

## 79th Region VI/ BOSTON STEM Fair Awards List

### SENIOR DIVISION

Title	Students Names	School	Place	Special Award
Cuffless Blood Pressure Measurement Monitor via Pulse Transit Time Analysis and Arduino	Shuting Zhu, Louis Chiu	O'Bryant School Math/Science	<b>GRAND</b>	Sanofi Grand Prize
How to control and optimize electromagnetic force under non-superconducting temperatures?	Zihua Mai	O'Bryant School Math/Science	1st	Special Judges Award
Biofilm-Based Plastic Bioremediation in Water Systems	Benson Wong, Martin Wong	Boston Latin	1st	AMD Engineering Excellence Award
Effect of Post-Fire Smoke on Chlorophyll Concentration of Pines	Qinghe Zhao	Boston Latin	1st	United States Air Force
Optimizing T-Cell-Mediated Cancer Killing: An Agent-Based Model	Andrew Yu	Boston Latin	1st	Alnylam BioScience Excellence Award
Evaluating Natural Medicines for Neuroprotection	Mary Deng	Boston Latin	1st	MCTA Chemistry Excellence Award
Novel Lichen Analysis at Lower Neponset River Reveals Previously Overlooked Heavy Metal Contamination	Yuxuan Zhang	Boston Latin	1st	MLSC Trailblazer Award Water Environment Federation / Stockholm Junior Water Prize
Cordyceps Militaris and it's effectiveness in Immunotherapy for NSCLC	Jianquan Zhao, Juns Ye	Boston Latin	2nd	United States Air Force
A Self-Regulating Gene Therapy Vector for Rett Syndrome	Yifan Ding	Boston Latin	2nd	United States Air Force
Effects of Road Salting on Muddy River Salinity	Isabella Winey	Boston Latin	2nd	Water Environment Federation / Stockholm Junior Water Prize
Circadian rest-activity rhythms and cognitive resilience in preclinical Alzheimer's disease	Kevin Wang	Boston Latin	2nd	
Improving Early Lung Cancer Detection Through Use of Neural Networks in Conjunction with LDCT Imaging	Brian Xu	Boston Latin	2nd	
Soil Fertility in East Boston	Elisen Bonilla, Joseph Puopolo	East Boston High	3rd	
Examining Differences in Neural Oscillations via Electroencephalography to Compare Reactions to Vocal and Siren Alarms	Mariana Monsalve Medina	Boston Latin	3rd	Special Judges Award
Antibiotic Resistance in Soil	Susan Chahwan	Boston Latin	3rd	Special Judges Award
Does e. Coli grow better in food-like conditions or agar?	Gerasimos Papadopoulos	Boston Latin	3rd	

Segmentation-Based Classification of Brain Tumors Using Neural Networks: Analyzing Meningioma, Pituitary Tumors, and Healthy Brain Cases	Ryan Ramu, Aditya Tangella	Boston Latin	3rd	MITRE Computer Science & Technology Excellence Award
Using a deep learning model to identify cell deaths in different cancer types	Rahul Bansal	Boston Latin	Honorable Mention	
The Effect of Different Energy Drinks on Daphnia's Heart Rate	Ruth Rodriguez, Joselyn Majano	East Boston High	Honorable Mention	
Eastie Farm and its Carbon Footprint / Eastie Farm y su Huella de Carbono	Mariana Monsalve Medina	East Boston High	Honorable Mention	NASA Earth System Science Award
Acidic Foods' Effect on Gut Microbiome	Anh Nguyen, Angel Morales	East Boston High	Honorable Mention	
How does academic stress affect students and can tracking it help deal with its effects?	Samantha Lee	O'Bryant School Math/Science	Honorable Mention	
What does the body do to the carbon dioxide and oxygen and why?	Stephanie Howard, Iriana Crispin, Josh Ortiz	Dearborn Stem Academy	Promising Scientist	
Macro invertebrates and Plankton in East Boston	Jenna DaSilva, Kayk Dos Santos	Promising Scientist	Promising Scientist	
Social media's effects in a modern bilingual high school	Hailey Jimenez - Escarfullery, Jeanmarlyn Pena	Margarita Muniz Academy	Promising Scientist	Special Judges Award
Fluorescent Bacteria	Taijah Beard	New Mission High School	Promising Scientist	
Acidic liquid's affect on catalase	Luis Bonilla Pineyro	Dearborn Stem Academy	Promising Scientist	
Breathing Boston: Unveiling the Primary Productivity of Native and Invasive Trees:	Melany Merino, Jancelley Rodriguez, Alejandra Conte Contreras	East Boston High		RICOH Special Judges Award
Early Detection of Putrescine Levels in Papillary renal cell carcinoma	Jessica Tao	Boston Latin		Special Judges Award
Bacteria in oceans due to runoff	Sima Kawaf, Ava Mclaughlin, Sidra Kawaf	East Boston High		National Oceanic and Atmospheric Administration Water Environment Federation / Stockholm Junior Water Prize

## JUNIOR DIVISION

Title	Students	School	Place	Special
An Introduction to Hand-Eye Coordination	Matolah Dankoff	Boston Latin	Grand	Cabot Corporation Grand Prize
Color Crazy	Reena Thompson	Eliot Elementary	1st	Behavioral & Social Science
Staying Safe Against E Coli PT2	Carwen Simoneau	Boston Latin	1st	Biology
Understanding Misophonia: Mysterious, Misunderstood, and Mistaken	Soleil Desai	Eliot Elementary	1st	Special Judges Award
Does a miracle berry make sour taste sweet because of a chemical reaction?	Sekou Kone	Dearborn	1st	Chemistry

Which Brand of Paper Towel is the Best?	George Darci, Ben Talbot, Chase Anderson	Warren-Prescott	1st	Engineering
Exercise (Don't Cram!) Right Before a Test: The Acute Impact of Aerobic Exercise on Cognitive Abilities	Sapna Malhotra	Eliot Elementary	1st	
Measures of Different Athletes Heart Rate When Doing Physical Activity	Juliana Cleary	Boston Latin	1st	
Assessing Student Perceptions	Rayne Valentine, Francesca Martin	Boston Latin	2nd	
Is Hydroponics Effective?	Ada Jiang, Bella Zhao	Boston Latin	2nd	
Pressure in the Air	Razia Frootan	Ruth Batson Academy	2nd	Computer Science
How does the amount of voltage being supplied to an electromagnet affect the strength of its magnetic field?	Alexander Khan	Boston Latin	2nd	Physics & Electronics
How does the emotion created from your surrounding environment affect your performance in both mental and physical tasks?	Meshack Vicente, Daniel Chen, Yovian Calderon	Warren-Prescott	2nd	
Stability of Gold Nanoparticles in Medicine and Technology	Mirabella Milane	Quincy Upper School	2nd	
Baseball Bats: Distance and Exit Velocity	Julius Sawyer	Boston Latin	2nd	
Sleep and Grades- Do they connect?	John Carmody	Boston Latin	2nd	
If I streamline a train will it progress faster	Adnan Sayeed	Boston Latin	3rd	Lemelson Early Inventor Prize
How does the acidity of food affect tooth enamel?	Iahn Seo	Boston Latin	3rd	
You're Not Immune To Propaganda	Marlowe Bolton	Eliot Elementary	3rd	
How do the genre of films affect children's (ages 11-12) behaviors?	Yeqing Guan	Boston Latin	3rd	
How does a concussion affect your thinking processioning	Ludovick Levesque	Boston Latin	3rd	
How Do Different pH Levels Affect Plant Growth?	Julius Schneiders	Boston Latin	3rd	
Testing the Damage Caused by Hailstones and Designing Protection For Your Car	Elyotan Yonas, Matthew McLaughlin	Warren-Prescott	3rd	
Sunscreen in the Winter	Claire Petersen	Boston Latin	3rd	Environmental Science
How Does Color Of Light Affect Photosynthesis?	Alison Conway	Joyce Kilmer	Honorable Mention	
Conformity and Why People Try to Fit It	Matthew Bradley, Jack Upton	Warren-Prescott	Honorable Mention	
Rock to Relaxation: The Heartbeat Project	Caroline Carey, Harper Racine	Eliot Elementary	Honorable Mention	
Pretty Pennies	Joselenah Johnson, Daniela Garcia, Suayane Lopes	Dearborn	Honorable Mention	

Make Elevators Safer	Simon Menzies, Benjamin Dvoskin	Quincy Upper School	Honorable Mention	
Electrical power from a bike	Elizabeth Rivkin McSwain	New Mission High School	Honorable Mention	
How Different Amounts of Fertilizer Affect Chia Seed Growth	Isabel Brink	Boston Latin	Honorable Mention	
Is it Possible to Create Your own Lie Detector Test?	Grayson Rogers, Max Ehrenpreis, Liam Redmond	Warren-Prescott	Honorable Mention	
Feel the power	Ediel Cartagena, Justin Alba	Ruth Batson Academy	Honorable Mention	Special Judges Award
Redesigning a Model Planetary Lander	Miguel A Gonzalez	Holmes Elementary School	Promising Scientist	Special Judges Award