Senior Fair	(A) - Be	havior & Social Sciences (100)	
Award		Project	Del Val
1st Place	A0101	The Difference Between Handwriting And Typing Notes For Memory Retention Havyn Steele - Bangor Area High School Sponsor - Robert Hachtman	
Senior Fair	(A) - Co	mputer (500)	
Award		Proiect	Del Val
1st Place	A0501	Implementation Of Radio-Frequency Identification (RFID) Technology For Student Information Within Public School Buildings Gulnur Avci - Bangor Area High School	
		Sponsor - Robert Hachtman	
Senior Fair	(A) - En	vironmental (800)	
Award			Del Val
1st Place	A0802	Proiect <i>The Effect Of Riparian Buffers Size On The Concentration Of</i> <i>Nitrate In Streams</i> Rachel Kromer - Bangor Area High School Sponsor - Robert Hachtman	
Sonior Eair	(Λ) Mo	dicipe & Health (1100)	
Senior Fail	(A) - We	dicine & Health (1100)	Del
Award		Proiect	Val
1st Place	A1101	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 Sriyaa Suresh - Parkland High School Sponsor - Michael Post	
Sopier Feir			
Senior Fair	(A) - Wid	crobiology (1200)	Del
Award		Proiect	Val
1st Place	A1204	Effects OF Caffeine On Gut Bacteria Isabel Smith - Bangor Area High School	✓
2nd Place	A1203	Sponsor - Robert Hachtman <i>The Importance Of Completing Your Antibiotic Regiment</i> Morgan Shriver - Bangor Area High School Sponsor - Robert Hachtman	

3rd Place	A1201	The Effects OF Sugar Alcohol On Gastrointestinal Normal Flora Nicola Kaye - Bangor Area High School Sponsor - Robert Hachtman	✓
Honorable Mention	A1202	The Effects of Absorbic Acid On Bacterial Growth Abigail LaCour - Bangor Area High School Sponsor - Robert Hachtman	
Senior Fair (A) - Phy	vsics (1300)	
Award		Proiect	Del Val
1st Place	A1301	Heat Loss Through A Wall Made With Optimized Insulating Bricks Isha Mohapatra - Moravian Academy Sponsor - Gabriella Dee	
Senior Fair (A) - Zoc	logy (1400)	
Award		Proiect	Del Val
1st Place	A1402	The Effect OF Essential Oil Scents On Cricket Respiration Grace Dougherty - Bangor Area High School Sponsor - Robert Hachtman	
2nd Place	A1403	Resource Holding Potential In Blue Gill Sunfish Doug Toth - Bangor Area High School Sponsor - Robert Hachtman	✓
3rd Place	A1401	The Effects Of Salinity On The Photosynthetic Performance Of Zooxanthellae In Sea Anemones Jessica Baggett - Bangor Area High School Sponsor - Robert Hachtman	
Senior Fair (A) - Tea	m Projects (1500)	
Award		Project	Del Val

Award		Proiect	Val
1st Place	A1501	The Effect Of Invertase On The Coversion Of Sucrose To Glucose Concentrations on Conventional Household Foods Paras Chand - Freedom High School Morgan Philpot - Freedom High School Sponsor - Graceanne Ruggiero	

Junior Fair (B) - Behavior & Social Sciences (100)

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Award		Proiect	Del Val
1st Place	B0101	What Can Rock-Paper-Scissors Tell Us About Cheating And Game Theory?	✓
		Stephanie Sipics - Emmaus High School	
		Sponsor - Brent Landrum	_
2nd Place	B0102	Hatred Of sound: An Investigation Into The Effects Of Misophonia	✓
		Avi Singh - Moravian Academy	
		Sponsor - Gabriella Dee	
Junior Fair (B)	- Che	mistry (400)	
Award		Project	Del Val
1st Place	B0401	Oil-Based cleaning	\checkmark
	00401	Krishna Dihora - Southern Lehigh High School	Ľ
		Sponsor - Rachel Saber	
lupior Eair (B)	Con	$a_{\text{Dutor}}(500)$	
Junior Fair (B)	- 001		
			ام
Award		Proiect	Del Val
Award 1st Place	B0505	Proiect Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods	
	B0505	Low-Cost Device for Autmatic Diagnosis Using Deep Learning	Val
	B0505	Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods	Val
	B0505 B0503	Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy	Val
1st Place		Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee Computer Generated Music - Can It Pass The Turing Test? Stefania Schoen - Emmaus High School	Val
1st Place 2nd Place		Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee <i>Computer Generated Music - Can It Pass The Turing Test?</i> Stefania Schoen - Emmaus High School Sponsor - Brent Landrum	Val Val
1st Place		Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee Computer Generated Music - Can It Pass The Turing Test? Stefania Schoen - Emmaus High School Sponsor - Brent Landrum Predicting Glioblastoma Progress And Response Using Machine Learning	Val
1st Place 2nd Place	B0503	Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee Computer Generated Music - Can It Pass The Turing Test? Stefania Schoen - Emmaus High School Sponsor - Brent Landrum Predicting Glioblastoma Progress And Response Using Machine Learning Arjun Vedantham - Parkland High School	Val V
1st Place 2nd Place	B0503	Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee Computer Generated Music - Can It Pass The Turing Test? Stefania Schoen - Emmaus High School Sponsor - Brent Landrum Predicting Glioblastoma Progress And Response Using Machine Learning	Val V
1st Place 2nd Place	B0503 B0502	Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee Computer Generated Music - Can It Pass The Turing Test? Stefania Schoen - Emmaus High School Sponsor - Brent Landrum Predicting Glioblastoma Progress And Response Using Machine Learning Arjun Vedantham - Parkland High School Sponsor - Michael Post Predicting The Dominant H3N2 Influenza Strain Using African Neural Network	Val V
1st Place 2nd Place 3rd Place	B0503 B0502	Low-Cost Device for Autmatic Diagnosis Using Deep Learning Methods Neil Deshmukh - Moravian Academy Sponsor - Gabriella Dee Computer Generated Music - Can It Pass The Turing Test? Stefania Schoen - Emmaus High School Sponsor - Brent Landrum Predicting Glioblastoma Progress And Response Using Machine Learning Arjun Vedantham - Parkland High School Sponsor - Michael Post Predicting The Dominant H3N2 Influenza Strain Using African	Val V

Junior Fair (B) - Engineering (700)

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Award		Proiect	Val
1st Place	B0701	Developing Greater Protective And Preventative Measures To Mitigate The Detrimental Effects Of Chronic Traumatic Encephalopathy And Initial Contact Head Injuries Punya Bhasin - Parkland High School Sponsor - Michael Post	
2nd Place	B0702	Microfabrication Rapid Prototyping Machine	\checkmark
	00702	Harper Chisari - Parkland High School	
		Sponsor - Michael Post	
Junior Fair (E	3) - Me	dicine & Health (1100)	
Award		Proiect	Del Val
1st Place	B1102	Using optical Coherence Tomographyto Cardiovascular Diseases In Drosophila Melanogaster Rhea Malhotra - Moravian Academy Sponsor - Gabriella Dee	
2nd Place	B1103	Auto-Al Method That Self-Learns By Looking At Minimal Amount Of Medical Images Briana Malik - Parkland High School Sponsor - Michael Post	
Junior Fair (E	3) - Phv	/sics (1300)	
	-,,		Del
Award		Proiect	Val
1st Place	B1301	The Most Effective Implementation Of A Certain Airfoil That Will Allow For More Lift Sohaib Nauman - Parkland High School Sponsor - Michael Post	
2nd Place	B1302	Are Flourescent Lights and LED Lights Hamrful To Your Eyes? Ishaan Lal - Emmaus High School Sponsor - Brent Landrum	
Junior Fair (E	3) - Zoo	ology (1400)	
Award	-		Del Val
Awaru		Proiect	vai

	Award		Proiect	Val
1st Place B1401 The Effects of Temperature On The Relationship Between Zooxanthellae And Sea Anemone Logan Anema - Bangor Area High School Sponsor - Robert Hachtman	1st Place	B1401	Logan Anema - Bangor Area High School	

Sophomore Fair (C) - Behavior & Social Sciences (100)

Award		Proiect	Del Val
1st Place	C0104	Incentives: The Impetus for Performing Well	\checkmark
		Anam Ali - Parkland High School	
		Sponsor - Michael Post	
2nd Place	C0103	How good Are People At Multitasking? And, What Is the Effect Of cognitive Dissonance One Their Self-Perception On Multitasking Ability?	
		Pandora Schoen - Emmaus High School	
		Sponsor - Brent Landrum	
3rd Place	C0102	Wait Am I Rght?	\checkmark
		Snehal Gupta - Parkland High School	
		Sponsor - Michael Post	

Sophomore Fair (C) - Biochemistry (200)

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Award		Project	Del Val
1st Place	C0201	Text Box	\checkmark
		Tanya Mehta - Parkland High School	
		Sponsor - Michael Post	
2nd Place	C0204	The Effects Of Ultraviolet Rays On Yeast Colony Growth	\checkmark
		Saakshi Girotra - Parkland High School	
		Sponsor - Michael Post	
3rd Place	C0203	PeriTect: Early Detection and Prevention of Peritonitis in Kidney Dialysis Patients	\checkmark
		Purva Gupta - Parkland High School	
		Sponsor - Michael Post	
Honorable Mention	C0205	Implementation Of Computational Techniques To Develop Effective Way To Drug Delivery	
		Gokul Perugu - Parkland High School	
		Sponsor - Michael Post	

Sophomore Fair (C) - Chemistry (400)

Award		Proiect	Del Val
1st Place	C0401	The Effects of Radiation on the Decomposition of Silver Chloride	\checkmark
		Caitlin O'Brien - Emmaus High School	
		Sponsor - Brent Landrum	

2nd Place	C0402	The Effect Of Temperature On Fuel Cell Efficiency Mustapha Salau - Parkland High School	
3rd Place	C0404	Sponsor - Michael Post Selective Deuteration Of Hterocycles Using A Sm2-H2) System Akshatha Manjunatha - Parkland High School Sponsor - Michael Post	
Honorable Mention	C0403	<i>The Chemistry Of Developing Film</i> Nader Rifai - Moravian Academy Sponsor - Gabriella Dee	
Sophomore F	air (C)	- Computer (500)	
Award		Project	Del Val
1st Place	C0501	A Geometric Analysis Of Protein Structures To Predict Mutations That Cause Drug-Resistance Udit Garg - Parkland High School Sponsor - Michael Post	
Sophomore F	air (C)	- Engineering (700)	
Award		Project	Del Val
1st Place	C0706	A Novel Implementation Of Localized Protuberances On The Leadeing Edge Of A Hydrofoil Dharshan Tharumia - Parkland High School Sponsor - Michael Post	
1st Place 2nd Place	C0706 C0705	Leadeing Édge Of A Hydrofoil Dharshan Tharumia - Parkland High School	>
		Leadeing Édge Of A Hydrofoil Dharshan Tharumia - Parkland High School Sponsor - Michael Post High Data Rate Non-Line-Of-Sight Underwater Wireless Optical Communication Ee-Ning Ooi - Parkland High School	
2nd Place	C0705 C0702	Leadeing Édge Of A Hydrofoil Dharshan Tharumia - Parkland High School Sponsor - Michael Post High Data Rate Non-Line-Of-Sight Underwater Wireless Optical Communication Ee-Ning Ooi - Parkland High School Sponsor - Michael Post Computational Modeling Of A Waveguide Using FDTD Ronak Singh - Parkland High School	

Sophomore Fair (C) - Environmental (800)

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Award		Proiect	Del Val
1st Place	C0804	Using A Leaf-Based electrolyte To Generate energy With A Photovoltaic Light Sensitive Dielectric Capacitor Taran Anantasagar - Parkland High School Sponsor - Michael Post	
2nd Place	C0803	Identifying The Best Liquid Organic Hydrogen Carrier For Transportation Sanjiv Parthasarathy - Parkland High School Sponsor - Michael Post	
3rd Place	C0802	Fuel It Up: Converting Trash and Biofuel Aashika Shah - Parkland High School Sponsor - Michael Post	
Sophomore	Fair (C)	- Mathematics (1000)	
Award		Proiect	Del Val
1st Place	C1001	Applications Of Stokes' Theorem on Complex Manifolds Suchir Agarwal - Parkland High School Sponsor - Michael Post	
2nd Place	C1002	A New Perspective Of Geometry: The Projective And Hyperbolic Spaces Neha Skandan - Moravian Academy Sponsor - Gabriella Dee	
Sophomore	Fair (C)	- Medicine & Health (1100)	
Award		Project	Del Val
1st Place	C1101	Re Envisioning Erythrocyte Dynamics: Computational vs. Experimental Modeling OF RBC In Capillary Shearing Prathysha Kothare - Parkland High School Sponsor - Michael Post	
Sophomore	Fair (C)	- Microbiology (1200)	
Award		Proiect	Del Val
1st Place	C1201	Effacious And Effectual Antifungal Natural Remedies? Rachel Li - Parkland High School Sponsor - Michael Post	

Sophomore Fair (C) - Physics (1300)

Award		Proiect	Val
1st Place	C1301	Efficient Computational Electromagnetics Modeling For The Optimization Of Nanoscale Devices	
		Ankhitha Manjunatha - Parkland High School Sponsor - Michael Post	
Ninth Grade	Fair (D)	- Biochemistry (200)	
Award		Project	Del Val
1st Place	D0201	The Effect Of Light On Yeast	\checkmark
		Aishwarya Gowrishankar - Parkland High School Sponsor - Michael Post	
Ninth Grade	Fair (D)	- Computer (500)	
Award		Project	Del Val
1st Place	D0502	Developing Flexible Circuit Boards Using Graphene	\checkmark
		Mikail Jaffer - Moravian Academy	
		Sponsor - Gabriella Dee	
2nd Place	D0501	Learning Science Through Virtual Reality	\checkmark
		Uma Purani - Parkland High School Sponsor - Michael Post	
3rd Place	D0503	Unmasking Parkinson's Disease In A Patient Using R	\checkmark
		Lalitha Loka - Parkland High School	
		Sponsor - Michael Post	
Ninth Grade	Fair (D)	- Engineering (700)	
Award		Project	Del Val
1st Place	D0703	Design A Nonlinear Battery Charging System For A Sun Tracking Solar Panel Victor Cai - Parkland High School	
		Sponsor - Michael Post	
2nd Place	D0701	Is It Stable? Depends On The Cable!	\checkmark
		James Donnelly - Freedom High School	
2rd Dlass	D0702	Sponsor - Graceanne Ruggiero Air Pollution detector	\checkmark
3rd Place	D0702	Veda Vundela - Parkland High School	V
		Sponsor - Michael Post	

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Ninth Grade	e Fair (D)	- Environmental (800)	
Award 1st Place	D0801	Proiect Heavy Metal removal From Wastewater By activated Carbon derived From Maple Leaf Samit Mohapatra - Moravian Academy Sponsor - Gabriella Dee	Del Val
Ninth Grade	e Fair (D)	- Microbiology (1200)	
Award 1st Place 2nd Place	D1203 D1202	Proiect <i>Microbial Fuel Cell</i> Ansh Malik - Emmaus High School Sponsor - Brent Landrum <i>The Effect Of Antibiotics On Bacterial Growth</i> Prisha Srivastava - Parkland High School Sponsor - Michael Post	Del Val V
Ninth Grade	e Fair (D)	- Physics (1300)	
Award 1st Place	D1302	Proiect <i>Semiconductor Laser</i> Aditi Maheshwari - Parkland High School Sponsor - Michael Post	Del Val
Ninth Grade	e Fair (D)	- Zoology (1400)	
Award 1st Place	D1401	Proiect Remediation Of Melatonin-Induced Cardiac Distress In Daphnia Magna Using A Natural Antioxidant Vaishnavi Joshi - Parkland High School Sponsor - Michael Post	Del Val
Ninth Grade	e Fair (D)	- Team Projects (1500)	
Award 1st Place	D1501	Proiect Using Operant Conditioning to Increase Participation in a High School Classroom Kiera Karve - Nazareth Area High School Emma Browning - Nazareth Area High School Sponsor - Lindsay Hoff	Del Val

Eighth Grade Fair (E) - Biochemistry (200)

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Award		Proiect	Del Val
1st Place	E0203	<i>Optimizing Algae Growth For Sustainable Environment</i> Aishwarya Suresh - Springhouse Middle School Sponsor - Scott Bauer	
Eighth Grade	Fair (E)- Botany (300)	
Award		Proiect	Del Val
1st Place	E0301	<i>What Type Of Meal Fertilizer Produces Fastest Plant Growth?</i> Daniela Fernandez - Orefield Middle School Sponsor - Brian Holtzhafer	✓
2nd Place	E0305	Do Household Chemicals Increase or Inhibit The Germination Of Seeds And The Growth Rate Of Plants? Priya Tekumalla - Springhouse Middle School Sponsor - Susan Stern	
3rd Place	E0304	<i>How Does Acid Rain Effect The Hight Growth Of Plants?</i> Jaeden Sistrunk - Springhouse Middle School Sponsor - Susan Stern	
Honorable Mention	E0306	<i>Hydrponics vs. Soil</i> Mary Jean Thornburg - St. Theresa School Sponsor - Constance Sisko	
Eighth Grade	Fair (E) - Chemistry (400)	

Eighth Grade Fair (E) - Chemistry (400)

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Award		Project	Del Val
1st Place	E0406	The Effect Of Pottasium Permanganate Infused Zeolites On Ethylene	✓
		Siddhant Khandelwal - Springhouse Middle School	
		Sponsor - Susan Stern	
2nd Place	E0402	How Does Changing Between Baking Soda And Baking Vinegar Affect The Height Of Muffins	
		Emily Collins - Springhouse Middle School	
		Sponsor - Daniel Christman	
3rd Place	E0411	What Is The Effect Of Different Brands Of Clarinet Reeds On The amount Of Water Absorbed?	
		Meredith Schmoyer - Springhouse Middle School	
		Sponsor - Daniel Christman	
Honorable Mention	E0401	What Candle Will Burn The Brightest?	
		Shayan Latif - Springhouse Middle School	
		Sponsor - Daniel Christman	

Honorable Mention E0412	Can A Simple Solvent Dissolve Plastic?	
	Yan Yu - Moravian Academy Middle School	
	Sponsor - Joanne Daniels	
Honorable Mention E0415	Protein Precipitation's Effects On Protein Capacity	
	Andy Hill - Orefield Middle School	
	Sponsor - Brian Holtzhafer	

Eighth Grade Fair (E) - Computer (500)

Award		Proiect	Del Val
1st Place	E0503	Virtual Vote: A Decentralized, Democratic Voting Application	\checkmark
		Rohan Mehta - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
2nd Place	E0501	IOT In Health: Designing A Smartwatch	
		Okezue Bell - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
3rd Place	E0502	Good Job!	
		Sanika Kothari - Springhouse Middle School	
		Sponsor - Susan Stern	

Eighth Grade Fair (E) - Earth & Space Sciences (600)

Award		Project	Del Val
1st Place	E0601	How Does The Type Of Soil Affect How Much It Compressed?	\checkmark
		Isabella Esteban - Springhouse Middle School	
		Sponsor - Daniel Christman	

Eighth Grade Fair (E) - Engineering (700)

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Award		Proiect	Del Val
1st Place	E0707	Contactless Detection OF Vibrations Like Vital Signs Using Doppler Radar Varun Pandian - Springhouse Middle School	
		Sponsor - Susan Stern	
2nd Place	E0703	<i>Dispensing Medications</i> Jarod Bloch - Orefield Middle School Sponsor - Brian Holtzhafer	
3rd Place	E0706	What Is The Effect Of Speed On The Ability Of The Robot To Follow The Path? Fudayl Niaz - Springhouse Middle School Sponsor - Daniel Christman	

Honorable Mention E0702	The Efficiency Of Various Lightbulb With Different Input Voltages Varsha Borkar - Springhouse Middle School	
	Sponsor - Susan Stern	
Honorable Mention E0704	Thickness Of Wire vs Strength Of Magnetic Field	
	Joshua Chou - Springhouse Middle School	
	Sponsor - Scott Bauer	
Honorable Mention E0708	Plant Power	
	Aditya Singhvi - Orefield Middle School	
	Sponsor - Brian Holtzhafer	
Honorable Mention E0709	The Effect Of Design On A Bridges Weight Capacity	
	Taehyuk Yang - Springhouse Middle School	
	Sponsor - Scott Bauer	

Eighth Grade Fair (E) - Environmental (800)

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A	ward		Proiect	Del Val
	1st Place	E0802	Saving The Planet And People: A Bio-Degradable Plastic	\checkmark
			Reva Gandhi - Springhouse Middle School	
			Sponsor - Susan Stern	
2	2nd Place	E0805	Don't Belittle The Microbead!	
			Sathvika Rajkumar - Springhouse Middle School	
			Sponsor - Susan Stern	
:	Brd Place	E0804	Blade size And Power Produced	
			Rithik Raghuraman - Springhouse Middle School	
			Sponsor - Susan Stern	
ł	Ionorable Mention	E0801	How does Glyphosate Affect The Environment?	
			James Fuller - Orefield Middle School	
			Sponsor - Brian Holtzhafer	
ł	Ionorable Mention	E0803	GO Green Turbine!	
			Arnav Jain - Springhouse Middle School	
			Sponsor - Susan Stern	

Eighth Grade Fair (E) - Mathematics (1000)

Award		Proiect	Del Val
1st Place	E1001	Pascal's Triangle In Cell Division	\checkmark
		Michael Alcher - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	

Eighth Grade Fair (E) - Medicine & Health (1100)

Award		Project	Del Val
1st Place E	E1107	A Novel Approach To Combating Cancer Using Chelation Therapy (EDTA)	✓
		Vishruth Hanumaihgari - Springhouse Middle School	
		Sponsor - Scott Bauer	
2nd Place E	E1104	Does Tumeric Inhibit Or Slow Down Tumorigenesis In Planaria (Dugesia Tirgrina)? A Novel Approach Toward A Cure For Cancer	
		Riva Kaneria - Springhouse Middle School	
		Sponsor - Susan Stern	
3rd Place E	E1101	How Does Exposure To Saltwater Affect How Well Different Water Resistant Sunscreen Work?	
		Natalie McEvoy - Springhouse Middle School	
		Sponsor - Daniel Christman	
Honorable Mention E	E1102	What Is The Effect Of Temperature On The Ascorbic Acid Content Of Orange Juice?	
		Lucas Lee - Springhouse Middle School	
		Sponsor - Daniel Christman	
Honorable Mention E	E1105	Which Drink Creates The Darkest Stain On Teeth?	
		Emily Walsh - Springhouse Middle School	
		Sponsor - Susan Stern	

Eighth Grade Fair (E) - Physics (1300)

Award		Proiect	Del Val
1st Place	E1301	Aerodynamics In The Wheels	\checkmark
		Homare Yamashita - Springhouse Middle School	
		Sponsor - Daniel Christman	
2nd Place	E1310	Does The Architecture Of A Bridge Affect Its Strength?	
		Devanshi Patel - Springhouse Middle School	
		Sponsor - Scott Bauer	
3rd Place	E1303	The Effect Of A Corked Bat On A Baseball's Distance	
		Ryan Stubbefield - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
Honorable Mention	E1304	The Seebeck Effect In Thermoelectricity	
		Wisdom Ufondu - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	

Honorable Mention E1311	Organic vs. Non-Organic	
	Riya Patel - Springhouse Middle School	
	Sponsor - Susan Stern	
Honorable Mention E1312	How Does Salt/Sugar Affect The Density Of Water And Floatation Of The Egg And Buoyancy?	
	Ayyanselvendhren Sureshkumar - Springhouse Middle School	
	Sponsor - Susan Stern	
Honorable Mention E1314	Chladni Plates	
	Rachele Grigoli - Springhouse Middle School	
	Sponsor - Daniel Christman	

Eighth Grade Fair (E) - Zoology (1400)

Award		Proiect	Del Val
1st Place	E1401	How Does The Incubation Of Spotted Lantern Fly Eggs Effect Them Hatching?	\checkmark
		Jacquelyn Fekula - Orefield Middle School	
		Sponsor - Brian Holtzhafer	
2nd Place	E1402	The Effect Of Salt On The Hatch Rate Of Artemia	
		Shravan Ganta - Springhouse Middle School	
		Sponsor - Scott Bauer	

Eighth Grade Fair (E) - Team Projects (1500)

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Award		Proiect	Del Val
1st Place	E1501	No Yolk About It!	\checkmark
		Vrindivanni Cannavino - Arts Academy Charter Middle School Madeline Ashby - Arts Academy Charter Middle School Sponsor - Carole Ondrovic	
2nd Place	E1506	Sleep for Athletes	
		Grace Litzenberger - Arts Academy Charter Middle School Celia Casey - Arts Academy Charter Middle School Sponsor - Carole Ondrovic	
3rd Place	E1504	Which Citrus Fruit Can Prevent Browning on Apple Slices the Longest?	
		Elizabeth Cordon - Arts Academy Charter Middle School	
		Susannah Gruver - Arts Academy Charter Middle School	
		Sponsor - Carole Ondrovic	_
Honorable Mention	E1502	Learn Behaivor	
		Danyellys Hernandez - Arts Academy Charter Middle School Madeline Cole - Arts Academy Charter Middle School Sponsor - Carole Ondrovic	

Seventh Grade Fair (F) - Behavior & Social Sciences (100)

Award		Proiect	Del Val
1st Place	F0103	Music: Help or Distraction For Testing?	\checkmark
		Kanchan Gupta - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
2nd Place	F0104	Teenage Motivation	
		Silas Taylor - Arts Academy Charter Middle School	
		Sponsor - Karen Miller	

Seventh Grade Fair (F) - Biochemistry (200)

Award		Proiect	Del Val
1st Place	F0201	Oil From Algae	\checkmark
		Vidhi Desai - Springhouse Middle School	
		Sponsor - Noel Mahmood	
2nd Place	F0206	Biofuels vs. Fossil Fuels	
		Akshay Sethi - Springhouse Middle School	
		Sponsor - Troy Minarovic	
3rd Place	F0205	Can Your Plant Survive For More Than Five?	
		Mia Preston - Orefield Middle School	
		Sponsor - Brian Holtzhafer	
Honorable Mention	F0202	What Effect Does Microwave Radiation Have On Plant Seeds?	
		Ananya Gope - Springhouse Middle School	
		Sponsor - Troy Minarovic	
Honorable Mention	F0207	The Effect Of Temperature And Oxygen On Melanin Formation In Potatoes	
		Vivek Shepherd - Springhouse Middle School	
		Sponsor - Jennifer Karetsky	

Seventh Grade Fair (F) - Botany (300)

Award		Proiect	De Va	
1st Place	F0308	How Much Water Should Plants Receive?	\checkmark	/
		Mujtaba Jaffer - Springhouse Middle School		
		Sponsor - Troy Minarovic		
2nd Place	F0303	Saving The Scraps]
		Grace Clewell - Springhouse Middle School		
		Sponsor - Noel Mahmood		

3rd Place	F0310	Do Household Chemicals Affect The Growth Of Plants?	
		Azra Mody - Springhouse Middle School	
		Sponsor - Troy Minarovic	
Honorable Mention	F0302	The Effect OF Different Liquids On Lima Beans Germination	
		Danica Butch - Springhouse Middle School	
		Sponsor - Noel Mahmood	
Honorable Mention	F0307	Booming Botany	
		Arianna Green - Arts Academy Charter Middle School	
		Sponsor - Karen Miller	

Seventh Grade Fair (F) - Chemistry (400)

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Award		Proiect	Del Val
1st Place	F0415	Water Purification Using Adsorption	\checkmark
		Riya Verma - Springhouse Middle School	
		Sponsor - Noel Mahmood	
2nd Place	F0404	Temperature's Effect On pH Of Liquids And Solutions	
		Yechan Cho - Springhouse Middle School	
		Sponsor - Jennifer Karetsky	
3rd Place	F0413	Effect Of Solutes On Dissociation Abilities In Liquid Water	
		Sooraj Tharumia - Springhouse Middle School	
		Sponsor - Noel Mahmood	
Honorable Mention	F0406	Cupcake Galore	
		Katriel Fretti - Springhouse Middle School	
		Sponsor - Noel Mahmood	
Honorable Mention	F0410	Sealant Stats	
		Luke Platek - Springhouse Middle School	
		Sponsor - Troy Minarovic	
Honorable Mention	F0412	The Tallest Muffin	
		Hailey Smith - Springhouse Middle School	
		Sponsor - Noel Mahmood	
Honorable Mention	F0416	Lock It In	
		Elizabeth Williams - Springhouse Middle School	
		Sponsor - Noel Mahmood	

Seventh Grade Fair (F) - Earth & Space Sciences (600)

Award		Project	Del Val
1st Place	F0602	How Does The Angle Affect The Efficiency Of Photovoltoil Cells? Shashwat Sharma - Springhouse Middle School Sponsor - Troy Minarovic	
Seventh Grad	e Fair ((F) - Engineering (700)	
Award		Project	Del Val
1st Place	F0701	Gear Up For Speed	\checkmark
		Sebastian Malaver - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
2nd Place	F0704	Suspension Bridge vs Beam Bridge	
		Paul Ganssle - St. Theresa School	
		Sponsor - Constance Sisko	
3rd Place	F0702	Wave Energy	
		Ishika Thareja - Springhouse Middle School	
		Sponsor - Troy Minarovic	
Honorable Mention	F0705	Bridges That Can Take A Shake	
		Claire Smith - St. Theresa School	
		Sponsor - Constance Sisko	
Honorable Mention	F0706	What Does Amperage Do?	
		Rylee Eberhart - Arts Academy Charter Middle School	
		Sponsor - Karen Miller	

Seventh Grade Fair (F) - Environmental (800)

Award		Proiect	Del Val
1st Place	F0803	Testing The Effect Of Various Chemicals On The Spotted Lantern Fly	✓
		Rayna Malhotra - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
2nd Place	F0804	Compare The Effectiveness Of Homemade Cleaning Products With Commercial Chemical Cleaners	
		Eshaan Patel - Springhouse Middle School	
		Sponsor - Jennifer Karetsky	
3rd Place	F0802	Does Temperature Of Water Affect Its pH?	
		Rujula Deshmukh - Springhouse Middle School	
		Sponsor - Troy Minarovic	

Honorable Mention F0801	Which Soil Is Best For Plant Growth?	
	Brooklyn Vasquez - Springhouse Middle School	
	Sponsor - Jennifer Karetsky	

Seventh Grade Fair (F) - Mathematics (1000)

			Del
Award		Proiect	Val
1st Place	F1001	The Josephus Problem	\checkmark
		Pranavi Marella - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
2nd Place	F1002	Pascal's Triangle	
		Aman Desai - Moravian Academy Middle School	
		Sponsor - Joanne Daniels	
Seventh G	rade Fair	(F) - Medicine & Health (1100)	
			Del
Award		Proiect	Val
1st Place	F1101	Will Squats Improve Your Vertical Jump?	\checkmark
		Talia Zurinskas - Springhouse Middle School	
		Sponsor - Noel Mahmood	

Sponsor - Karen Miller

How Does Meditation Impact Our State Of Mind?

Dana Passerman - Arts Academy Charter Middle School

Seventh Grade Fair (F) - Physics (1300))

F1103

2nd Place

Award		Project	Del Val
1st Place	F1304	"Wright" or Wrong: Are Two Wings Better Than One?	\checkmark
		Jerrod Harris - Orefield Middle School	
		Sponsor - Brian Holtzhafer	
2nd Place	F1306	The Effect Of Gravity On Drying Suspension Droplets	
		Thomas Gilchrist - Orefield Middle School	
		Sponsor - Brian Holtzhafer	
3rd Place	F1313	Cello Bridge Material On Timbre	
		Brynn Suhocki - Orefield Middle School	
		Sponsor - Brian Holtzhafer	
Honorable Mention	F1305	Wind Power	
		Nikhil Girotra - Orefield Middle School	
		Sponsor - Brian Holtzhafer	

Honorable Mention F1308	How Does The Voltage Of A Battery Affect The Magnetic Force When Creating Your Own Electricity? Sunny Chen - Springhouse Middle School	
	Sponsor - Noel Mahmood	
Honorable Mention F1310	How Can You Most Efficiently Lift Up Water Using Capillary Actiion?	
	Eric Jin - Orefield Middle School	
	Sponsor - Brian Holtzhafer	
Honorable Mention F1311	Effects Of Replicated Sunlight On Color Pigments	
	Emma Johnson - Orefield Middle School	
	Sponsor - Brian Holtzhafer	

Seventh Grade Fair (F) - Zoology (1400)

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Award		Proiect	Del Val
1st Place	F1401	The Effect Of Caffeine On The Regeneration Of Planaria	$\checkmark$
		Sarah Pangare - Springhouse Middle School	
		Sponsor - Noel Mahmood	
2nd Place	F1405	The Effects Of Electromagnetic Waves On Daphnia	
		Aarav Kakade - Springhouse Middle School	
		Sponsor - Troy Minarovic	
3rd Place	F1402	Does Supplementing Laying Hens With Vitamin E Affect Egg Production?	
		Kelsey Gelb - Orefield Middle School	
		Sponsor - Brian Holtzhafer	
Honorable Mention	F1403	The Pen vs. Bugs Does All Bugs Try To Past The Line? Why?	
		Malak Varshany - Arts Academy Charter Middle School	
		Sponsor - Karen Miller	
Honorable Mention	F1404	Which Will A Dog Choosse First, Carrots, Cheese Or A Hot Dog?	
		Noah Helmuth - Springhouse Middle School	
		Sponsor - Noel Mahmood	
3rd Place Honorable Mention	F1402 F1403	Aarav Kakade - Springhouse Middle School Sponsor - Troy Minarovic Does Supplementing Laying Hens With Vitamin E Affect Egg Production? Kelsey Gelb - Orefield Middle School Sponsor - Brian Holtzhafer The Pen vs. Bugs Does All Bugs Try To Past The Line? Why? Malak Varshany - Arts Academy Charter Middle School Sponsor - Karen Miller Which Will A Dog Choosse First, Carrots, Cheese Or A Hot Dog? Noah Helmuth - Springhouse Middle School	