



Pennsylvania Junior Academy of Science Region 1A Episcopal Academy Award Recipients 2026



EA PJAS Regional Competition 2026 at a Glance

85 Participants

60, 1st Place Awards

25, 2nd Place Awards

7 Special Awards

6 Perfect Scores



Students who received Perfect Scores or Special Awards

The Pennsylvania Junior Academy of Science (PJAS) is a statewide organization dedicated to providing opportunities in STEM to students in grades 7-12. This year, Episcopal Academy's PJAS chapter reached an exciting milestone, with 85 Middle and Upper School students participating. Each student began by selecting a STEM topic of their choice.

With guidance from faculty mentors, they designed and conducted an independent research project, analyzed data, and drew meaningful conclusions. They then had the opportunity to present their research at Regional Competition on February 28.

At the Regional Competition, students presented their findings to a panel of external judges who evaluated each project using a discipline specific rubric. Based on their assessment, students could potentially receive 1st, 2nd, or 3rd place awards, with 1st place recipients eligible to advance to the State Competition. A Perfect Score represents a rare and impressive achievement, awarded only when all judges agree that a student has

flawlessly executed every aspect of their research and presentation. Judges may also nominate exceptional projects for Special Awards.

We are incredibly proud of every EA participant! Throughout this process, our students demonstrated creativity, resilience, and critical thinking, embracing the inquiry process!

Perfect Scores

Elise Markle (8th Grade)

Zora Lewis (9th Grade)

Jaina Markle (10th Grade)

Gabriella Burke (11th Grade)

Daniel Adibi (12th Grade)

Mahika Ralhan (12th Grade)

Special Awards

Robbie Deirmengian (8th Grade) – The Perseverance in Research Award

The student demonstrates exceptional persistence and growth when faced with setbacks, unexpected results or challenges during the research process. The project shows clear evidence of troubleshooting, redesign, or iteration that strengthened their overall study and the student reflected meaningfully on obstacles encountered and how those challenges contributed to their own growth and learning process.

Myra Ralhan (9th Grade) – The Robust Research Award

The student takes initiative in their research, including but not limited to finding industry professionals or academic papers. The research is extensively referenced during the presentation. The hypothesis is informed by research. If the experiment fails to support the hypothesis, the student attempts to discover why by revisiting or performing additional research.

Angela Zhou (9th Grade) – The Exceptional Analysis Award

The student went above and beyond in the analysis area of the project and drew sound conclusions from the data gathered (e.g., presenting and explaining more than a set of averages). The student can rationally explain any errors or outliers in the data. The student speaks extensively about the experiment's results and explains any crucial implications of the findings.

Jaina Markle (10th Grade) – The Door Award for Innovation

The student creates or implements an innovative solution during the project. The innovative solution could be a creative testing apparatus, an uncommon (but effective) testing methodology, an analysis technique, unique materials used, etc.

Gabriella Burke (11th Grade)- The Judge's Award

Daniel Adibi (12th Grade)- The Judge's Award

Mahika Ralhan (12th Grade) – The Judge's Award

The student went above and beyond in a specific project area the judges wished to recognize. The specific area could be the strength of a real-world application, the student's ability to communicate complicated concepts effectively, the complexity of the subject matter given the student's grade level, an unexpected obstacle or challenge that the student resolved, etc.

EA PJAS Participants and Awards

Middle School



MS Participants from STEM Discovery Elective

First Name	Last Name	Title	Award
Ryan	Burke	The Deadly Magnetic Brownie...	2nd Place
Robbie	Deirmengian	Radiation Shielding Shown in a Cloud Chamber	1st Place
Jack	Kuhn munch	Temperature on the Strength of a Magnet	2nd Place

Ellen	Le	The Impact of Winglet Shapes on Distance	1st Place
Jake	Liang	The Effect of Temperature on the Rate of Bacterial Growth	2nd Place
Elise	Markle	The Role of Gender in Bystander Decision-Making	Perfect Score
Jackson	Rogers	The impact of Social Influence on Objective Visual Judgments	1st Place
Leo	Wang	Impact of temperature on mold growth in bread	1st Place

EA PJAS Participants and Awards

Upper School



EA PJAS students and faculty following the award ceremony

9th Grade

First Name	Last Name	Title	Award
Vihaan	Bhoopathy	Analyzing the Evolution of CAR-T Cell Therapies with AI	2nd Place
Effie	Goebeler	Situational Choice Patterns	1st Place
Maggie	Gomez	Yeast Clump Size Survival in Response to Env. Stressors	1st Place
Kasen	Jones	The Affect of pH on Hydra Population	2nd Place

Yashvi	Kiran	How to create a levitating vehicle using electromagnets?	2nd Place
Zora	Lewis	The Effect of Text Color On Short-term Memory Recall	Perfect Score
Nina	Lohin	The Effect of Fruit Type on Mold Growth Over Time	2nd Place
Faye	Mo	How the Properties of Convex Polyhedra Influence their Nets	1st Place
Myra	Ralhan	The Impact of Sales on Consumer Decisions	1st Place
Cate	Washburn	Seasonal Changes in Campus Bird Community	2nd Place
Christopher	Winner	How environment affects architectural styles worldwide.	2nd Place
Luke	Wright	The Effect of Music on Reading and Math Comprehension	1st Place
Angela	Zhou	Body Image Perception	1st Place

10th Grade

First Name	Last Name	Title	Award
Omar	Ahmad	Effects of Partial-Social Isolation on Zebrafish behavior	1st Place
Andrew	Ahn	Effects of Different Peroxides on Heavy Metals in Water	1st Place
Aadi	Balyan	Detecting Curvature Using Local Intrinsic Geometric Measures	1st Place
Giselle	Bell	Comparing Buffer Capacities of Eczema Treatments	1st Place
Anna	Bradford	Effectiveness of Household Antimicrobials Versus Penicillin	2nd Place
Meghan	Ereso	Automated Plant Watering Robot vs Human Watering	1st Place
Kayla	Foppa Kouahou	Effects of Caffeinated Drink Ingredients on Pillbug Activity	1st Place
Keira	Gallagher	Splint Providing Distraction and Flexion to the PIP Joint	1st Place
John	Groark	Neurodegenerative effects of industrial pollutants	2nd Place
Max	Guo	Correlation of Measured Sky Temperature and Cloud Cover	1st Place
Ella	Gvodas	The Prevention of Dental Biofilms in an Acidic Environment	2nd Place

Benjamin	Heo	Stimuli-Responsive Polymer Systems for TNBC Drug Delivery	1st Place
Charlotte	Jones	Effects of Tea Leaf Decomposition on Wisconsin Fast Plants	1st Place
Aarav	Khandelwal	Designing a Braille Keyboard for the Visually Impaired	1st Place
Kayla	Krasnick	How Environment Influences Non-Invasive IR Glucose Monitors	2nd Place
Max	Leung	Effects of Fertilizer Type on Turfgrass Runoff	1st Place
Jaina	Markle	Food Allergy and Aversion Study	Perfect Score
Yaphet	Michael	Effects of Suspended Sediments on Photosynthesis	2nd Place
Nick	Michel	Exploring Landscape Cover Runoff and Erosion on EA's campus.	2nd Place
Caroline	Moran	The Impact of Road Salts on Plant Life	2nd Place
Kassidy	Patrick	The Effects of Antibiotics on E. Coli's Respiration	1st Place
Lucille	Ren	The Impact of Materials on Instrument Sound Quality	2nd Place
Katy	Schuck	Teacher Engagement and Its Effect on Student Performance	2nd Place
Sifin	Sintayehu	Natural Remedies vs Ibuprofen: Effects on Pillbug Behavior	1st Place
Violet	Stanek	Impact of Organic vs Synthetic Fabric on Soil Invertebrates	1st Place
Isabella	Winner	The effect of agar composition on Serratia and Micrococcus	1st Place
Jayden	Zhu	CFD Analysis: Aerodynamic Impact of 2026 F1 Regulations	1st Place

11th Grade

First Name	Last Name	Title	Award
Kate	Boerner	Exercise Stress and Histamine Sensitivity in pillbugs	2nd Place
Gabriella	Burke	Effects of BurnOut Herbicide on Invertebrate Abundance	Perfect Score
Reagan	Buzan	The Effect of Music on Academic Performance	1st Place
Grace	Christie	Using Artificial Intelligence to Analyze Stock Market Trends	1st Place

Gregory	Deirmengian	The effects of different substances on yeast growth	2nd Place
Isabel	Ding	Subspace Structure and Reasoning in Multimodal Models	1st Place
Joseph	Doyle	An Analysis of Password Cracking and Defense	1st Place
Muriel	Fitz-Kaltenmeier	How Temperature Effects on Calcium Hydroxide Carbon Capture	1st Place
Cyrian	Foppa Tiankwa	Effects of Apple Variety and Treatments on PPO Activity	1st Place
Sara	Gutheil	The effects of the internet on study habits and test scores	1st Place
Vivian	Jiang	Improving the Selectivity of Curcumin for Copper Detection	1st Place
Micah	Kim	Evaluating Encryption Algorithms Under Different Data Sizes	1st Place
Arjun	Kulkarni	Effect of Polymerization Temperature on Degradation of PCL	2nd Place
Annie	Le	Microplastic shedding from contacts and its effects on eyes	1st Place
Emily	MacIntyre	Evaluating Test Scores and Time in Different Environments	1st Place
Darcy	Mackenzie	Drought stress effect on competitive leafy green biomass	1st Place
Lily	McNamara	Effects of Microplastics on Aquatic Invertebrates	1st Place
Connor	Myers	Exploring Properties of Lissajous Curves	1st Place
Cj	Nichols	The Effect of UV Light on Bacterial Growth	1st Place
Cai	Parker	Exploring Native and Non-Native Plants for Green Roof Usage	1st Place
Danity	Pike	Comparing Microplastics Across Local Water Sources	1st Place
Ronen	Roy	Solving Equations with Extended Euclidean Algorithm	2nd Place
Ayman	Samuel	Cost Effective Water Filtration for Toxic Chemicals	1st Place
Lindy	Schmedlen	Effects of Salinity Changes on Oyster Filtration Rates	1st Place
Nathan	Shebel	Simulation of the Spread of Disease in an Epidemic	2nd Place
Karen	Shi	Social Media Engagement as a Predictor of Political Interest	1st Place
Laura	Tarau	The Effects of Music on the Brain's Ability to Focus	1st Place

Shaivi	Vuyyuru	From Soil to Scent: How Fertilizers Influence Flower Aroma	2nd Place
Benjamin	Wang	Antioxidant Protection Against Oxidative Stress in Yeast	1st Place
Ryan	Wen	Slime Mold and Public Transportation Systems	1st Place
Lydia	Wright	The Rare Earth Hypothesis: The Occurrence of the Biosphere	1st Place

12th Grade

First Name	Last Name	Title	Award
Daniel	Adibi	Determining the Theoretical Limit of Tidal Flattening	Perfect Score
Ivie	Enakhimion	Assessing How Competition Affects Antibiotic Response	1st Place
Tucker	Ewan	How Length of Organic Molecules effects Non-Polarity	2nd Place
Mahika	Ralhan	Machine Learning Assisted Optimal Electric Fields in STMBJ	Perfect Score
Ishaan	Singh	Can A Computer Know More Art History Than Me?	2nd Place
Lilian	Wang	Helix Curves in the Frenet-Serret Frame	1st Place



EA at the Region 1A Competition, E.T. Richardson Middle School in Springfield, PA