack Hebrew Academy Arthur Maiman
31202	Riya Keshri	The Sound of Fire	Central Bucks High School- West Mark Hayden
B1204	Vanessa Cleophat	Dry Ice Explosion	School of the Future Zachary Minken
B1205	Pranav Padmanabhan	Fractal Capacitors: Investigating A Novel Method Of Constructing Capacitors	Charter School of Wilmington David Stover
31206	Darren Wu	Rapid Thickness Identificationmethodology For The Two Dimensional Mos2 And In2Se3 Nanosheets Using Optical Microscopy	Charter School of Wilmington Regina Fody
B1209	Justin Xu	Electronic Structure Bases For Failure In	Charter School of Wilmington

 B1210 Eric Zhong
 Fluoropolymer Chains

 B1210 Eric Zhong
 Tunable Plasmonic Device Based on Dynamic Simulated BST Nanostriations

Charter School of Wilmington Rose Lounsbury

Upper Dublin High School David Price

Exhibitor	Exhibit		School & Sponsor
		Zoology	
B1301 Victoria Col	hen The Effect of V	arying Surfaces on Cockroach Gait	Springside Chestnut Hill Academy Scott Stein
B1302 Magen Swar	rtley Identifying Rag	gweed Pollen in Honey	Souderton Area High School Karen Wolfe
B1305 Carolyn Aln	Radiation On L	Radiofrequency Electromagnetic The Immune Defense And Life History soperla Rufilabris	Burlington Township High School Heather Almonte
B1306 Gianna Fidu		ophagy: Intermittent Fasting in Relation on of Stem-Cell Regeneration of Planaria	Villa Joseph Marie High School Stephanie Syzlejko
B1307 Jadira Foster	r Testing the Eff	ects of Manganese on Coral Bleaching	Foster Homeschool Kelsey Speer
B1309 Isabella Coz	zone The Ratio of Se Docks	ea Nettle Polyps on Wood Versus Vinyl	Marine Academy of Technology & Environmental Science (MATES) John Wnek
B1310 Hassan Chor	udhry The Effect of St magna	alinity on the Heart Rate of Daphnia	Biotechnology High School Ann MacLean

	Exhibitor	Exhibit	School & Sponsor
		Behavior & Social Sciences	
C0101	Samiha Zarin	Effect of Multilingualism and Early Language Acqusition on Cognitive Function	Upper Darby High School Roseann Burns
C0103	Kaitlyn Kaulback	Motivation Contemplation	Archmere Academy Glenn Hartman
C0105	Annie Wang	The Effect of the Amount of Nightly Sleep on the Difference between Working and Resting Heart Rate in High Tech Students	High Technology High School Michael Roche
C0107	Olivia Takla	Using Machine Learning and Smart Insoles for Early Detection of Autism Spectrum Disorder	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0108	Skye Scarlett	Snips, Snails, Sugar, & Spice	Souderton Area High School Karen Wolfe
C0109	Samar Oubarri	Effects of Placement into an MG Program on Teen Stress	Central High School Robert Herbstritt
C0110	Anna Fattizzo	Gender Bias in Advertising	Upper Darby High School Roseann Burns
C0111	Aarya Doshi	The Effect of Pocket Size on How Female Students Value Garments	High Technology High School Michael Roche
C0113	Emma Schrandt	Birth Order's Effect on Youngest Siblings Personality	Central Bucks High School- West Mark Hayden
C0114	Simi Edeki	How Do Emotions Affect Boundary Extension	Archmere Academy Glenn Hartman
C0116	Lena Shaddinger	Evaluation of Speed in Runners with Spikes and Trainers	Upper Dublin High School Dawn Edelman
C0117	James Donnelly	Does your sibling drive you crazy?	Freedom High School Graceanne Ruggiero

	Exhibitor	Exhibit	School & Sponsor
		Biochemistry	
C0202 (Gwen Ericson	Maximizing Knockdown in Engineered ATSB Station Prototypes In Field And Laboratory Settings	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0203	Ava Kennedy	Can a Fluorescent DNA Dye Work in Simulated Crime Scene Scenarios to Visualize DNA in Fingerprints?	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0204 Z	Zihan Yang	Applications of Exosomes The Diagnosis and Treatment of medulloblastoma	Lower Moreland High School Richard Becker
C0205 §	Shayl Chetty	Developing and Assessing the Mechanical Properties of Hydroxy-propyl Cellulose Films	Conestoga High School Dushen Chetty
C0206	Amar Dhanjal	Enzyme Catalyzed Reactions	G.W Carver Engineering and Science Lisa Franchetti
C0207 N	Maya Butani	Putting the Plant in Transplant: Plant Scaffolds for Tissue Engineering with Stem Cells	Moorestown High School Sean Watson
C0208 I	Ruiyao Zhu	Exploring Novel Drug Targets for Brain Tumor Through Transcriptomes Analysis	The Hill School Erin Ruane
C0211 I	Phoebe Vallapureddy	Effects of Varying pH on Lysozyme in Egg White	Central Bucks High School- East Judy Elinow
C0212 I	Hyunkyung Katherine Lee	How Surrounding Charges Affect Color Detection by the Retinal Chromophore	Conestoga High School Choongkeun Lee
		Botany	
C0301 I	Lilian Boffin	Growing Plants in Blood v.s. Water	Woodstown High School Chris Rickard
C0302 N	Micaeli Dym	The Effect of Different Media-Based Vertical Hydroponic Systems on the Wet Biomass of Brassica Oleracea	High Technology High School Michael Roche
C0303 H	Keira Trout	Nature vs. Nurture: Which is Better?	Perkiomen Valley High School Mary Cutillo
C0304 I	Esben Nielsen	The Effect of Inoculation with Rhizobium or Pseudomonas putida on the Crop Yield of Alfalfa Plants	High Technology High School Michael Roche
C0305 I	Brad Miller	The Application of Melatonin to Stimulate Growth in Mung Beans	High Technology High School Michael Roche
C0307 N	Mahari Brown	Bean Growth in Saltwater	G.W Carver Engineering and Science Lisa Franchetti
C0308	Annetta Yuwono	Squashing Cancer	Julia R. Masterman Kathleen Tait
C0309 V	Veronica Swartz	Determining Phosphate-Sensing in Lettuce Roots	Central Bucks High School- South Mark Hayden

	Exhibitor	Exhibit	School & Sponsor
		Chemistry	
C0403	Harini Shankar	Analysis of E-cigarette Emissions and Comparison to Traditional Tobacco Cigarette Emissions	Central Bucks High School- South Mark Hayden
C0405	Benjamin Shain	Comparison of Legitimate and Counterfeit Magic the Gathering Cards in Terms of Percent Transmittance	High Technology High School Michael Roche
C0407	Sara Kuzan	The Effectiveness of Moisturizers	Lacey Township High School Alexandra York
C0408	Irene Biju	Biodiesel: The fuel of the Future	Methacton High School Robert Helm
C0409	Cameron Morgan	What Sports Drink has the Highest Level of Electrolytes?	Woodstown High School Carol Althouse
C0411	David Yan	Defeating Climate Change: An Efficient Electrochemical Cell To Capture Carbon Dioxide Out Of The Atmosphere	Charter School of Wilmington Dr. Heffner
C0413	Taylor Emanuel-Jackmon	The Effect of Formation Time on Hydrogel Bead Diffusion	Upper Darby High School Roseann Burns
C0414	Mason Melito	Utilizing a 5 % Citric Acid Solution to Formulate a Biodegradable Alternative to Plastic Using Various Leaf Types by Studying Leaf Physiognomy	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0416	Nhien Dinh	Does Temperature or Concentration affect pH?	Pennsauken High School Tim Gilbride
C0417	Dylan Kuang	Effect of Plasticizers on the Decomposition of Bioplastics	Methacton High School Robert Helm
C0418	Isabel Portner	Testing The Filtration of Chromium-6 Using Ion- Exchange Resins	Julia R. Masterman Kathleen Tait
C0419	Ciana Brady	Essential Oils vs. Harmful Hydrocarbons	Philadelphia Academy Charter High School Christine Dunne
C0420	Jason Chang	The Effects of Temperature Change on Vitamin C Levels in Fruit	Upper Dublin High School Dawn Edelman
C0422	Sana Nauman	What's cooking? An exploration of nitrites in foods	Parkland High School Michael Post

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	Exhibitor	Exhibit	School & Sponsor
		Computer	
C0501	Eeshwar Krishnan	Using Computer Analysis to Predict the Folds in a Protein	PA Leadership Charter School Sriram Krishnan
C0503	Daniel Luo	Optimization of NLP Through Genetic Algorithms	Upper Dublin High School Dawn Edelman
C0504	Aastha Gautam	Identify Objects in Images and Videos Using Computer Vision Technology's and Machine Learning.	Central Bucks High School- East Judy Elinow
C0506	Edmond Niu	The Influence of Tennis Ball Condition on Bounce Height	High Technology High School Michael Roche
C0507	Carter Hancock	Neural Networks and Genetic Algorithms	Souderton Area High School Karen Wolfe
C0509	Jeffrey Cheng	Neural Networks in Medicine: Diabetic Retinopathy Detection	Germantown Academy Sarah Kesten
C0510	Varoon Raghupathi	Maximizing Airport Efficiency	Council Rock High School- North Terese Grateful
C0511	Kristen Park	Analysis of the Health of Brassica oleracea var. sabellica Leaves in an Aeroponics System Using Machine Learning	High Technology High School Michael Roche
C0512	Lalitha Loka	Optimization of a breast cancer neural network to improve success of diagnosis of fine needle aspirations	Parkland High School Michael Post
		Earth & Space Sciences	
C0601	Kamil Vazquez	Freezing Rocks	Mariana Bracetti Academy Charter Scho Molly Maldonado
C0602	Elena Tawa	Pathways in Warped Space-time	Central Bucks High School- East Judy Elinow
C0603	Abigail Meyer	Investigating Which Wetlands Vegetation Acts as the Best Natural Nitrogen and Phosphorus Filter	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0604	Mehir Badlani	Analysis of Surface Level CO2 Concentration and pH Around the Globe Using Statistical Data	Central Bucks High School- South Mark Hayden
C0605	Michael Hudak	An Examination of Radon Levels Compared to Soil Classification	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0606	Emily Byrne	The Effect of Sulfates and Nitrates on Precipitation in New Jersey	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0608	Gopiga Dass	Red Thumbs The Purification of Martian Regolith for Plant Growth	Lower Moreland High School Richard Becker
C0400		Mananina Maranatia Wanan	Villa Land Maria IV-1. Caland

C0609 Megan Kraunelis Measuring Magnetic Waves

Villa Joseph Marie High School John Gentile

	Exhibitor	Exhibit	School & Sponsor
		Engineering	
C0701	Shiva Subramanian	The Effect of an Angled Suspension System on the Balance of Motorcycles	High Technology High School Aimee Babbin
C0703	Eric Mass	Building a Mechanical Clock	Central Bucks High School- West Mark Hayden
C0705	Sitian Wang	A Novel Design of Fire Detection and Distinguishing Robot Based on SSD Algorithms	The Hill School Erin Ruane
C0706	Leah Baker	Destroying Domes: Testing the Structural Strength of Different Types of Geodesic Domes	Bishop Shanahan High School Stefanie Baker
C0707	Luke Price	The Effect of Angle of Attack on Different Airfoil Types	Upper Dublin High School Leanne Jones
C0708	David Volchonok	On Echo's and Spatial Change	Lower Moreland High School Richard Becker
C0709	Matthew Sparling	Evaluating Drone Flight Stability Using Different Sling Configurations	Penncrest High School Jay Sparling
C0711	Ashley Tang	Color Wheel Oil Paint Dispenser	The Episcopal Academy Matthew Memmo
C0713	Jack Ringenbach	Constrained Layer Damping	Bishop Shanahan High School Daniel Ringenbach
C0714	Riva Sharma	Systematic Nanogenerator Based on the Concept of Snow Triboelectrification	Cherry Hill High School East Brian Vernachio
C0717	Cayla Beasley	Hydropower: The Future of Clean Energy	Woodstown High School Carol Althouse
C0718	Danielle Murat	Utilizing Sources of Renewable Energy to Construct a Hand-Crank Generator	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C0720	Mikail Jaffer	Building a cost-effective autonomous unmanned aerial vehicle	Moravian Academy Gabriella Dee
C0721	Liam Allen	Kinetic Energy in a Practical Sense	Nazareth Area High School Lindsay Hoff

	Exhibitor	Exhibit	School & Sponsor
		Environmental	
C0801	Willow Kaplan	The Decomposition Rate of Biodegradable Cups	Upper Dublin High School Dawn Edelman
C0802	Maria Karakousis	Eutrophication and Cyanobacteria	Julia R. Masterman Kathleen Tait
C0803	Harold Huang	The Effects of Rotten Organic Matter on Decomposition of Cellulose in Paper Towels in Compost Soil	High Technology High School Michael Roche
C0804	Rohan Sharma	How Can We Restore The pH Of Our Oceans	Central Bucks High School- West Mark Hayden
C0806	Alicia Wexler	Plastic Havoc	Avon Grove High School Carl Wexler
C0809	Stanley Gian	The Effects of Deicing Salts on the Photosynthesis of Elodea	Upper Darby High School Roseann Burns
C0810	Sophia Jarrar	The Bacterial Bioremediation of 3-Nitrobenzanthrone	Upper Dublin High School Joanne Lilliendahl
C0811	Emily Luo	Testing the Efficacy of the Sediment-Microplastic Isolation (SMI) Unit Protocol Against Extraction Method 1 in Filtering Microplastics from Sediment	High Technology High School Michael Roche
C0812	Molly Doppler	Prokaryotic Superheroes Save the Bay	Sussex Technical high School Michele Thomas
C0813	William McQueston	Plant pH	Woodstown High School Carol Althouse
C0814	Lea Wang	Effective Filtration Of Amoxicillin From Wastewater Using Activated Charcoal Filters	Council Rock High School- South Matthew Ciaudelli
C0815	Nicholas Worrall	How Effective Are Wax Worms At Breaking Down Different Types Of Plastics?	Central Bucks High School- West Mark Hayden
C0816	Prisha Srivastava	Could algae be the answer to global warning	Parkland High School Michael Post
C0817	Ilyas Kose	Effects of differing feed compositions on the rearing of crickets for consumption	Moravian Academy Gabriella Dee
C0818	Alex Gundry	Comparing biogas generators	Nazareth Area High School Lindsay Hoff
C0819	Samit Mohapatra	Microplastic and nanoplastic removal from water by activated carbon made from eaves	Moravian Academy Gabriella Dee
		Mathematics	
C0902	Kavish Saini	Relationship Between the Area of a Circle to Other Similar Equilateral Polygons in Regard to Radius	Downingtown STEM Academy Ritu Saini
C0906	Yulun Wu	Do Developers Have a Sense of Obligation to Consider the Ethical Implications of their Code?	Northfield Mount Hermon Betty Wang

	Exhibitor	Exhibit	School & Sponsor
		Medicine & Health	
C1001	Susan Deering	Designing a Prosthesis to Aid Hand Motion of Violin	Avon Grove High School Ann Deering
C1003	Emma Cartnick	Analyzing the Long Term Effects of Osteoarthritis on the Biomechanics of the Human Knee	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C1004	Maria Thomas	The Effect of Homeopathic Remedies and Synthetic Antibiotics on the Inhibition Concentration and Resistance of E. coli K-12.	Downingtown STEM Academy Joyce Vas
C1005	Prithvi Parthasarathy	Analysis of Thoracic Deformity and Pulmonary Function in Patients with Early Onset Scoliosis (EOS)	Great Valley High School Padhmaja Kannan
C1006	Jewel La Bletta	Investigating the Effects of E-Cigarettes Aerosols on Drosophila	Cherry Hill High School West Brian Grillo
C1007	Nicole Wealand	Ankle Taping to Prevent Inversion Injuries While Maintaining Flexibility	Upper Dublin High School Dawn Edelman
C1008	Norah Alavi	The Association Between Daphnia Heart Rate and E- Liquid	Upper Dublin High School Joanne Lilliendahl
C1009	Kera McCarthy	Leaves as Human Tissue?	Julia R. Masterman Kathleen Tait
C1010	Ashley Rosica	The Effective of Shampoo on the Tensile Strength of Hair	Villa Joseph Marie High School John Gentile
C1011	Maria Giannakopoulos	The Effects of Athletic and Academic Stress on Heart Rate Variability	High Technology High School Michael Roche
C1012	Chirag Choudhary	The Effect of Chloramphenicol Resistance Conferred by Tn2424 and MarR11 Genes Escherichia coli Resistance to T4 Bacteriophage	Unionville High School Satyajit Choudhary
C1013	Christopher Sarpong	NIght Shift	Philadelphia Academy Charter High School Amanda Burau
C1015	Emily Marshall	The Effect of the Brand of Aspirin on Dissolution Rate	Upper Dublin High School Dawn Edelman
C1016	Shreyas Ramkumar	Methods to Detect the Body's Postural Compensations During Recovery from a Back Injury	Central Bucks High School- South Mark Hayden
C1017	Gabriella Kantor	Potential Medicational Cure for Grey Hair	Avon Grove Charter School (upper) Gennadiy Kantor
C1018	Grace Hercik	The effect of sports drinks on resting heart rate and blood pressure	Freedom High School Graceanne Ruggiero

	Exhibitor	Exhibit	School & Sponsor
		Microbiology	
C1102	Pranay Linga	Antibacterial Effects Of Various Spices On Lactobacillus Acidophilus	Charter School of Wilmington Ravik Linga
C1103	Irene Abraham	Bioremediation with Oil-Eating Microbes for Oil Spills	Downingtown STEM Academy Abey Jacob
C1104	Braden Churches	Catchin' Too Much Sun: The Effects of UV Rays	Dock Mennonite Academy High School Kellena Smith
C1105	Rayan Jawa	Creating More Effective Vaccines Through Bioinformatic Identification of Immunogenic Epitopes.	Holmdel High School Josephine Blaha
C1107	Lakshmi Yannam	Effectiveness of Solar Disinfection on Escherichia Coli in Various Colored Water Bottles	Marine Academy of Technology & Environmental Science (MATES) John Wnek
C1108	Jai'lyn Lagrone-Lassiter	Damaging Ultraviolet Rays	G.W Carver Engineering and Science Lisa Franchetti
C1109	Kristina Krishna	Which Yogurt Contains the Most Bacteria?	Woodstown High School Carol Althouse
C1110	Gina Olivieri	How Clean is Your Mouth?	Philadelphia Academy Charter High School Christine Dunne
C1111	Thanmayee Yalamanchi	Studying the Antibacterial Effects of Purified Plant Extracts on Pathogenic Bacteria	Central Bucks High School- South Mark Hayden
C1113	Sunskriti Gupta	Spices Vs. Cancer	Methacton High School Robert Helm
C1115	Sarah Santos	Various Methods for the Quantification of Growth of Pyrocystis fusiformis	Marine Academy of Technology & Environmental Science (MATES) John Wnek

1201		Dharaiaa	
1201		Physics	
	Allison Courtenay	Generating More Electricity by Decreasing Temperature	Upper Dublin High School Dawn Edelman
1202	Jen Parsons	<i>Optimal Hair Bun Placement to Reduce Drag for Swimmers</i>	Upper Dublin High School Dawn Edelman
1204	Zachary Abudahri	Wireless Electricity	Upper Darby High School Roseann Burns
1206	John Zhang	Gravity Coefficient Factor Study of Object in Different Density Fluids/Substances	Vineland HS AMSA Miriam Jamil
1209	Annalise Schuck	Effect of Average Thrust on Model Rocket Engines of the Same Total Impulse	Villa Joseph Marie High School John Gentile
1210	Manuel Thomas	Electromagnetic Induction Efficiency: What is the Most Effective Way to Reduce a Current?	Downingtown STEM Academy Joyce Vas
1211	Alexander Postovskiy	The Effect of Wall Paint Sheen on the Color Rendering Accuracy of Reflected Light	High Technology High School Michael Roche
1212	Margaret Quiroz	Increasing Destructive Interference in Sound	Bishop Shanahan High School Antonio Quiroz
1215	Nicole Nguyen	Measuring Sound Absorption Properties in Pine Lake Park and Sedge Island	Marine Academy of Technology & Environmental Science (MATES) John Wnek
1217	Michaela Caldwell	Using Cymatics to Find Node Patterns in Chladni Plates	Upper Dublin High School Dawn Edelman
1218	Elizabeth Bowe	Measuring the Surface Tension of Water	Villa Joseph Marie High School John Gentile
		Zoology	
1301	Randilyn Saul	How Weather Affects Turkey Vulture Roosting Behavior	Coventry Christian School Josh Oliver
1303	Shealyn Lawless	Developing and Testing a Low-Cost Deicing Agent with Minimal Faunal Impacts on Palaemonetes spp.	Marine Academy of Technology & Environmental Science (MATES) John Wnek
1304	Bridget Magee	The Effect of Light Pollution on Courtship Behaviors of Drosophila melanogaster	Souderton Area High School Karen Wolfe
1305	Payton Przyuski	Chronic Wasting Disease	Central Bucks High School- West Mark Hayden
1306	Abigayle Heathwaite	Effect of Nanosilver of Aquatic Animals	Woodstown High School Carol Althouse
1307	Sangeetha Bhuyan	Protein Denaturation of Invasive Spotted Lanternfly	Germantown Academy Sarah Kesten

	Exhibitor	Exhibit	School & Sponsor
		Behavior & Social Sciences	
D0101	Veronika Medvedeva	The Effect of Phones on a Student's Ability to Focus	Upper Dublin High School Dawn Edelman
D0103	Vox Ch'ng	Predictors of Morality	Cherry Hill High School East Brian Vernachio
D0104	Aidan Garber	How Anxiety is Affected by Music and Meditation Methods in a High School Student.	Cherry Hill High School West Brian Grillo
D0107	Lucas Collins	The Effect of Pop Up Advertisements on Reading Comprehension	Upper Darby High School Roseann Burns
D0108	Marie-Lainie Galdo	How Does Multi-tasking Affect the Efficiency of the Brain	Lower Moreland High School Richard Becker
D0109	Kayla D'Eletto	Can Disabled Voices Be Able To Use Voice ID on AI?	Germantown Academy Sarah Kesten
		Biochemistry	
D0202	Josiah Saddick	Biogas Recovery for Renewable Energy	Upper Darby High School Roseann Burns
D0203	Lucy Wang	Assessing the Roles of Colitis-Associated Myofibroblast Cells	Methacton High School Robert Helm
D0204	Jessie Jin	Exploration of Protein Denaturation	Council Rock High School- North Terese Grateful
D0205	Hannah Gong	The Effect of Different Antacids on Gastric pH	Upper Dublin High School Dawn Edelman
D0208	Uma Bapat	The Effect of Production Methods on Vitamin C in Fruits	Methacton High School Robert Helm
D0209	Morgan Polk	Let It Glow	Woodstown High School Stephen Ordog
D0210	Brianna Suliguin	The Effect of Different Sweeteners on the Anaerobic Respiration of Saccharomyces cerevisiae	Marine Academy of Technology & Environmental Science (MATES) John Wnek
D0211	Danielle Hughes	How Much Gas is Produced When Food Decomposes?	Woodstown High School Jennifer Sorbello
D0212	Sammit Bal	Effects of varying water temperature on the rate of cellular respiration in germinating and nongerminating peas	Parkland High School Michael Post
D0213	Sathvika Rajkumar	<i>The Study of Metabolic Reactions and the Perceived</i> <i>Benefits</i>	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor
		Botany	
D0301	Jordyn Smith	The Ripening Process of Musa acuminata	Salem County Vocational Technical School Kristen Redkoles Polk
D0302	Nicole Truong	Discovery Chlorophyll using Chromatography Paper	Philadelphia Academy Charter High School Christine Dunne
D0304	Sherly Chen	Effect of Ginkgo Biloba on Drosophila Melanogaster	Central High School Robert Herbstritt
D0305	Sneha Chaudhuri	Study of Efficient Watering Methods for Plant Growth	Upper Dublin High School Joanne Lilliendahl
D0306	Katherine Rasmussen	Underwater Salad: How Raphanus Sativus Reacts to Being Grown in an Underwater Environment	Vineland HS AMSA Marie Donato
D0307	Keyan Vojdani	Completely Compost: A Study of How Types of Fungi Affect the Decomposition Rate of Compost	Moorestown High School Sean Watson
D0308	Sameeksha Panda	Plants Vs Soil Erosion	Methacton High School Robert Helm
D0309	Klement Swartz	Correlating Root Cap Cells and Seedling Emergence in Ocimum basilicum	Tamanend Middle School Mark Hayden
D0310	Roshen Gandotra	Comparisons of nitrogen fixation techniques to enhance plant growth	Moravian Academy Gabriella Dee
		Chemistry	
D0401	Suraj Samudrala	A Curative Catalyst: Pineapple's Chemical Reaction with Gelatin	Holicong Middle School Robert Meletti
D0402	Jabe Cox	The Effect of Temperature on Solubility of CO2 in Water	Upper Darby High School Roseann Burns
D0403	Anna Lu	How to Make Ibuprofen More Efficacious	Methacton High School Robert Helm
D0404	Jamerika Grandberry	Benefits of Composting	Temple Upward Bound Amanda Burau
D0407	Scott Schlackman	Cleaning Solutions Efficacy in Protein Residue Removal	Upper Dublin High School Joanne Lilliendahl
D0410	Deven Chakrabarti	Low Energy Desalination of Seawater Using Selective Solvents, Part 2	Moorestown High School Sean Watson
D0411	Emma Joyce	The Effect of Saturation on Aluminum Potassium Sulfate Crystal Growth	Salem County Vocational Technical School Kristen Redkoles Polk
D0413	Mai Hukuoka	Effects of Substrate concentration and environment temperature on the rate of catalase reactions	Parkland High School Michael Post

Delaware Valley Science Fairs 2020 72nd Delaware Valley Science Fair (D) $_{M_{Sponsored By DVSF}}$

	Exhibitor	Exhibit	School & Sponsor	
	Computer			
D0501	Varun Singh	Simulating Frequency Analysis in Java	Lower Moreland High School Richard Becker	
D0503	Samuel Wang	Predicting Influenza Outbreak with a Machine Learning Model	Germantown Academy Sarah Kesten	
D0504	Sreekara Dandibhotla	Image Recognition Visual Aid for Visually Impaired People	Methacton High School Robert Helm	
D0507	Sanika Kothari	Fusion-plasma response modeling through neural network machine learning	Parkland High School Michael Post	
D0508	Okezue Bell	MedMaster - an application tailored by and for medical students	Moravian Academy Gabriella Dee	
D0510	Rithik Raghuraman	An autonomous self-driving car	Parkland High School Michael Post	
		Earth & Space Sciences		
D0601	Ethan Thomson	The Impact of Ground Rod Depth on Ground Rod Resistance	Owen J Roberts High School Graeme Thomson	
D0602	Luke Olmstead	The Effect of Substrate on Wave Transmission	Upper Darby High School Roseann Burns	
D0603	Holly Binkowski	Ocean Acidification on Mytilus edulis Shells	Pope John Paul II High School Clayton Cottman	
D0604	Parmesh Sivakumar	A Comparative Analysis of Bio-diesel from Different Vegetable Oils	Methacton High School Robert Helm	
D0605	Brittany Zhang	Finding Conditions for Maximum Wind Enery Production	Pennbrook Middle School Carol Ward	

	Exhibitor	Exhibit	School & Sponsor		
	Engineering				
D0701	Keanan Alemao	Exploring Aerodynamics	Holicong Middle School Robert Meletti		
D0703	Alaina Gassler	Designing an Improved Grabber Device	Avon Grove Charter School (upper) Paul Gassler		
D0704	Paul Gill	How Does Drumstick Material Affect Its Rebound?	Bishop Shanahan High School Ann Massimi		
D0705	Jacob O'Donnell	A Wind-Wind Solution	Bishop Shanahan High School Jerry O'Donnell		
D0707	Kaylee Beener	Using Solar Energy to Charge Electronics	Coventry Christian School Josh Oliver		
D0708	Vrishti Yadav	Smart Electronic Compression Glove for Arthritis Patients	Pennbrook Middle School Carol Ward		
D0709	Hansen Smith	Geo-Engineering Reflective Materials Used to Reduce Air Conditioning	Valley Forge Military Academy Lori Smith		
D0710	Claire Fader	Plants to Paper: Is It a Durable Alternative?	Bishop Shanahan High School Andrew Fader		
D0712	Emma Engle	Brainwave Technology For Control of 3-D Printed Prosthetics	Marine Academy of Technology & Environmental Science (MATES) John Wnek		
D0713	Varun Pandian	Measuring vital signs using the photoplethysmography technique	Parkland High School Michael Post		

Exhibitor	Exhibit	School & Sponsor
	Environmental	
D0801 Phillis Wan	The Effect of Nutrient Pollution on the Bioluminescent Intensity of Pyrocystis sp.	Unionville High School Sandra Litvin
D0803 Mason Mills	Marine Plastic Pollution: Islands of Trash	SCSSD (Daretown) School Rick Hughes
D0804 Malavika Menon	Ecofriendly Encapsulation for Efficient Use and Controlled Release into the Environment	West Chester East High School Jayant Menon
D0806 Ryan Lange	The Effects of Varying Nitrogen Concentrations on the Bioluminescence and Growth Rate of Pyrocystis fusiformis	Marine Academy of Technology & Environmental Science (MATES) John Wnek
D0807 Nina Feinberg	Organic vs Conventional: Does Organic Produce Increase Fertility and Provide Health Benefits to Drosophila Melanogaster?	Central High School Robert Herbstritt
D0808 Samantha Williams	Effectiveness Of Floating Treatment Wetlands To Lower Nitrate Levels In Surface Water	Woodstown High School Jennifer Sorbello
D0809 Sarah Beth Sandifer	Comparison of Geotextiles and Grass on Erosian Control	Germantown Academy Sarah Kesten
D0810 Moesharlynn Torto	Affordable Archimedes: Testing different Quanitities of charcoal to create low-cost water with Archimedes Function	Vineland HS AMSA Marie Donato
D0811 Jazz Ch'ng	Effects of Bacteria on Petroleum Phytoremediation by Poplar Trees	Cherry Hill High School East Brian Vernachio
D0812 Reva Gandhi	Bioskin: An innovative way of increasing shelf life and reducing plastic waste	Parkland High School Michael Post
D0813 Yan Yu	Solar Distillation: Turning seawater into freshwater	Moravian Academy Gabriella Dee

		Mathematics		
D0901	Ryan Clarici	Efficiency in Determining Roots of Equations	Upper Darby High School Roseann Burns	
D0902	Kashti Satish Umare	Using Fractals to Analyze Phenomenon of Nature	Downingtown STEM Academy Shilpa Umare	
D0903	Alexander Robertson	Modeling Human Population Growth Using Differential Equations	Holicong Middle School Robert Meletti	
D0904	Matthew McWeeney	An Analysis of How Modern Technology Has Directly Impacted Music: What Do the Numbers Say?	Marine Academy of Technology & Environmental Science (MATES) John Wnek	
D0908	Amanda Guan	The Effect of a Dynamic Rebalancing Strategy on Investment Portfolio Returns	High Technology High School Michael Roche	

	Exhibitor	Exhibit	School & Sponsor
		Medicine & Health	
D1003	Megan Lim	Effectiveness of Concussion Headbands and Helmets	Upper Dublin High School Dawn Edelman
D1004	Diamante Daniel	Nanopillars to Protect Astronauts from Infection	Wissahickon High School Bruce Rothenberger
D1005	Katherine Elmer	Which Natural Home Remedy is Best for Preventing Growht of Candida albicans Compared to an Antifungal	Marine Academy of Technology & Environmental Science (MATES) John Wnek
D1006	Emma Berry	The Pulse Behind The Strokes Of Swimming	Woodstown High School Stephen Ordog
D1008	Suhan Neema	The Effect of Vaping Flavorings on Planaria Regeneration	Unionville High School Sandra Litvin
D1010	Rahela Dolha	The Effectiveness of the Influenza Vaccine on Asthma Patients	Souderton Area High School Karen Wolfe
D1011	Ty Walker	Does Kinesiology Tape Enhance Athletic Ability?	Woodstown High School Stephen Ordog
D1013	Kayla Heron	How Much Do You Rely on Your Dominant Eye?	Philadelphia Academy Charter High School Christine Dunne
D1014	Aishwarya Suresh	Toxicological effects of electronic cigarette vapors on daphnia magna	Parkland High School Michael Post
D1016	Michael Alchaer	K-nearest and support vector liver cancer detection using (MRI's)	Moravian Academy Gabriella Dee
		Microbiology	
D1101	Elise Sperry	Does the 5 Second Rule Really Exist?	Woodstown High School Jennifer Sorbello
D1102	Christian Prasetyo	The Effect of Excess Iron on Fruit Flies	Central High School Robert Herbstritt
D1103	Jack Schuler	Mold in the Bread Basket	Pennsauken High School Tim Gilbride
D1107	Devyn Stek	A 12-Month Surveillance Seasonality Study of Toxocara in Montgomery County Pa	Villa Maria Academy High School Nicole Cronin
D1109	Mason Matich	Natures Navigator: A First Step Towards A Fully Autonomous Car System Inspired By Slime Mold	Holicong Middle School Robert Meletti
D1110 .	Joseph Ochieng	PET Power	Coventry Christian School Josh Oliver
D1111	Daud Tariq	Effects of urea on algae anabaena	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor
		Physics	
D1202	Dhaval Tantry	The Absorption of Impact Force By Different Materials	Holicong Middle School Robert Meletti
D1203	Katelyn Deal	Does The Panel Count Of A Soccer Ball Affect The Distance?	Woodstown High School Stephen Ordog
D1206	Leah Blasko	The Science of Spin and Curve of a Soccer Ball	Coventry Christian School Josh Oliver
D1207	David Styer	Lasers	Styer Homeschool Peggy Styer
D1208	Thomas Hagan	An Analysis of What Makes A Chart-Topping Song	Marine Academy of Technology & Environmental Science (MATES) John Wnek
D1209	Chinmay Bapat	The Effect of Earth's Rotation on Simple Harmonic Motion	Methacton High School Robert Helm
D1210	Wisdom Ufondu	Repairing holes in the Ozone Layer through the electrolysis of water	Moravian Academy Gabriella Dee
D1211	Homare Yamashita	Relationship between wheel inertia and rotational kinetic energy	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor
		Zoology	
D1301	Summer Sakowicz	Seasonal Community Shifts and Over Winter Populations of Fish and Crustaceans in Northern Barnegat Bay	Marine Academy of Technology & Environmental Science (MATES) John Wnek
D1302	Sophia Ortiz	The Effects of Age on Female Fertility in Drosophila Melanogaster	Central High School Robert Herbstritt
D1303	Erin Magee	Artemia Response to Soy Lecithin and Cellulose Oil Dispersant	Souderton Area High School Karen Wolfe
D1305	Harry McCobb	Finding an Onset to Parkinson's Disease	Central High School Robert Herbstritt
D1306	Tiffany Wong	The Best Method of Anesthesia on Drosophila Research	Central High School Robert Herbstritt
D1307	Madison Nichols	Comparison of Mouth Bacteria Between Dogs that Feed on Dry Versus Wet Food	Marine Academy of Technology & Environmental Science (MATES) John Wnek
D1308	Sofia Trone	The Effect of Common Water Pollutants on Dugesia tigrina	Avon Grove High School Richard Trone
D1310	Spencer Westover	Effect of Industrial Toxins on C. elegans Behavior	Germantown Academy Sarah Kesten
D1311	Hannah Elrod	The Memory of Equine	Salem County Vocational Technical School Kristen Redkoles Polk
D1312	Alyssa Calabrese	What Are The Effects Of Different Energy Drinks On Daphnia's Heart Rate?	Woodstown High School Jennifer Sorbello
D1313	Quinn Neill	Does the Type of Food Used Affect the Growth of a Fish?	The Marine Academy of Science and Technology (MAST) Liza Baskin
D1315	Riva Kaneria	Effect of Ferula assa-foetida on the activity and mortality of Lycorma delicatula: A natural approach to controlling populations of Lycorma delicatula to mitigate crop devastations	Parkland High School Michael Post
D1316	Evan Lan	The effect of antioxidants on the regenerative properties of planaria	Parkland High School Michael Post
D1317	Taehyuk Yang	The effect of radiation on the regeneration rate of planarians	Parkland High School Michael Post

	Exhibitor	Exhibit	School & Sponsor		
	Behavior & Social Sciences				
E0103	Cecilia Zarinko	<i>Which Is More Flexible? Dancers 6-10 Or Dancers 11- 15?</i>	Upper Pittsgrove School Danielle Taulane		
E0104	Cassie Kempinski	The Effectiveness of Subliminal Priming on Calming Eighth Grader's Stress Levels	Holicong Middle School Carrie Bannon		
E0105	Patrick Bellew	Does Color Affect Memory?	St. Aloysius Academy Mary Jo Bellew		
E0106	Emma Allcorn	Does Practice Make Perfect?	Oldmans Township School Jason Winistorfer		
E0107	Bryan Wu	Lumosity Effectiveness on Brain	Indian Valley Middle School Amy Welsh		
E0108	Jiaray Shi	What Color do People Associate with their Emotions?	St. Peter's School Laura Bader		
E0109	Helen Potts	Simply Sensational: How the Different Senses Trigger Emotion	Academy of Notre Dame de Namur Jessica Reid		
E0110	Dylan Burke	Wired Differently	Arcola Intermediate School Sharon Branca		
E0112	Darren Lin	Eye Can't See It: Color Contrast in Reading	Woodrow Wilson Middle School Martrice Donaldson		
E0113	Vladimir Bondar	The Effect of Using One to One Technology on Academic Performance and Information Retention	William Allen Middle School Ken Lynch		
E0114	Da'Najia Hicks	Can You Make Your Body Talk?	Galloway Township Middle School Stefanie Tripician		
E0115	Sabrina Gambale	Visual Conditions and Their Effect on Magic Eye Images	St. Jude School Emily Loeffler		
E0116	Aidan Moskowitz	Which Color Catches Your Eye?	Delran Middle School Richard Carmeron		
E0118	Gabrielle Effendian	Beat The Clock	Meredith Elementary Christopher Leshock		
E0119	Samantha Faith Capili	Is There A Correlation Between Optical Illusion Susceptibility and Reading Speed?	Toms River Intermediate East Sylvia Piznik		

	Exhibitor	Exhibit	School & Sponsor	
Biochemistry				
E0201	Olivia Valania	Got Gluten?	Ursuline Academy Eileen Koenig	
E0204	Brynn Galloway	Generic vs. Brand Name Pain Relievers	Philadelphia Academy Charter Grade School Joseph Eagan	
E0205	Shriya Patel	Which Form of Advil Dissolves the Quickest in Artificial Stomach Acid?	Toms River Intermediate North Katie Keller	
E0207	Jack Roarty	The Sweet Science Of Making Marshmallows	Immaculate Heart of Mary Nichol Carroll	
E0208	Arushi Patel	How Does Temperature Affect the Rates of Enzyme- Catalase Reactions?	Manalapan-Englishtown Middle School Dawn Danza	
E0209	Davida Dockwiller	Enzyme Catalyzed Reactions	Green Woods Charter School Erin Richards	
E0211	Dylan Wen	Does Chilling Onions Keep You from Crying?	Arcola Intermediate School Sharon Branca	
E0212	Daisy Maturo	Does Your Medication Need More Conservation?	Haddonfield Friends School Earlene Sorrento	
E0214	Aidan Carlson	Plant Clock	Elsinboro Township School Joe Sarbello	
E0215	Jake Frank	The C in Veggies	St. Aloysius Academy Micehlle Frank	
E0218*		Gelatin Flavors Affecting Setting Time	St. Andrew School - Drexel Hill Steven Lacey	

	Exhibitor	Exhibit	School & Sponsor	
Botany				
E0303	Jared Bacon	What Substances Will Keep Flowers Alive The Longest?	Elsinboro Township School Joe Sarbello	
E0304	Ella Holmes	The Effect Of Different Fertilizers On Plants	Ursuline Academy Eileen Koenig	
E0305	Charlotte Scalora	Influence Of Magnets On Plants	Immaculate Heart of Mary Nichol Carroll	
E0308	Khushi Thaker	Nitrogen in the Soil, Will it Spoil?	Indian Valley Middle School Amy Welsh	
E0309	Mason Foxwell	Grow With the Flow	Milford Central Academy Jacqueline Powers	
E0310	William Whiting	Plants Can Reduce Oil. Why Can't We?	Haddonfield Friends School Earlene Sorrento	
E0312	Tyler Plumsky-Adams	Does Different Natural Water Sources In Delaware Affect A Plant Health?	Ursuline Academy Eileen Koenig	
E0314	Kaitlyn Muller	Does the Amount of Nitrogen in Fertilizer Affect Plant Growth?	Toms River Intermediate North Katie Keller	
E0315	Evan Cohen	How Different Colored Light Affects Plants	St. Peter's School Laura Bader	
E0317	Zyon Chance	Teenage Mutant Ninja Seeds	ExCel Deena Osmer	
E0320	Blaise Foster	Soil vs. Hydroponics	Haverford Middle School Danielle Berardoni	
E0321*		Circadian Rhythm Effect on Non-refrigerated Post- harvest Spinach's Nutritional Value	Haverford Middle School Danielle Berardoni	

	Exhibitor	Exhibit	School & Sponsor
		Chemistry	
E0401	Erynn Geiss	Orange You Glad I Picked This Topic?	Philadelphia Academy Charter Grade School Darlene Allison
E0402	Sienna Boos	How Does The Substance Tested Using The Kastle- Meyer And Its Dilution Affect The Results Of The Test?	Lenape Middle School Jennifer Yeager
E0403	Emily Barnum	Polarity vs. Clarity	Indian Crest Middle School Melissa Carnahan
E0404	Naimur Abir	Energy Worth Your Salt	Galloway Township Middle School Maddie Stapleton
E0406	Jolene Frey	Is Sugar the Culprit of Tooth Decay?	Abington Junior High School Ed Steinhardt
E0410	Julia Carroll	A Boost Of BPA	Immaculate Heart of Mary Nichol Carroll
E0413	Maura Read	Soakin' It Up: The Fabric Dye-namic	Ursuline Academy Eileen Koenig
E0414	Emily Morley	Snap, Crackle, POP!	Academy of Notre Dame de Namur Kathleen McTiernan
E0415	Audrey Houghton	Salting The Road	Newark Charter School Andrea Narvaez
E0416	Rebecca Chavez	Rusty Fruits!	Cherry Street School Heather Engler
E0417	Emily Hamill	Super Surface Tension of Water	Academy of Notre Dame de Namur Kathleen McTiernan
E0418	Casey Gannon	"Wash" What You're Doing	Lower Alloways Creek Township School Melissa Elwell
E0420	Chloe Wnek	Does Type of Aluminum Affect Corrosion in Salt Water?	Toms River Intermediate South Kayley Pagano

	Exhibitor	Exhibit	School & Sponsor
		Computer	
E0501	Owen Ramsdell	WiFi Blockers	Abington Junior High School Ed Steinhardt
E0503	Easton Dilks	Identifying A User's Emotional State Through Machine Learning And Responding Empathetically With Voice Recognition Technology	Fernwood Avenue Middle School Jeffrey Warner
E0504	Ava Ezzie	Which Toothpaste Cleans and Whitens the Best?	St. Andrew School - Drexel Hill Patricia Ezzie
E0505	Violet Schroeher	Computer Programming to Encrypt and Decrypt a Message	Newtown Middle School Dave Curry
E0506	Allison Lane	What Materials Will Interfere With A Wifi Signal?	Oldmans Township School Jason Winistorfer
E0508	Nicholas Berchuk	Performance of Sorting Algorithms on different data types	Holicong Middle School Robert Meletti
E0509	Gianna Pelura	Computer Arithmetic	Elsinboro Township School Joe Sarbello
E0511	Joshua Rhine	How Effectively Can an Arduino Identify Different Denominations and Ages of Coins?	Toms River Intermediate South Kayley Pagano
E0512	Lola Serrano-Martinez	Heads Up, Phones Down!	Meredith Elementary Christopher Leshock
E0514	Arthur Armaing	The Strength of WiFi Signals	French International School of Philadelphia Valerie Denny

	Exhibitor	Exhibit	School & Sponsor
		Earth & Space Sciences	
E0601	Paul Ricchiutti	Activation Filtration	St. Mary Interparochial School Mildred Cammisa
E0602	Carmella Werleman	Number the Stars	Fernwood Avenue Middle School Jeffrey Warner
E0603	Alexandra Marroquin Espinoza	A Puzzling Parallax	Quarter Mile Lane School Kathleen Sharp
E0604	Sean Marks	Darkness Falls Over All	Haddonfield Friends School Earlene Sorrento
E0605	Angel Rivera-Burgos	The Power of Heat Is Right Under Your Feet	Mariana Bracetti Academy Charter School Meredith McGlinchey
E0606	Malaika Bhullar	The Forceful Tides of Tidal Forces	St. Mary Interparochial School Mildred Cammisa
E0607	Leo Moore	Which Type Of Soil is the Most Permeable?	Abington Junior High School Ed Steinhardt
E0608	Wyatt Nelson	The Effects That Acid Rain Have on Limestone	Abington Junior High School Ed Steinhardt
E0610	Michael Chollis	Can the pH Of Soil Be Changed By Rain	Elsinboro Township School Joe Sarbello
E0611	Ranjit Rajapakse	Understanding How Windmills Work	Holicong Middle School Robert Meletti
E0612	Shelby Manlove	Oyster Growth from Top to Bottom	Sussex Academy Lauren Hvorecny
E0615	Juliet Cherry	To the Moon and Beyond	Galloway Township Middle School Dandre Dennis
E0616	Alyssa Curry	Crater Conundrum: How Do Impact Craters Form?	Tohickon Middle School Kenneth Hall
E0617*		Radiation Admission Change Over Time	St. Andrew School - Drexel Hill Steven Lacey

	Exhibitor	Exhibit	School & Sponsor
		Engineering	
E0701	Anna Weatherwax	Hot Wheels or Cold Wheels	Penndale Middle School Matthew Wendell
E0702	Bella Chiaravallo	Which Type of Insulation Keeps a Room the Warmest?	Toms River Intermediate East Sylvia Piznik
E0703	Gabrielle Dube	Forecast Windy: With A Side Of Electricity	Immaculate Heart of Mary Nichol Carroll
E0704	Sonia Leo	NextGen A/C - Reduce Pollution and Purify Air Outdoors Using an Air Conditioner	Moorestown Upper Elementary School April Sullivan
E0705	Srijay Chenna	Fighting A Man-Made Epidemic	H.B. DuPont Middle School Srihari Chenna
E0707	Noelle Klinger	The Look Of Sound	Immaculate Heart of Mary Nichol Carroll
E0710	Sienna Tunnell	Producing Biofuel from Corn	Sussex Academy Lauren Hvorecny
E0711	Arnav Tiwari	Thermal Electricity as a Renewable Energy Resource	Arcola Intermediate School Sharon Branca
E0712	Kip Eron	How Does The Temperature Of Maglev Train Magnets Affect The Speed And Efficiency Of The Train?	Holicong Middle School Carrie Bannon
E0713	Alycea McBride	Building Triboelectric Generators for Mechanical to Electrical Energy	Carolyn McBride Carolyn McBride
E0715	Angelo DeRito	The Surprisingly Swift Solar-Powered Kart	St. Mary Interparochial School Mildred Cammisa
E0716	Eva Kuri	What is the Effect of Reservoir Height on the Length of the Water Stream Produced?	Toms River Intermediate South Kayley Pagano
E0717	Norah Mooney	What Material Will Protect Eggs The Best?	Pittsgrove Township Middle School Andrea Wendell
E0718	Ellie Davis	Recovered Energy Lights the Way	Sussex Academy Lauren Hvorecny
E0719	Daniel Styer	Heron's Fountain	Styer Homeschool Peggy Styer
E0722	William Kessler	The Best Way to Build a Flying Car	St. Peter's School Laura Bader
E0723	Emma Dunn	Effects of Various Structures for Managing Wave Energy	Holicong Middle School Robert Meletti
E0724	Yori Candidi	The Magic of Static!	Meredith Elementary Christopher Leshock
E0725*		Determining the Most Efficient Parachute Design	St. Dorothy School Mike Fohner

	Exhibitor	Exhibit	School & Sponsor
		Environmental	
E0801	Eva Mussari	Determining What Kind of Water is Safest to Drink	Classical Conversations of Buckingham Amy Lynn Criger
E0802	Sameer Menghani	Mission CB: The Epidemic Caused bu Cyanobacteria	AMSA at Johnstone Marie Donato
E0804	Gillian Lovett	Which Method of Composting is Faster: Vermicomposting or Backyard Composting?	Jordan Road Elementary School Liz Lichtenstein
E0805	Bella Smookler	Flowing Filters	Immaculate Heart of Mary Nichol Carroll
E0806	Peter Bauer	Tap vs. Bottled And Filtered Water	Immaculate Heart of Mary Nichol Carroll
E0808	Jack Bergmann	What Material For A Biodegradable Nerf Dart Flies The Farthest.	Oldmans Township School Jason Winistorfer
E0810	Eleni Murphy	How Do Phosphates, Nitrates, and Fertilizers Affect Water Oxygen Levels?	St. Peter's School Laura Bader
E0811	Jordan Bechtold	Plastic, Plastic Go Away, and Come Back Another Way	St. Mary Interparochial School Mildred Cammisa
E0812	Kaitlyn Culbert	Can Duckweed Lower the Levels of Nitrates and Phosphates From the Polluted Waters of the Barnegat Bay?	Toms River Intermediate North Katie Keller
E0814	Ian Lee	The Effects of Airplane Contrails on Temperature	The Episcopal Academy Hannah Bae, MD
E0815	Owen Blamey	The Lanternfly Problem	Arcola Intermediate School Sharon Branca
E0816	Kushagra Goel	Dye Sensitized Solar Cells Using Natural Dyes from a Combination of fruits and Vegetables	Henry C Beck Middle School Gary Haaf
E0817	Eliza Worrall	Testing the Strength of Concrete Bricks with Varied Amounts of Plastic	Lenape Middle School Mark Hayden
E0818	Genevieve Hagen	The Circle of Nutrients	Sussex Academy Lauren Hvorecny
E0819	Lily Hutt	How Does the Population of Oysters in the Rehoboth Bay Affect the Turbidity of the Bay?	Sussex Academy Lauren Hvorecny
E0821	Saranya Anantapantula	Methods for Removing Contaminants in Untreated Water	North Penn High School Melody Leithold
E0822	Analiese Jacobson	Get The Lead Out	Immaculate Heart of Mary Nichol Carroll

	Exhibitor	Exhibit	School & Sponsor
		Mathematics	
E0901	Chris Zheng	Using Algorithms To Speed Solve The Cube Efficiently	McCall School Scott Knoflicek
E0902	Reece Ralston	Count the Rainbow	Galloway Township Middle School Stefanie Tripician
E0903	Jack Holladay	From Pitch to Hits	Lower Alloways Creek Township School Melissa Elwell
E0904	Aashish Cheruvu	Application of Machine Learning in Health Care	Tamanend Middle School Erika Gamble
E0905	Justin Baum	M & M's and Probability	Abington Junior High School Ed Steinhardt
E0906	Aliya Nagaria	<i>Do You Have a Better Chance of Rolling a Sum of 16</i> <i>with 3 Dice or 5 Dice?</i>	Toms River Intermediate North Katie Keller
E0907	Monica Levis	Epidemiological Modeling of the 2019 Novel Coronavirus	Levis Homeschool Barbara Ann Levis
E0908	Lucas Berg	Probably Probability	French International School of Philadelphia Valerie Denny
E0909	Theo Miksa	Do You Measure Up: A Predictive Swimming Model based on Trend Analysis	Holicong Middle School Carrie Bannon
E0911	Ezra Tapper	The Problem^3	Haddonfield Friends School Earlene Sorrento

	Exhibitor	Exhibit	School & Sponsor
		Medicine & Health	
E1001	Gabriella Fox	Risky Business	Galloway Township Middle School Maddie Stapleton
E1004	Audrey Tyler	Lighten Your Load	Oldmans Township School Jason Winistorfer
E1005	Oscar Lorenzi	Radioactive Effects on the Body	French International School of Philadelphia Valerie Denny
E1006	Valentina McColgan	Does Exercise Improve Blood Flow in Peripheral Artery Disease?	Philadelphia Academy Charter Grade School Darlene Allison
E1007	Kennedy Pavlekovich	Family Fingerprints	Newark Charter School Andrea Narvaez
E1009	Hannah Sam	Analyzing Which Fabric has the Best UV Resistance during Different Times of the Day	Holicong Middle School Robert Meletti
E1010	Kyle Lockhead	Overcoming Physical Challenges	Indian Valley Middle School Amy Welsh
E1011	Victoria Lupan	Depth Perception	Haddonfield Friends School Earlene Sorrento
E1012	Stephanie Boys	Lefties Are Alright	Newark Charter School Errin Halfen
E1013	Harry Kane	One "Gel" of a Delivery	St. Mary Interparochial School Mildred Cammisa
E1014	Srilekha Mamidala	The Effect of Secondhand and Thirdhand E-cigarette Vapor on the Geotaxis and Olfaction of Larval and Adult Drosophilia melanogaster	Garnet Valley Middle School Gyaneswar Mamidala
E1015	Riana Dion	How Does Age Affect Memory?	Holicong Middle School Robert Meletti
E1017	Simon Betancort	The Germinator Project	ExCel Deena Osmer
E1019	Claire Keach	Grimy Games	Newark Charter School Andrea Narvaez
E1020	Taylor Vaugh	That Burns! A Holistic Approach to Heartburn Relief	Galloway Township Middle School Stefanie Tripician
E1021	Emily Evearts	The Curious Chemicals Behind Moisurizers	Haddonfield Friends School Earlene Sorrento

	Exhibitor	Exhibit	School & Sponsor
		Microbiology	
E1102	Sierra Sakaguchi	Bursting Bacteria	Oldmans Township School Jason Winistorfer
E1103	Katelyn Little	You've Got a Friend in Yeast	Pittsgrove Township Middle School Andrea Wendell
E1104	Kaelyn Stek	How Much Bacteria will Food Pick Up on Different Surfaces?	St Teresa of Calcutta Elaine Loughnane
E1105	Griffin Blokker	How Do Food Preservatives Affect The Growth Of Microorganisms?	Lenape Middle School Jennifer Yeager
E1106	Steven Sorokin	No Time for Bacteria	Haddonfield Friends School Earlene Sorrento
E1107	Lidia Hetzel	The Effectiveness of Hand Washing VS A Facial Brush	Folsom Elementary School Christopher Roth
E1108	Sam Garcia	Different Ways to Kill Bacteria	Haddonfield Friends School Earlene Sorrento
E1109	Lena Johnson	The Power of Soil	Penn Alexander School Charles Foster
E1110	Rong Xu	Amount of Carbon Dioxide Production in Yeast from Different Monosaccharides and Disaccharides	Holicong Middle School Carrie Bannon
E1111	Malo Alanio	Would You Like Salt or Sugar in Your Bread?	French International School of Philadelphia Valerie Denny
E1112	Lauryn Cowles	Germ Madness	ExCel Deena Osmer
E1113	Aidan Federico	How will the Time that Food is in Contact With a Kitchen Floor Affect Bacteria Growth?	Alder Avenue Middle School Jeffrey Warner

	Exhibitor	Exhibit	School & Sponsor
		Physics	
E1201	Zachary Pressler	To Up Up and Away!	Pressler Home School Hope Pressler
E1203	Zoe Steinmetz	Is a Technical Swimsuit More Effective than a Non- Technical Competition Swimsuit?	Philadelphia Academy Charter Grade School Joseph Eagan
E1205	Ian Fahroe	Evaporation Extravaganza	Immaculate Heart of Mary Nichol Carroll
E1206	Dominic Bunda	Electromagnetic Strength	St Teresa of Calcutta Elaine Loughnane
E1207	Sophia Longo	Secrets Of Robin Hood	Pittsgrove Township Middle School Emily MacNeill
E1208	John Sojan	Optimal Efficiency of Winglets	Holicong Middle School Carrie Bannon
E1210	Jaden Jones	Going the Distance	Galloway Township Middle School Maddie Stapleton
E1211	Esmeralda Oloarte	Temperature vs Magnetism	ExCel Deena Osmer
E1213	Elijah Turner	Water Splitting	Haddonfield Friends School Earlene Sorrento
E1214	Dawn Ong	Battle of the Bottles	Ong Homeschool Zabrina Ong
E1215	Hailey Vandenbraak	What Keeps Your Body Warm?	Ursuline Academy Eileen Koenig
E1216	Layla Mahani	It's Raining Solids!	Ursuline Academy Eileen Koenig
E1219	Helen Talavera	What Liquid has the Greater Viscosity?	Mannington Township School Destiny Leoni
E1220	Kevin Conway	What Bounces Best?The Effect of Different Elemental Gasses and Temperature on the Elasticity in Basketballs Bounce	Conway Home School Joseph Conway
E1221	Gabriella Kravchuk	The Pressure is On. Or is it?	Abington Junior High School Ed Steinhardt

	Exhibitor	Exhibit	School & Sponsor
		Zoology	
E1301	Victoria Wilson	A Scratchy Situation	Milford Central Academy Jacqueline Powers
E1302	Caeli Mcalonan	Hold Your Horses!	Ursuline Academy Eileen Koenig
E1303	Drini Hamza	Want a Whole New Head?	Joseph Greenberg Elementary Kristin Morris
E1304	Mary Kate Daniel	Bring on the Brine	Academy of Notre Dame de Namur Kathleen McTiernan
E1307	Collin Kroll	What Type of Bait Attracts More Deer?	Oldmans Township School Jason Winistorfer
E1309	Morgan Maslanka	Dolly Antics	Galloway Township Middle School Stefanie Tripician
E1310	Aubrey Edwards	A Walk On The Wild Side	Immaculate Heart of Mary Nichol Carroll
E1311	Morgan Johnson	Does Artificial Light Affect Laying Hens?	Elsinboro Township School Joe Sarbello
E1312	Naomi Figueroa	Speedy Snails	Haddonfield Friends School Earlene Sorrento
E1315	Analise Myles	Birds of a Feather Don't Always Fly Together	Galloway Township Middle School Stefanie Tripician
E1316	Angelia Koesmadjie	Which Soil Habitat Do Earthworms Love The Most?	McCall School Scott Knoflicek
E1317	Hailey Wood	Investigating Equine Oral Bacteria	St. Jude School Emily Loeffler

	Exhibitor	Exhibit	School & Sponsor
		Team Projects	
E1401	Darvin Pierre Zyaira Sanders	Soil Stress	The Philadelphia Charter School for The Arts & Sciences Amanda Taggart
E1402	Jonathan Santiago Erick Velasquez	Bacteria on Your Food	ExCel Deena Osmer
E1403	Kaelin Brannick Vaishnavi Sakthi	Super Slime - True Or False?	Newark Charter School Andrea Narvaez
E1404	Riley Budenas Morgan Rodemann	Does Gender Have An Effect On The Stroop Effect?	Toms River Intermediate North Katie Keller
E1407	Dayvey Gordon Bailey Maloney	Dimes vs Dollars	Immaculate Heart of Mary Nichol Carroll
E1408	Armaan Gupta Gia Gupta Karina Gupta	Futuristic Model of Energy Self Sustainable Coastal Village	Rosa International Middle School Kavita Gupta
E1409	Yakeline Cruz Santiago Estefania Ramos Mendoza	Flowers vs Dishsoap	ExCel Deena Osmer
E1410	Rupert Swartz Sudhir Yelamarthy	The Use Of Ash And Oak As A Substrate For Growth Of Edible Mushrooms	Tamanend Middle School Erika Gamble
E1411	Amanrai Kahlon Veer Pahwa	The Best Ball For Your Buck	The Independence School Jessie Copeland
E1412	Adrian Bolinas Kaeden Fleming Justin Flenner	The Effect Of Engine Placement On Car Performance	Immaculate Heart of Mary Nichol Carroll
E1413	Emerson Fallat Madeline Krohn	The Effects of Different Milk Types on Taste	Toms River Intermediate South Kayley Pagano
E1414	Deven Butani Rafe Cultrara Advait Wattal	Outstanding Oil Absorbents	William Allen Middle School Ken Lynch
E1416	Michael Gioia James Kennedy	Power Foods	Immaculate Heart of Mary Nichol Carroll
E1417	Hannah DeWitt Ryann Foote	Hand Soap vs. Hand Sanitizer	Elsinboro Township School Joe Sarbello
E1419	Hannah Newport Nathaniel Newport	EZ Read with Dyslexic Fonts	William Allen Middle School Ken Lynch

	Exhibitor	Exhibit	School & Sponsor
		Consumer Science	
E1501	Ava Staib	Coke vs. Pepsi: Put To The Coldness Test	Ursuline Academy Eileen Koenig
E1502	Vega Mick	Food of the Future - The Science of Spherification	Galloway Township Middle School Stefanie Tripician
E1503	Sophia Sorrells	It's a Waterful Life	Ursuline Academy Eileen Koenig
E1504	Kaitlyn Phan	pH Levels of Regular vs. Diet Soda	Arcola Intermediate School Sharon Branca
E1506	Ethan Steinmetz	Which Brand of Fishing Line is the Strongest?	Philadelphia Academy Charter Grade School Darlene Allison
E1507	Jaime Deal	Which bottle keeps water cold the longest?	Upper Pittsgrove School Danielle Taulane
E1508	Madeline Slaughter	How Do Various Fabrics React To Flames?	Holicong Middle School Robert Meletti
E1509	Abigail Cavanaugh	Antioxidants	Haddonfield Friends School Earlene Sorrento
E1510	Catherine Greenwald	How Time Affects the Depth of Color of Naturally-Dyed Fiber	Holicong Middle School Robert Meletti
E1511	Danna Armenta Escamilla	What's the Quickest Way To Get A Bottle of Water Cold?	Broad Street School Kristi Lancaster
E1512	Elsa Thomas	Which Type of Insulation is Better?	Pennfield Middle School Jennifer Beach
E1513	Audrey McGowan	The Solution to the Sharpie Problem	Galloway Township Middle School Stefanie Tripician
E1516	Asha Chakrabarti	Evaluating and Reducing Electromagnetic Radiation from Common Household Devices	Moorestown Upper Elementary School April Sullivan
E1517	Charlee Ahearn	The Effectiveness of Cleaning Agents on Teeth	Green Woods Charter School Erin Richards

	Exhibitor	Exhibit	School & Sponsor		
Team Projects					
T1401	Riya Chaturvedi Saarth Chaturvedi Vijay Ramu	Purification and Isolation of Novel Antimicrobial Compounds	University of Pennsylvania Yajamana Ramu		
T1402	Megan Brooks Mac Bryan Brianna Shields	The Effect of Different Types of H2O on Poa pratensis	Salem County Vocational Technical School Kristen Redkoles Polk		
T1403	Patrick Carbone Chenkai Mao James McCullough	Effects of UV light and Freezing Temperatures on PET Disposable Water Bottles and Plastic Reusable Water Bottles	Malvern Preparatory School Agnese Abate		
T1404	Alessandro Iaia Nicholas Kulda	Effects Of UV Light On Cellular Growth	Charter School of Wilmington Rick Schuder		
T1405	Sindhu Narayan Abigail Spangler	The Effect Of Age And Gender On Overt And Self Perceived Frustration	Charter School of Wilmington Michael Katz		
T1406	Molly McAtee Morgan Murphy	How Basic is Too Basic for Worms?	Villa Joseph Marie High School Joe Sheenan		
T1407	La'Jourah King Primisha Patel	The Effect of Different pH Concentrations of Soil on the Growth of Pisum Sativum	Vineland HS AMSA Miriam Jamil		
T1408	Lina Lin Sanjana Samudrala	Ginkgo Biloba and its Effect on Natural Sunscreen	Central Bucks High School- East Judy Elinow		
T1410	Jason Pagegala Bernard Scott	Will It Live?	Bishop Shanahan High School Margaret Scott		
T1411	Richard Li Addison Liu	Leveraging Polymer Immiscibility in Additive Manufacturing: Sequestration of Graphene Nanoplatelets within a Phase-Separated PLA/iPP Polymer Matrix for Optimized Mechanical and Thermal Performance	Unionville High School Stanley Liu		
T1413	Doreen Valmyr Eddie Wang	<i>The Relationship of Phage Concentration to E. coli</i> <i>Mortality</i>	Central High School Robert Herbstritt		
T1414	Yash Prabhu Brandon Vu	Detecting Firearms Using Computer Vision and Machine Learning	North Penn High School Melody Leithold		
T1416	Jordyn Flaherty Jesse Herdman	We Bean Knew (the Effect Of Population Density On Growth And Survival Of Mung Bean)	Charter School of Wilmington Jennifer Toner		
T1417	Abigail Evans Grace Profy	Destruction of Hair	Villa Joseph Marie High School Molly Kenny		
T1418	Ummayh Siddiqua Margaret Smith	The Digestion of Biodegradable Plastics	Upper Darby High School Roseann Burns		

	Exhibitor	Exhibit	School & Sponsor
T1420	Shayla Modi Amrutha Veeramachiani	Testing The Effectiveness Of Disinfectant On Ecoli	Charter School of Wilmington Rick Schuder
T1421	Jessica Baek Brianna Baldwin	Reducing the Impact of Oil on Benthic Wildlife	North Penn High School Melody Leithold
T1425	Luke Kryka Olivia MacMillan Colleen McCann	Herd Mentality	Archmere Academy Glenn Hartman
T1428	Claire Brodish Alexa Horvath	The Production of Cellulosic Ethanol Derived From Grass	Central Bucks High School- East Judy Elinow
T1429	Kenan Kanopka Jr. Joshua Konschnik Juston Moritz	Biofeedback therapy on the rate of cardiorespiratory recovery from aerobic exercise	Freedom High School Graceanne Ruggiero
T1431	Shivam Chand Sebastian Jaskowski Belinda Yeung	The dissolution rates of over-the-counter analgesics in stomach acid	Freedom High School Graceanne Ruggiero
T1432	Samuel Rodrigues Andrew Younes	Non-Electric Water	Nazareth Area High School Lindsay Hoff