

2025 MA Region V Science and Engineering Fair Winners		
Congratulations to all students, teachers and mentors for their hard work!		
Name	School	Project Title
1st Place Sanofi Specialty Care Grand Prize. The winner will advance to the MA State Science & Engineering Fair in April, and will represent Region V at the International Science and Engineering Fair in Colmbus, OH, May 10-16		
Alex Hu	Tabor Academy	A Modular Ion Wind Cooling System Based on High-Voltage Pulse Generator and Sensors
1st Place Award Winners - These students advance to the MA State Science & Engineering Fair on April 4th at Gillette Stadium		
David Aubrey	Falmouth Academy	Biophysical Determinants of T-Cell Receptor Signaling in Danio rerio
Maggie Chen	North Quincy High	Optimizing Vitamin C Production in Hydroponically-Grown Common Bean Seedlings (Phaseolus vulgaris) Through Controlled Sunlight Exposure
Charles He	Milton Academy	Low-Frequency Energy Harvesting Device Based on a Winch-Driven Structure
Marko Mano	North Quincy High	Harnessing Food Waste-Derived Hydrogels for Targeted Herbicide Delivery: A Novel, Sustainable Approach to Controlling Fallopia Japonica
Srivibhu Piratla	Sharon High	Sweat Lactate Detection For Early Diagnosis Of Decompensated Heart Failure
Anvi Sarmah	Sharon High	Identification of Potential Genomic Biomarkers for the Personalized Treatment of Colorectal Cancer Utilizing Bioinformatics Approach
Jason Xie, Neal Tandon	Dover-Sherborn Regional High	STING Inhibits Migration and Invasion in Triple-Negative Breast Cancer Independently of Immune Cells
2nd Place Award Winners - These students advance to the MA State Science & Engineering Fair on April 4th at Gillette Stadium		
Kevin Bai	Westwood High	Evaluation of Unsupervised Network Intrusion Detection Algorithms without a Gold Standard
Angelina Fang	Winsor School	Exploring the Role of PI3K β in Cell Growth
Taleena Gonneea	Falmouth Academy	Defining the Role of abcg2a on the Hematopoietic Processes in D. rerio

Komal Jasuja	Weston High	NeuroVox: Voice-Activated Spinal Injury Muscle Regeneration
Zimon Li	Rivers School	Optimization of HRT Imaging Cell Counting Protocol in Study of UVA Effects on Fuchs Endothelial Corneal Dystrophy
Wenna Mao	Milton Academy	Understanding GBM Relapse Mechanisms through scRNAseq Analysis and Experimental Validation of Functional Genes
Maverick Pil	Falmouth Academy	Benthic Microbial Fuel Cells: A Novel Power Source
Aishwaryalakshmi Saravanan	Sharon High	Using Molecular Docking and Machine Learning to Design and Discover Novel Drugs for ER-alpha Targeted Breast Cancer Treatment
Seiji Ting	Dover-Sherborn Regional High	Development of a Microfluidic Device for Improving Cryoprotected Cell Therapies
Xiaoke Yu	Milton Academy	Regenerative Shock Absorber with Adjustable Dampening
Jingrui Zhang	Tabor Academy	Multi-Environmental Monitor Drone
Qiaorui Zhang	Newton North High	Predicting Poverty in the US Based on Demographic and Socioeconomic Features
3rd Place Award Winners - These students advance to the MA State Science & Engineering Fair on April 4th at Gillette Stadium		
Pranav Addanki	Canton High	Molecular Profiling of Stem Cell-Derived Neurons: Evaluating Their Potential to Replace Huntington's Disease-Affected Neurons
Xuanyu Chang	Falmouth Academy	How Does The Depth and The Cover-crop Treatment Affect Soil Carbon and Microbial Community
Thomas Hong	Milton Academy	SingSense: Lowering Stress Levels by Singing in a Biometrically Supported VR Platform
Ivan Ivanov	Sturgis Charter Public School	Hair Chemistry: An Investigation on the Catalytic Capabilities of Hair
Alex Kuriakose, Sanjay Iyer	Sharon High	Energy-Efficient Routing to Pick Up Heavy Objects
Anna Li, Elmeria Cheung, Michelle Chen	North Quincy High	Impact of Calcifying Macroalgae on the Mitigation of Ocean Acidification
Valerie Lindh	Southeastern Regional Vocational Technical	Investigation of the Impact of Soil Microorganisms on the Growth of Vigna Radiata

Andrea Lo	Tabor Academy	Investigating ECGC and Quercetin Synergistic Effect in Amyloid Beta Modified Drosophila melanogaster
Avaneesh Mohan	Sharon High	A Pipeline Prediction Tool of Cerebral Hypoxia Using Digital Histology Staining, U-Net Segmentation, and Multimodal Deep Learning Frameworks
Eagle Pei	Tabor Academy	Simultaneously Targeting Photons to Mitochondria and Lysosome via Nanophotosensitizers
Dyuthi Prashanth	Walpole High	Sentinel Step: A Guard on Your Path to Independence
Shea Ryan	St. John Paul II High School	The Role of Endocrine-Disrupting Pesticides in Decline of Bee Populations
Hayim Sims	Maimonides School	Photonic Nanoglass Stress Sensors
Siana Solarazza	Falmouth Academy	The Effects of Cytochrome P450 Enzyme Knockout on Acetaminophen Toxicity in Zebrafish Larvae
Finnegan Sommer, Olutayo Oyewusi	Southeastern Regional Vocational Technical	TheraBee
Venkat Surya Sai Kotur	Sharon High	SkinRAI: A Novel Approach to Leveraging AI and ML for Skin Cancer Detection by Mitigating Racial Bias
Emily Ward	Sturgis Charter Public School	Sustainable carbon capture: increasing food security in a changing world
Sonia Warrick	Oliver Ames High	Recipe for an Exoplanet: Using Transmission Spectroscopy to Identify Potentially Livable Exoplanets
Christopher Yoo	Noble And Greenough School	Modeling and Optimizing Firms' Competition and Collaboration Using Game Theory and Reinforcement Learning
Elaine Zhang	Dover-Sherborn Regional High	Charting the Brain: Using Normative Modeling to Predict Adolescent Cognitive Development
Honorable Mention Award Winners - While these students do not advance to MSEF we feel their projects deserve recognition.		
Tony Badawi	Dedham High School	How Prism Can - and Can't - Align Double Vision in Strabismus Patients
Shevaun Brown	Martha's Vineyard Regional High	Best Soil for Sedum Growth on Green Roofs
Ashley Defilippo	Weston High	Fire and Smoke Detection Safety System Leveraging Computer Vision and Thermal Imaging
Ryan Denny	Milton High	Social Credit: Leveraging Artificial Intelligence (AI) and Social Media for Inclusive Lending

Hannah Flanders	Falmouth Academy	The Effects of Ocean Acidification on Sclerochronology
Clare Hooper, Meah Cavallo	Newton Country Day School	Dermatologist Approved and Not Approved Moisturizers
Hollis Oliver	Falmouth Academy	The Effects of Seawater on Hydroponically Grown Lactuca Sativa
Michaela Oppong	Milton High	Effect of citrus juice on apple browning as a model for hyperpigmentation in human skin
Ethan Parmentier	Falmouth High	Does obsolete technology have a place in science?
Dua Rafaqat	North Quincy High	Synergistic Effects of Plant Extracts and Silver Nanoparticles in Combatting E. coli
Guanbo Wang	Boston Trinity Academy	ADHD Brain Activity Based on Transformer and MAIA Analysis
Special Award Winners - These students met the criteria for the following awards, sponsored by various organizations		
Award	Student	School
Category: Alnylam BioScience Award	Anvi Sarmah	Sharon High School
Category: AMD Engineering Excellence Award	Charles He	Milton Academy
Category: Massachusetts Chemistry & Technology Alliance (MCTA) Chemistry Excellence Award	Maggie Chen	North Quincy High School
Category: Massachusetts Life Sciences Center (MLSC) Trailblazer Award	Marko Mano	North Quincy High School
Category: MITRE Computer Science and Technology Excellent Award	Srivibhu Piratla	Sharon High School
Emerging Scientist Award	Neel Thakar	Quincy High School
Naval Science Award	Taleena Gonneea	Falmouth Academy
Naval Science Award	Maverick Pil	Falmouth Academy
Naval Science Award	Qiaorui Zhang	Newton North High School

Society for Science & the Public: NASA Earth Systems Science Award	Sonia Warrick	Oliver Ames High School
Society for Science & the Public: American Psychological Association Award	Thomas Hong	Milton Academy
Society for Science & the Public: Association for Women Geoscientists	Emily Ward	Sturgis Charter Public School
Society for Science & the Public: National Oceanic and Atmospheric Administration Award	Anna Li, Elmeria Cheung, and Michelle Chen	North Quincy High School
Society for Science & the Public: Ricoh USA, Incorporated	Xuanya Chang	Falmouth Academy
Society for Science & the Public: Society for In Vitro Biology	Zimon Li	Rivers School
Society for Science & the Public: Water Environment Federation Stockholm Junior Water Prize	Hannah Flanders	Falmouth Academy
Society for Science & the Public: Yale Science & Engineering Association Award	Seiji Ting	Dover-Sherborn High School
United States Air Force Award	Xiaoke Yu	Milton Academy
United States Air Force Award	Jingrui Zhang	Tabor Academy
United States Air Force Award	Kevin Bai	Westwood High School