Lehigh Valley Science andEngineering Research Fair 2024 - Fair Results

Category	Gr	Place	Project Title		Promoted to Del Val?	School	Teacher
Behavioral	6	1st Place	What Lipstick Color is Best for You?	Gabriella Ortiz		Moravian Academy - MS	JoAnne Daniels
Behavioral	7	1st Place	Can Listening to Music Improve Concentration?	Chloe Balshi	Promoted	Moravian Academy - MS	JoAnne Daniels
Behavioral	8	1st Place	Does Heart Rate Variability Affect Your Cognitive Abilities	Shravani Shelke	Promoted	Springhouse Middle School	Daniel Christman
Behavioral	9	1st Place	The Impact of Online Gaming Technologies on K-12 Education	Chizaram Chigozie-Okwum	Promoted	Arts Academy Charter Middle School	Carole Allen
Behavioral	11	1st Place	Is there a difference in the academic confidence of males and females	Emma Bluske	Promoted	Emmaus High School	Brent Landrum
Behavioral	11	2nd Place	How does age affect one's adultification bias	Aashka Sevak	Promoted	Emmaus High School	Brent Landrum
Behavioral	11	3rd Place	The Effect of Friendship on Accuracy in Predicting Choices	Isabella Applegate	Promoted	Freedom High School	Graceanne Ruggiero
Behavioral	12	1st Place	How Color Affects Memory	Emily Ace	Promoted	Bangor Area High School	Robert Hachtman
Biochemistry	6	1st Place	What is the Best Method to Extra Strawberry DNA?	Jazelle Tout-Puissant		Moravian Academy - MS	JoAnne Daniels
Biochemistry	8	1st Place	Improving Proton Conductivity to Optimize MFC Performance	Ayush Jalani	Promoted	Springhouse Middle School	Scott Bauer
Biochemistry	9	1st Place	Which over-the-counter headache medication (Excedrin, Aleve, Tylenol) dissolves the fastest in a stomach acid simulation?	Sofia Hameed	Promoted	Parkland High School	Kaitlin Heintzelman
Biochemistry	10	1st Place	MyeloMut: A Novel Biocomputational approach for Identifying common patterns in Genetic Mutations causing Multiple Myeloma.	Vedant Malik	Promoted	Parkland High School	Kaitlin Heintzelman
Biochemistry	10	2nd Place	A Novel Framework to Fold and Analyze Protein Interactions	Anish Pallod	Promoted	Parkland High School	Kaitlin Heintzelman
Biochemistry	12	1st Place	Year Three: Assessing the Efficacy of Dacomitinib Towards Elastic Matrix Repair in Aortic Aneurysms Relative to siRNA-Based Gene Silencing in the EGFR Signaling Pathway	Rayna Malhotra	Promoted	Moravian Academy - MS	Wendy Sheetz
Botany	7	1st Place	The Effect of Fertilizer Type on Plant Growth	Kushaan Shah	Promoted	Springhouse Middle School	Lauren Myers
Botany	7	2nd Place	How to keep flowers alive for the longest?	Shriveda Nagulapally		Springhouse Middle School	Troy Minarovic
Botany	7	3rd Place	What is the best type of water for plants?	Alexandra Maghacot		Springhouse Middle School	Troy Minarovic
Botany	7	Honorable Mention	How Does the pH in Different Liquids Affect Grass Growth?	Molly Frank		Springhouse Middle School	Jennifer Karetsky
Botany	8	1st Place	Do hydroponically grown or soil grown plants grow taller?	Noelle Carson	Promoted	Springhouse Middle School	Scott Bauer
Botany	8	2nd Place	What is the Effect of Salt Water Concentrations on Mung Beans	Varsha Magaji		Springhouse Middle School	Daniel Christman
Botany	9	1st Place	Analyzing the Effects of Microplastic Pollution on Garden Cress (Lepidium sativum) Growth	Jonathan Win	Promoted	Parkland High School	Kaitlin Heintzelman
Botany	9	2nd Place	Compost and its effect on plant development	Esteban Rodriguez Silva	Promoted	Easton Area High School	James Brown
Botany	11	1st Place	An Investigation of How Allelopathic Plants Impact Eichhornia Crassipes	Priya Mancheril	Promoted	Emmaus High School	Brent Landrum
Botany	11	2nd Place	Optimal Ratio of Auxins and Cytokinins on Plant Growth	Talha Ali	Promoted	Parkland High School	Kaitlin Heintzelman
Botany	12	1st Place	Plants Under Pressure	Liam Foley	Promoted	Freedom High School	Graceanne Ruggiero
Chemistry	6	1st Place	Which Lip Balm is the Best Moisturizer?	Reyah Jaffer		Moravian Academy - MS	JoAnne Daniels
Chemistry	7	1st Place	How Does the Type of Candle Wax Affect the Life of the Candle?	Saharsha Konda	Promoted	Springhouse Middle School	Lauren Myers
Chemistry	7	2nd Place	Out of a Sticky Situation: A Scientific Exploration into Gum Cleanup Solutions	Hanchun Yang		Springhouse Middle School	Jennifer Karetsky
Chemistry	7	3rd Place	What Stain Remover is the most effective?	Talia Trehan		Springhouse Middle School	Jennifer Karetsky
Chemistry	7	Honorable Mention	The effect of SPF from sunscreen on UV paper through sunlight.	Noor Aslam		Springhouse Middle School	Lauren Myers
Chemistry	7	Honorable Mention	How Does Temperature Affect the Activity of an Enzyme?	Sophia Chen		Moravian Academy - MS	JoAnne Daniels

Category	Grade	Award	Title	Student	Status	School	Teacher
Chemistry	7	Honorable Mention	Does the temperature of a galvanic cell affect its voltage?	Sanvi Jha		Springhouse Middle School	Troy Minarovic
Chemistry	8	1st Place	Powerful Plastic: The Effect of Glycerin on a Bioplastic made with Sargassum Seaweed	Veda Gandhi	Promoted	Springhouse Middle School	Scott Bauer
Chemistry	8	2nd Place	What is the affect of Potassium Chloride, Magnesium Chloride, & Calcium Chloride on ice's melting rate?	Mahi Patel		Springhouse Middle School	Daniel Christman
Chemistry	8	3rd Place	How does the amount of baking soda affect the height of cookies?	Al Ford		Springhouse Middle School	Scott Bauer
Chemistry	8	Honorable Mention	How do different salt-metal catalysts affect the efficiency and amount of electricity produced by water electrolysis?	Sushal Boddeda		Springhouse Middle School	Susan Stern
Chemistry	8	Honorable Mention	What is the effect of different liquid and coin combinations on pH?	Siddhi Pai		Springhouse Middle School	Daniel Christman
Chemistry	9	1st Place	How does temperature affect performance of lithium-ion batteries?	Jayden Yao	Promoted	Parkland High School	Kaitlin Heintzelman
Chemistry	9	2nd Place	What Effect Does pH Have on the Accuracy of Lead Detection?	Sophia Nauman	Promoted	Parkland High School	Kaitlin Heintzelman
Chemistry	9	3rd Place	How do different substances affect the melting rate of ice?	Anuoluwapo Ogunsola	Promoted	Parkland High School	Kaitlin Heintzelman
Chemistry	11	1st Place	Optimizing Power and Energy Density to Improve the Capacity of Lithium-Air Batteries by Changing Cathode Microstructures	Jayaditya Kothari	Promoted	Parkland High School	Kaitlin Heintzelman
Computer	7	1st Place	Can An Algorithm Beat the S&P 500?	Landon Sheatsley	Promoted	Moravian Academy - MS	JoAnne Daniels
Computer	7	2nd Place	Using AI to find pneumonia through image processing	Devansh Garg		Springhouse Middle School	Jennifer Karetsky
Computer	8	1st Place	An Advanced Method for Visually Impaired People To Avoid Everyday Obstacles Such As Pedestrians and Automobiles using Convolutional Neural Network and Distance Detection	Areesha Mariyam	Promoted	Springhouse Middle School	Susan Stern
Computer	8	2nd Place	Using Machine Learning to Diagnose Lung Cancer	Kelly Wang		Springhouse Middle School	Scott Bauer
Computer	8	3rd Place	Which Sorting Algorithm is the most Efficient?	Kaustubh Kashalkar		Springhouse Middle School	Scott Bauer
Computer	8	Honorable Mention	A Calculator for your Weight: BMI	Mohid Mirza		Springhouse Middle School	Susan Stern
Computer	9	1st Place	Develop an App to Efficiently Create Peddimat Programs with c#.net for Peddinghaus Machines	Anthony Wang	Promoted	Parkland High School	Kaitlin Heintzelman
Computer	9	2nd Place	Active Fraudulent Medicare Practitioner Screening Using Statistical Analysis and Machine Learning	Reva Paul	Promoted	Moravian Academy - HS	Wendy Sheetz
Computer	10	1st Place	Synthetic Data: A Novel Approach to Predict Diabetes	Neha Atchyuthuni	Promoted	Parkland High School	Kaitlin Heintzelman
Computer	11	1st Place	Using Functional Connectivity Data To Predict ADHD Severity	Hanning Yan	Promoted	Moravian Academy - HS	Wendy Sheetz
Earth	8	1st Place	Optimal Growth Conditions for Cyanobacteria in Simulated Martian Environment	Aaditri Suresh	Promoted	Springhouse Middle School	Scott Bauer
Earth	8	2nd Place	Rocks to the Rescue: Optimizing CO2 Storage	Guhan Sathish	Promoted	Springhouse Middle School	Susan Stern
Earth	8	3rd Place	Shake it Up	Naina Dey		Orefield Middle School	Brian Holtzhafer
Earth	8	Honorable Mention	How do different gases affect temperature?	Benjamin Mangano		Springhouse Middle School	Scott Bauer
Earth	10	1st Place	TESSNet: Analysis of Transfer Learning for a TESS Exoplanet Classification Model Utilizing Deep Learning	Jerry Wang	Promoted	Parkland High School	Kaitlin Heintzelman
Engineering	7	1st Place	Can I Make an Electric Car That Will Recharge and Not Overheat?	Fayzaan Jali	Promoted	Moravian Academy - MS	JoAnne Daniels
Engineering	8	1st Place	How does the amount of blades on a wind turbine affect its performance?	Vibha Borkar	Promoted		Susan Stern
Engineering	8	2nd Place	The Science Behind Gear Ratios in Wind Turbines	Haadi Matin Matin		Springhouse Middle School	Scott Bauer
Engineering	8	3rd Place	How does the length of a metal threaded rod with a fixed end affect it's deflection when loaded on the unfixed end?	Olivia Esteban		Springhouse Middle School	Daniel Christman
Engineering	9	1st Place	Solar Panel Energy Production	Avleen Khinda	Promoted	Parkland High School	Kaitlin Heintzelman
Engineering	10	1st Place	AquaGuard: A Multimodal device for Real-Time Drowning Detection in Swimming Pools	Aadi Deshmukh	Promoted	Moravian Academy	Wendy Sheetz

Engineering	10	2nd Place	Creation of a Permanent, Self-Sufficient AUV to Navigate Subsea Pipelines and Improve Oil Leak Detection	Aryan Kapoor	Promoted	Parkland High School	Kaitlin Heintzelman
Engineering	11	1st Place	Creating Digital Eyes Using Sensor Fusion and Stereo Vision	Brandon Cai	Promoted	Parkland High School	Kaitlin Heintzelman
Engineering	11	2nd Place	The Effect of Color Theory On the Diagnosis of Skin Disorders in Dark Skinned Patients	Gloria Klees	Promoted	Emmaus High School	Brent Landrum
Engineering	11	3rd Place	The Effect of Various Polymers on the UV Resistance of Glass	Jillian Halm	Promoted	Freedom High School	Graceanne Ruggiero
Engineering	12	1st Place	Digital Eyes: A Computer Vision Assisted Probing Cane for the Visually Impaired	Sooraj Tharumia	Promoted	Parkland High School	Kaitlin Heintzelman
Engineering	12	2nd Place	Solar Cooking	Kenden Bair	Promoted	Bangor Area High School	Robert Hachtman
Environmental	7	1st Place	How does Geothermal Energy work?	Diksha Patel	Promoted	Springhouse Middle School	Troy Minarovic
Environmental	8	1st Place	The Effect of Pesticides vs. Genetically Modified Corn on Terrestrial and Aquatic Invertebrates.	Tyler Iyengar	Promoted		Brent Landrum
Environmental	8	2nd Place	Can Biodegradable Hydrogels Help Conserve Water in Farming	Bhuvan Barker		Springhouse Middle School	Scott Bauer
Environmental	8	3rd Place	The Effects of Fertilizers on Algal Bloom Growth	Maanya Gope		Springhouse Middle School	Susan Stern
Environmental	9	1st Place	The Effect of Herbicides on Phytoplankton	Vivian Xu	Promoted	Parkland High School	Kaitlin Heintzelman
Environmental	10	1st Place	Design of a Low-Cost Air Pollution/Quality Monitor for Interpreting Air Quality	Saisuchit Gollapudi	Promoted	Parkland High School	Kaitlin Heintzelman
Environmental	10	2nd Place	Effects of Different Trees on Greenhouse Gases	Sydney Klever	Promoted	Parkland High School	Kaitlin Heintzelman
Environmental	11	1st Place	Superbacteria vs. Superfund Site: Life in Extreme Environments	Natalya Ding	Promoted	Southern Lehigh High School	Jill Suzanne Forrest
Environmental	11	2nd Place	The effects of microplastics on sea anemones	Cayden Bray	Promoted	Bangor Area High School	Robert Hachtman
Environmental	11	3rd Place	Combining Satellite Imagery and Convolutional Neural Networks to Determine the Likelihood of Wildfires in a Given Area	Samith Rohatgi	Promoted	Parkland High School	Kaitlin Heintzelman
Environmental	12	1st Place	Determining the LD50 of Copper Nanoparticles with Bibb Lettuce	Alyvia Herman	Promoted	Emmaus High School	Brent Landrum
Environmental	12	2nd Place	The effects of pesiticides on non-target insect populations	Olivia Melazzo	Promoted	Bangor Area High School	Robert Hachtman
Math	8	1st Place	Numbers for Harmony: Gauging the Inclusivity of Color Vision	Lucas Yang	Promoted	Springhouse Middle School	Susan Stern
Medicine	7	1st Place	How Does Caffeine Affect Pulse Rate?	Elizabeth Goodman	Promoted	Moravian Academy - MS	JoAnne Daniels
Medicine	8	1st Place	Effects of High Sugar Diet on the health of Drosophila melanogaster: Lesson learned	Adwik Banerjee	Promoted	Springhouse Middle School	Scott Bauer
Medicine	9	1st Place	Mechanical Model: Knee Stress	Nila Raja	Promoted	Parkland High School	Kaitlin Heintzelman
Medicine	10	1st Place	Discovering Novel Biomarkers in Cardiac Stent Thrombosis and Restenosis through Precision Intravascular Imaging	Krish Malik	Promoted	Parkland High School	Kaitlin Heintzelman
Medicine	10	2nd Place	NeuroAID: An Explainable Artificial Intelligence (XAI) based Brain Tumor Detection System using MRI Analysis	Tushar Mehta	Promoted	Parkland High School	Kaitlin Heintzelman
Medicine	11	1st Place	DNA Extraction using Laboratory Reagents vs. Household Materials	Adarsh Naryanan	Promoted	Parkland High School	Kaitlin Heintzelman
Microbiology	8	1st Place	How Do Different Common Antibiotics Affect Antibiotic Resistance Differently in E. coli by Repeated Exposure?	Sean Jeon	Promoted	Springhouse Middle School	Susan Stern
Microbiology	8	2nd Place	How does transformation conditions change the transformation efficiency in E.coli?	Zeeshan Jasim Jasim	Promoted	Springhouse Middle School	Scott Bauer
Microbiology	11	1st Place	Leukemia Detection using Image Recognition	Aadhavan Raja Nainar	Promoted	Parkland High School	Kaitlin Heintzelman
Microbiology	12	1st Place	The Effects of FDA Approved Artificial Food Colorings on Gastrointestinal Health	Oliver Krejbich	Promoted	Bangor Area High School	Robert Hachtman
Microbiology	12	2nd Place	Effect of Cell Type on Transformation Efficiency	Logan Rusché	Promoted	Bangor Area High School	Robert Hachtman
Physics	7	1st Place	How much weight can be added to a Maglev train before it touches the track.	Mugdha Chaturvedi	Promoted	Springhouse Middle School	Troy Minarovic
Physics	7	2nd Place	Studies of Pulleys Mechanical Advantage	Yasamin Farsani		Springhouse Middle School	Jennifer Karetsky
Physics	7	3rd Place	Testing Different Metals for Electromagnets	Max Immer		Springhouse Middle School	Jennifer Karetsky
Physics	7	Honorable Mention	Does the color of an object affect the amount of heat absorbed from a light source?	Riya Shenoy		Springhouse Middle School	Lauren Myers

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Physics	8	1st Place	Do different materials have different surface energies, measured by water contact angles?	Yihan Li	Promoted	Springhouse Middle School	Susan Stern
Physics	8	2nd Place	How does color effect temperature?	Matthew Huang		Springhouse Middle School	Scott Bauer
Physics	8	3rd Place	Extraterrestrial Object Identification Through Laser Induced Breakdown Spectroscopy (LIBS) Spectrum with Artificial Neural Networks	Derek Yao		Springhouse Middle School	Scott Bauer
Physics	8	Honorable Mention	What can hold more mass: paper or plastic bags?	Madison Althouse		Springhouse Middle School	Daniel Christman
Physics	8	Honorable Mention	Drawback Length in Archery	Ayra Ismail		Springhouse Middle School	Scott Bauer
Physics	8	Honorable Mention	How does the Temperature Affect the Bounce of a Tennis Ball	Sania Kadhiwala			Susan Stern
Physics	8	Honorable Mention	The Effect Of Rocket Fin Shapes on its Apogee	Kevin Lu		Springhouse Middle School	Susan Stern
Physics	8	Honorable Mention	What is the effect of the refractive index on different concentrations of sugar dissolved in a liquid?	Sachin Rajkumar		Springhouse Middle School	Scott Bauer
Physics	8	Honorable Mention	What is the best angle for a ballista to shoot a projectile the farthest	Jude Wilson		Springhouse Middle School	Daniel Christman
Physics	9	1st Place	Hemodynamic Intricacy: Interpreting the Impact of Blood Vessel Diameter and Viscosity on Flow Characteristics through a Modeling Framework	Guhan Sureshkumar	Promoted	Parkland High School	Kaitlin Heintzelman
Physics	10	1st Place	Hysteresis in the formation of waves in spinning fabrics	Katherine Gilchrist	Promoted	Parkland High School	Kaitlin Heintzelman
Physics	10	2nd Place	Using "Tunabots" to Understand how the Shape of a Fish Affects the Fluid Interactions in a School of Fish	Nikhil Skandan	Promoted	Moravian Academy - HS	Wendy Sheetz
Physics	10	3rd Place	Water Vaporization for In-Space Electric Propulsion Applications Using Induction Heating and Ultrasonic Atomization	Clarke Ray	Promoted	Parkland High School	Kaitlin Heintzelman
Physics	10	Honorable Mention	How Does the Temperature of a Tennis Ball Affect the Height of its Bounce?	Hafsah Hasher		Parkland High School	Kaitlin Heintzelman
Physics	11	1st Place	Relationship between Mechanical Energy Conservation and Density of Moving Object	Minori Yamashita	Promoted	Parkland High School	Kaitlin Heintzelman
Physics	12	1st Place	Efficiency Optimization of a Pulsed DC Magnetohydrodynamic Drive	Cooper Gray	Promoted	Bangor Area High School	Robert Hachtman
Team	7	1st Place	Algae eaters vs Algae eaters, Which is better?	Aiden Tallada	Promoted	Wind Gap Middle School	Colette Flory
Team	7	1st Place	Algae eaters vs Algae eaters, Which is better?	Marshall Shank	Promoted	Wind Gap Middle School	Colette Flory
Team	7	1st Place	Algae eaters vs Algae eaters, Which is better?	Caden Metzgar	Promoted	Wind Gap Middle School	Colette Flory
Team	8	1st Place	What Effect Does the Miracle Berry Have on Spicy and Sour Foods?	Andrew Breneman	Promoted	Wind Gap Middle School	Colette Flory
Team	8	1st Place	What Effect Does the Miracle Berry Have on Spicy and Sour Foods?	Trey Miller	Promoted	Wind Gap Middle School	Colette Flory
Team	8	1st Place	What Effect Does the Miracle Berry Have on Spicy and Sour Foods?	Luca Uliana	Promoted	Wind Gap Middle School	Colette Flory
Team	9	1st Place	Dealing with Diabetes: The Road to Developing an Artificial Pancreas	Rahini Chauhan	Promoted	Parkland High School	Kaitlin Heintzelman
Team	9	1st Place	Dealing with Diabetes: The Road to Developing an Artificial Pancreas	Miriam Kelawy	Promoted	Parkland High School	Kaitlin Heintzelman
Team	9	2nd Place	Hot Hair Health	Shireen Jan	Promoted	Parkland High School	Kaitlin Heintzelman
Team	9	2nd Place	Hot Hair Health	Maheen Jan	Promoted	Parkland High School	Kaitlin Heintzelman
Team	9	2nd Place	Hot Hair Health	Safiya Saif	Promoted	Parkland High School	Kaitlin Heintzelman
Team	11	1st Place	The Effect of Sunscreen SPF on UV Radiation Absorption	Nivetha Varathakumar	Promoted	Freedom High School	Graceanne Ruggiero
Team	11	1st Place	The Effect of Sunscreen SPF on UV Radiation Absorption	Hailey Applegate	Promoted	Freedom High School	Graceanne Ruggiero
Zoo	10	1st Place	Galleria Mellonella: A Novel Method of Degrading Polyethylene.	Luke Hauck	Promoted	Parkland High School	Kaitlin Heintzelman
Zoo	11	1st Place	Testing the Effectiveness of Natural Anesthetics	Aleena Khokhar	Promoted	Emmaus High School	Brent Landrum
Zoo	12	1st Place	The Effect of the Components of Energy Drinks on the Heart Rate of Daphnia magna	Hannah Halm	Promoted	Freedom High School	Graceanne Ruggiero