

High School Award Winners

Biology

Award	Student(s)	Project Title	School
First Place	Yash Parikh	<i>Targeting the Npy+ Cortico-Brainstem Circuit: A Novel Pathway for Motor System Repair After Central Nervous System Injury</i>	Westlake HS
Second Place	Aira Jain	<i>The Genetic Landscape of SMARCB1: Novel Insights on the Impact of SMARCB1 Deletion on Murine Cortical Development</i>	Ardsley HS
Third Place	Lasya Hota	<i>CRISPR Activation of Kizuna: Investigating a Centrosomal Gene Linking Neuronal Morphology to Autism Spectrum Disorder</i>	Horace Greely HS
Third Place	Angelina Nie	<i>Enhanced Mitochondria Function Impairs Skeletal Muscle Differentiation and Maintenance: Implications for Sarcopenia Therapy</i>	Byram Hills HS

Chemistry

Award	Student(s)	Project Title	School
First Place	Anusha Vaish	<i>Domain Specific Role of Myosin-1e SH3 Domain in Facilitating Efficient IgG-Mediated Phagocytosis in Murine Macrophages</i>	The Ursuline School
Second Place	George Rojek	<i>In Silico Optimization of Postbiotic-Loaded Nanoparticle Delivery Systems for Inflammatory Bowel Disease Therapy</i>	Horace Greely HS
Second Place	Lorelai Nocca	<i>Crystallizing Galactose for Extraction from Upcycled Cheese Whey Permeate: A Novel Methodology</i>	Horace Greely HS

(1) Marilyn Reiner Science in Education Award for Top High School Exhibit

(2) Advances to the New York State Science Congress Competition

(3) New York State Science Congress Alternate

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Clinical/Social Psychology

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First Place	Iris Chen	<i>Utilizing Machine Learning to Predict Protective Factors for Childhood Exposure to Violence</i>	Blind Brook HS
Second Place	Hayley Brick	<i>Celiac Disease, Its Comorbid Psychological Conditions, and How It Affects Quality of Life for Adolescents</i>	White Plains HS
Third Place	Claire Mauney	<i>Multilingualism and teacher-child language congruence as predictors of young children's emotional competence in a preschool setting</i>	Byram Hills HS

Earth/Space

Award	Student(s)	Project Title	School
Third Place	Levent Sarayli	<i>The HURDAT Reanalysis Project for a Previously Unidentified Subtropical Cyclone</i>	Irvington HS
Third Place	Jeremy Loots	<i>Origin Matters: Enhancing Ethical Transparency and Value Integrity in the Diamond Trade</i>	Byram Hills HS

Engineering/Technology

Award	Student(s)	Project Title	School
Second Place	Julianna Wang	<i>Automated Drowning Detection Device for Residential Pools</i>	Briarcliff HS
Second Place	Saarth Desai	<i>The Electromagnetic Transmission</i>	Yorktown HS
Third Place	Joseph Park	<i>Securing DJI Drones: A Real-Time Wi-Fi Intrusion Detection and Response System</i>	Ardasley HS

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Environment

Award	Student(s)	Project Title	School
First Place (2)	Chloe Ferreira Szilagyi	<i>Examining the taxonomic composition and seasonal shifts of phytoplankton in the Kensico Reservoir: A Biological Approach to Water Quality Assessment</i>	Byram Hills HS
Second Place (3)	Maura McCormack	<i>Quantifying the Impact of Temporal and Seasonal Variability on Enterococcus Concentrations in the Hudson River</i>	The Ursuline School
Third Place	Alexandra Ziff Glueck	<i>Application of Seagrass as a Bio Barrier Mitigation Source for the Entrapment of Macro- and Micro- Plastics Along Coastal Ecosystems</i>	Irvington HS

Health/Nutrition

Award	Student(s)	Project Title	School
First Place	Madeline Lamb	<i>Phthalate Levels and Healthy Eating Index Scores: Dietary Quality as an Indicator of an Endocrine Disrupting Chemical</i>	Horace Greely HS
Second Place	Sameera Kavanal	<i>Examining HPV Vaccine Series Completion Rates in Adults through Socioeconomic Determinants of Health</i>	Yorktown HS
Third Place	Shane Goff	<i>Plyometrics vs. Weighted Ball Training: A Review</i>	Yorktown HS

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Math/Computers

Award	Student(s)	Project Title	School
First Place	Aditri Inamdar	<i>Integrative snRNA-seq and snATAC-seq Analysis to Identify Stepwise Transcriptional and Epigenetic Drivers of AT2-to-Basal-Like Transdifferentiation in Human Lung Epithelium</i>	Ardley HS
Second Place	Gavin Bunting	<i>Saving Time For Surgeons: A Novel AI-Based Framework for Automated Recordings of Robotic-Assisted Surgical Procedures in the da Vinci Xi Robotic Surgical System</i>	Byram Hills HS
Third Place	Max Charney	<i>Harnessing Millions of Consumer Reviews to Reveal Societal Trends at an Unprecedented Scale: Two Proof-of-Concept Studies for a Novel Computational Social Science Approach</i>	Byram Hills HS
Third Place	Matthew Masala	<i>Robust Tuberculosis Screening in Low-Resource Settings: Safety-Aware Restoration of Smartphone-Captured Chest X-Rays</i>	Briarcliff HS

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Medicine and Medical Science & Technology

Award	Student(s)	Project Title	School
First Place (2)	Nicholas Li	<i>Computational Discovery of Dorsal Root Ganglia (DRG) Cell Type Specific Markers for Delivery of Pain Treatment</i>	Briarcliff HS
Second Place (2)	Dhayashree Ravi	<i>Characterization of Exosomes from Axolotls for the Regeneration of Retinal Ganglion Cells (RGCs)</i>	Yorktown HS
Second Place (2)	Anthony Panarelli	<i>A Novel Role for NF-κB Signaling as a Biomarker in Ovarian and Endometrial Cancers</i>	Irvington HS
Second Place (3)	Vaishnavi Ravindranath	<i>Optimizing the Degree of Substitution in Sulfobutyl Ether β-Cyclodextrins for Enhanced Binding of Poorly Soluble Cancer Drugs</i>	Yorktown HS
Third Place (3)	Iris Ma	<i>The Role of Novel TREX1 Inhibitors in the Upregulation of cGAS-STING Signalling as a Promising Immunotherapy in Lung Adenocarcinoma</i>	Irvington HS
Third Place (3)	Priyanka Talla	<i>Defining the Role of Horizontal Intracortical Neurons in Functional Recovery After Spinal Cord Injury Using a Novel Kinematic Deviation Index</i>	Horace Greely HS

Physics

Award	Student(s)	Project Title	School
Third Place	Ying Yin Chen	<i>Simulation of Dark Matter Detection Using Upcoming Mu2e Experiment</i>	Byram Hills HS

Physiological/Experimental Psychology

Award	Student(s)	Project Title	School
First Place (1)(2)	Alexander Altamuro	<i>Testing Deception Detection Accuracy in Humans and Artificial Intelligence with Diagnostic Questioning and Content in Context</i>	Yorktown HS
Second Place	Bernadette Shafik	<i>Sleep Disruptions and Memory Outcomes During TMR: A Comparative Analysis</i>	Yorktown HS
Third Place	Alissa Zhu	<i>The Role of Intrinsic Self-Relevance on Memory Recognition</i>	Briarcliff HS

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**The Frank Iacopelli Award for Academic Excellence in Science, Technology,
Engineering & Mathematics for Top High School Presented to**

Yorktown HS

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