



# Connecticut Science & Engineering Fair

## Quinnipiac University

March 4 - 16, 2024

### Special Award Winners

*These judging results are unaudited by the fair's Database Committee. The CSEF reserves the right to correct the listings.*

**All special award winners are required to attend the awards ceremony on Saturday. Be sure to acknowledge by going to the CHECK-IN page.**

[SchTown] [School] [Teacher]  
[Proj#] [FCat] [Project Title]

**Avon** Avon High School John Salerni  
 [3508] [LST] Defining the Significance of Inflammation in Atherosclerosis by Examining Cross-Cohort Transcriptomics Using R and Deep Learning Programs  
**Student(s)** **Phydena Liu** **Grade 10** **Town** Avon  
**Lauren Zhang** **Grade 11** **Town** Darien

**Avon** Talcott Mountain Academy John Pellino  
 [5009] [P7] The Aura Project: Landing Rockets at a Model Scale  
**Student(s)** **Kwabena Addai - Boateng** **Grade 8** **Town** East Hartford

**Avon** Talcott Mountain Academy John Pellino  
 [2520] [L8] The Boreabrush  
**Student(s)** **Oliver Lind** **Grade 8** **Town** Harwinton

**Bridgeport** Blackham School Nancy Hovanec  
 [4002] [PT] Hovercraft The New Transportation  
**Student(s)** **Sebastian Suarez** **Grade 7** **Town** Bridgeport  
**Jayden Perez** **Grade 7** **Town** Bridgeport

**Bridgeport** Bridgeport Regional Aquaculture Center Kirk Shadle  
 [3015] [LS] Non-Thermal Induction of Heat Shock Protein 90 to Mitigate Early Oncogenesis With Preserved HSR  
**Student(s)** **Chloe Atkins** **Grade 12** **Town** Stratford

**Bridgeport** Bridgeport Regional Aquaculture Center Kirk Shadle  
 [6060] [PS] Magnetohydrodynamic (MHD) Salt Water Generator: Harnessing energy from flowing salt water without moving parts  
**Student(s)** **Samuel DiVasto** **Grade 12** **Town** Trumbull

**Bridgeport** Bridgeport Regional Aquaculture Center Kirk Shadle  
 [6070] [PS] Synthesis of Conductive Optical Lenses with Variable Refractive Indices: The Kerr Effect  
**Student(s)** **Cole Galla** **Grade 12** **Town** Trumbull

**Bridgeport** Bridgeport Regional Aquaculture Center Kirk Shadle  
 [3077] [LS] Utilizing Fucus distichus alginates to develop an enhanced aerosol treatment for Cystic Fibrosis  
**Student(s)** **Mia Nierenberg** **Grade 12** **Town** Stratford

**Bridgeport** Bridgeport Regional Aquaculture Center Kirk Shadle  
 [3134] [LS] Acoustic Noise Pollution Affecting Reproduction, Communication, and Behavior of Brine Shrimp  
**Student(s)** **Anne Taylor** **Grade 12** **Town** Fairfield

**Bridgeport** Fairchild Wheeler Biotechnology Cynthia Crudale  
 [3069] [LS] Shoots vs. Roots: The Effect of Hormone Treated Media on Lettuce Growth  
**Student(s)** **Naomi Rosen** **Grade 12** **Town** Fairfield

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**Bridgeport** Fairchild Wheeler Biotechnology Marilyn Carolina

3520 LST Testing the Efficacy of Biochar Source Materials in Filtering Heavy Metal Pollution from the Housatonic River in CT

**Student(s)** Angeline Tran **Grade** 12 **Town** Shelton  
Phi Uanino **Grade** 12 **Town** Shelton

**Bridgeport** Waltersville School John Cunningham

4008 PT Does Municipal/Household Infrastructure Affect the Quality of Drinking Water in Bridgeport, CT?

**Student(s)** Andrea Villatoro **Grade** 7 **Town** Bridgeport  
Genesis Reilly **Grade** 7 **Town** Bridgeport

**Bristol** St. Matthew School Danielle Persichetti

5004 P7 Which Drink Has the Most Electrolytes?

**Student(s)** Lily Chou **Grade** 7 **Town** Bristol

**Bristol** St. Matthew School Danielle Persichetti

2002 L7 Which Moisturizer is Best?

**Student(s)** Lauren Gillis **Grade** 7 **Town** Bristol

**Brookfield** Brookfield High School JonathanNeuhausel

6077 PS GeoCool: A Novel Approach to Sustainable Residential Cooling Using Underground Soil Temperatures

**Student(s)** Arjun Parimi **Grade** 11 **Town** Brookfield

**Cheshire** Cheshire High School Julie Barker

6045 PS A Torticollis Tilt Alerting Device using MPU6050 Sensor, Vibration motor, and iOS and Android App Built Using Flutter

**Student(s)** Suchita Srinivasan **Grade** 10 **Town** Cheshire

**Cheshire** Dodd Middle School Katie Kearney

5509 P8 The Irrigator- a sustainable solution for gardening

**Student(s)** Olivia Dixon **Grade** 8 **Town** Cheshire

**Danbury** Westside Middle School Academy Nancy Barlow

1025 LT The Effect of Different Types of Grass on Soil Erosion

**Student(s)** Sayam Dand **Grade** 8 **Town** Danbury  
Kylie Capone **Grade** 8 **Town** Danbury  
Ayme Calero **Grade** 8 **Town** danbury

**Danbury** Westside Middle School Academy Nancy Barlow

4007 PT The Effectiveness of Different Distillation Methods for Desalination

**Student(s)** Siddanth Ramakrishnan **Grade** 7 **Town** Danbury  
Patrick Madden **Grade** 7 **Town** Danbury

**Danbury** Westside Middle School Academy Nancy Barlow

4012 PT Building a Versatile Air Sensor That Can Detect PM10 & PM2.5 in the Air

**Student(s)** Sarvesh Ram Sankarnarayan **Grade** 8 **Town** Danbury  
Gabrielle Anderson **Grade** 8 **Town** Danbury  
Eleftherios Amperidis **Grade** 8 **Town** Danbury, Ct

**Darien** Darien High School Christine Leventhal

6082 PS Simulating CMB temperature signal to analyze the effects of noise

**Student(s)** Bo-Jun Qin **Grade** 12 **Town** Darien

[SchTown] [School] [Teacher]  
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**Darien** Darien High School Guy Pratt

6064	PS	An Investigation of Stone Reusual Construction Techniques Used in the Anasazi Community From 800-1200 AD In Southwestern United States Based on Stone Length-Width Ratios
<b>Student(s)</b>	<b>Evelyn Trudel</b>	<b>Grade 12 Town Darien</b>

**Ellington** Ellington High School David Gerlach

6074	PS	Developing an Adaptable Metal Casting Mold Using Soft Robotics
<b>Student(s)</b>	<b>Thomas Gerlach</b>	<b>Grade 9 Town Ellington</b>

**Enfield** Chiaravalle Academy Tim Coleman

4022	PT	Using Solar to Generate Electricity.
<b>Student(s)</b>	<b>Keenan Cieslak</b>	<b>Grade 8 Town Monson</b>
	<b>Beau Dugas</b>	<b>Grade 8 Town Enfield</b>
	<b>Michael Bielanski</b>	<b>Grade 8 Town Enfield</b>

**Enfield** Chiaravalle Academy Timothy Coleman

1026	LT	How Does Different Types of Food Affect A Chicks' Growth and Learning Ability?
<b>Student(s)</b>	<b>Zoha Shamsi</b>	<b>Grade 7 Town Suffield</b>
	<b>Leah Caswell</b>	<b>Grade 7 Town Enfield</b>
	<b>Marin Czerwiec</b>	<b>Grade 7 Town Agawam</b>

**Farmington** Farmington High School Alexandra Raymunt

6054	PS	Steeping Towards Safety: Addressing Mycotoxin Risks in Coffee and Tea
<b>Student(s)</b>	<b>Rhea Doshi</b>	<b>Grade 9 Town Farmington</b>

**Farmington** Farmington High School Alexandra Raymunt

3511	LST	The impact of different levels of spf on the pigmentation of one's skin
<b>Student(s)</b>	<b>Lauren Jeong</b>	<b>Grade 11 Town Farmington</b>
	<b>Lydia Kim</b>	<b>Grade 11 Town Farmington</b>

**Farmington** Farmington High School Alexandra Raymunt

6068	PS	Origami-Inspired Paper-Based Multiplex Device for Water Contamination Monitoring
<b>Student(s)</b>	<b>Jiayi Liu</b>	<b>Grade 11 Town Farmington</b>

**Greenwich** Brunswick School Dana Montanez

6015	PS	Inertial Navigation Control System: Use of Reaction Wheels as an in-flight Steering Mechanism for Rockets
<b>Student(s)</b>	<b>Thomas Armstrong</b>	<b>Grade 11 Town Greenwich</b>

**Greenwich** Brunswick School Dana Montanez

6522	PST	The Efficiency of Toroidal Propellers on Plane Engines and Boat Propellers
<b>Student(s)</b>	<b>Thomas Carney</b>	<b>Grade 10 Town New Canaan</b>
	<b>Pierce Crosby</b>	<b>Grade 10 Town Greenwich</b>

**Greenwich** Brunswick School Dana Montanez

3507	LST	Using Mineral Packed Liposomes to Increase Plant Growth in Arid Environments
<b>Student(s)</b>	<b>Henry Johnson</b>	<b>Grade 11 Town Riverside</b>
	<b>Tucker Spiess</b>	<b>Grade 11 Town Old Greenwich</b>

[SchTown] [School] [Teacher]  
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**Greenwich** Brunswick School Dana Montanez

6510	PST	Biodegradable Mylar: A Materials Investigation to Reduce Marine Life Fatalities.
<b>Student(s)</b> Sean Mensi		<b>Grade</b> 9 <b>Town</b> Katonah
Lincoln O'Donohue		<b>Grade</b> 10 <b>Town</b> Old Greenwich

**Greenwich** Brunswick School Dana Montanez

6516	PST	Water Testing with Ease: Creation of a handheld device for Water Analysis in Recently Flooded Areas.
<b>Student(s)</b> William Pallone		<b>Grade</b> 10 <b>Town</b> Rye
Townsend Bancroft		<b>Grade</b> 10 <b>Town</b> Greenwich

**Greenwich** Central Middle School Andrew Bramante

5514	P8	The Synergistic Improvement of Indoor Air HEPA-Filtration using Concurrent Dehumidification
<b>Student(s)</b> Mikah Kaalund		<b>Grade</b> 8 <b>Town</b> Greenwich

**Greenwich** Central Middle School Andrew Bramante

2507	L8	Modeling of Fairfield County Fresh-water and Estuary Waterways, to Highlight Contamination of their Ecosystems/Environments
<b>Student(s)</b> Briar Lissauer		<b>Grade</b> 8 <b>Town</b> Greenwich

**Greenwich** Central Middle School Andrew Bramante

2516	L8	Development of a Simple Salivary Rapid Diagnostic for the Detection of Iodine Deficiencies
<b>Student(s)</b> Tyler Malkin		<b>Grade</b> 8 <b>Town</b> Greenwich

**Greenwich** Central Middle School Andrew Bramante

5504	P8	Simple Filtration of Fertilizer-ion Water Contaminants via Implementation of Phosphate and Nitrate Absorbency Pads
<b>Student(s)</b> Caroline Stowe		<b>Grade</b> 8 <b>Town</b> Greenwich

**Greenwich** Eastern Middle School Andrew Bramante

2501	L8	Design of a Smart-Bandage to provide lasting Itch-Relief and Healing for an Insect Bite.
<b>Student(s)</b> Lily Bittman		<b>Grade</b> 8 <b>Town</b> Greenwich

**Greenwich** Eastern Middle School Andrew Bramante

5502	P8	Shedding Light on the Prevalence of Harmful Butylated Hydroxytoluene Preservative in Artificially Formulated Dog Foods.
<b>Student(s)</b> Mackensey Wilson		<b>Grade</b> 8 <b>Town</b> Old Greenwich

**Greenwich** Greenwich Country Day School Nathan Haag

3016	LS	Antidepressant-response biomarkers in adolescents: a confirmational study using EEG
<b>Student(s)</b> Solomon Hochman		<b>Grade</b> 12 <b>Town</b> Riverside

**Greenwich** Greenwich High School Andrew Bramante

6053	PS	Reduced Carbon Dioxide Emission and Increased Energy Efficiency Via a Newly-Designed Superconductive Cryogenic Brushless DC Motor
<b>Student(s)</b> Ishan Ambastha		<b>Grade</b> 11 <b>Town</b> Riverside

**Greenwich** Greenwich High School Andrew Bramante

3113	LS	Implementation of a Multi-Objective Genetic Algorithm to Optimize Resource Allocation in Disease Prevention
<b>Student(s)</b> Isaac Bell		<b>Grade</b> 10 <b>Town</b> Riverside

[SchTown] [School] [Teacher]  
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**Greenwich** Greenwich High School Andrew Bramante  
 3025 LS Sonic Repulsion of Purple Sea Urchins to Reduce Degradation of Nascent Nereocystis luetkeana Forests  
**Student(s) Owen Benison** **Grade 11** **Town** riverside

**Greenwich** Greenwich High School Andrew Bramante  
 6081 PS Genetic Engineering of Cryobacterium to Increase Silica Content and Enhance the Glacial Albedo of Black Arctic Oceans  
**Student(s) Justin Bernstein** **Grade 11** **Town** Greenwich

**Greenwich** Greenwich High School Andrew Bramante  
 3122 LS Rapid Detection of Pulmonary Fibrosis via Eu(TTA)<sub>3</sub> Phen, and Rhodamine-6G-Cinnamaldehyde, Dual-Sensor Luminescent Diagnostic  
**Student(s) Lauren Huang** **Grade 11** **Town** Old Greenwich

**Greenwich** Greenwich High School Andrew Bramante  
 3071 LS Fabrication of a Europium-based Magnetic Nanosensor for the Detection of D-Serine in Early-onset Alzheimers  
**Student(s) Ava Jackson** **Grade 11** **Town** Old Greenwich

**Greenwich** Greenwich High School Andrew Bramante  
 6058 PS Detection of Nanoplastics within Complex Environmental and Food Resource Matrices via Machine Learning  
**Student(s) Henry Jin** **Grade 10** **Town** Greenwich

**Greenwich** Greenwich High School Andrew Bramante  
 3003 LS Iron-Fortified Cornhusk Biochar Flocculation of Pondwater Phosphates, to Reduce Invasive Macrophyte Growth  
**Student(s) Neil Pendkar** **Grade 9** **Town** Old Greenwich

**Greenwich** Greenwich High School Andrew Bramante  
 3020 LS Oral Delivery of Anticoagulant Dabigatran via a Mg-Micromotor Encapsulant Within a Gastric-Resistant Tablet for Ischemic Stroke Treatment  
**Student(s) Lula Wang** **Grade 9** **Town** Old Greenwich

**Greenwich** Greenwich High School Andrew Bramante  
 6019 PS Reinforcement Learning Optimization of Placement of Public Vehicle Charging Stations using a Novel Parking Demand Model  
**Student(s) Marley Wies** **Grade 10** **Town** Old Greenwich

**Hamden** Hamden Hall Country Day School Daniel Cuneo  
 3096 LS Edhelper: The Application of Artificial Intelligence in the Aid of Neurodivergent Children  
**Student(s) Andrei Balas** **Grade 10** **Town** Cheshire

**Hamden** Hamden Hall Country Day School Daniel Cuneo  
 6512 PST Using Quantum-assisted Machine Learning in Maize Yield Prediction through Environmental Patterns.  
**Student(s) Helena Chaine** **Grade 11** **Town** Orange  
**Yue Zhuo** **Grade 12** **Town** Hamden  
**Linda Chen** **Grade 10** **Town** Woodbridge

**Hamden** Hamden Hall Country Day School Gina D'Angelo  
 6025 PS Deep learning based drug response prediction algorithm about synergistic and antagonistic responses of cell lines and drug combos.  
**Student(s) Jiahui Chen** **Grade 11** **Town** New Haven

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**Hamden** Hamden Hall Country Day School Sarrah Gavin  
3061 LS The effect of deforestation on soil erosion at Sleeping Giant Park  
**Student(s) Kaleb Fiore** **Grade 10** **Town** Southington, CT

**Hamden** Hamden Hall Country Day School Frank Gasparro  
3017 LS Effect of Hydroxyapatite Encapsulation on the Transdermal Diffusion and Photodegradation of Avobenzone and Octinoxate to Enhance Sunscreen Safety  
**Student(s) Sophia Vash** **Grade 10** **Town** Fairfield CT

**Hamden** Sacred Heart Academy Sibani Sengupta  
3117 LS The Effect of Sound Pollution on the Physical Behavior of Armadillidium Vulgare  
**Student(s) Danyella Lanche-Flores** **Grade 12** **Town** West Haven

**Kent** Kent School Jesse Klingebiel  
6032 PS CardioXNet: Representation Learning for Accurate Cardiovascular Disease Diagnosis from X-ray Images  
**Student(s) Jiwon Hwang** **Grade 10** **Town** Kent

**Manchester** Manchester High School Wendy Turek-Hernandez  
3138 LS Determining the incidence of Beech Leaf Disease symptom severity based on overwintering nematode abundance in Fagus grandifolia buds  
**Student(s) Dina Watson** **Grade 12** **Town** Manchester

**Manchester** Saint James School Ellen Oei  
5017 P7 Crusty n' Rusty  
**Student(s) Brendan Abbamonte** **Grade 7** **Town** Vernon

**Manchester** Saint James School Ellen Oei  
5007 P7 Affect of Color on Heat Absorption  
**Student(s) Saanvi Sethi** **Grade 7** **Town** Manchester

**Mansfield** Edwin O Smith High School Cheryl Granger  
6005 PS Why Does My Neighborhood Have Less Trees Than Yours? Geospatial Modeling of Urban Tree Cover Inequalities in Connecticut Cities  
**Student(s) Hiruni Witharana** **Grade 10** **Town** Storrs

**Milford** Platt Technical High School Lori Grace  
3502 LST NatureCare Project  
**Student(s) Diogo Gaudencio** **Grade 12** **Town** bridgeport  
**Yossias Muluaem** **Grade 12** **Town** ansonia  
**Maritza Portillo** **Grade 12** **Town** west haven

**Montville** Saint Bernard School Alexandros Mathioudakis  
6011 PS Making Football Safer With The Smart Helmet  
**Student(s) Palmer Noe** **Grade 10** **Town** East Lyme

**New Haven** Engineering and Science University Magnet School Roger Rushworth  
3118 LS Implementing the Usage of Nontoxic Sand and Bacterial Filtration in the Enhanced Degradation of Emerging Contaminants in Aqueous Solutions  
**Student(s) Sahithi Aliminate** **Grade 9** **Town** Milford

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[SchTown] [School] [Teacher]  
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**New Haven** Engineering and Science University Magnet School Roger Rushworth

3126 LS Advanced Hybrid Water Treatment Systems: A Comparative Study of Membrane Filtration, Adsorption, and Photocatalysis for Comprehensive Contaminant Removal

**Student(s)** Saket Aliminate **Grade** 10 **Town** Milford

**New Haven** Engineering and Science University Magnet School Alyssa Anderson

6052 PS Synthesis of Porous Polymer Sponge Matrix using Modified Sodium Alginate Clay Compound for Adsorptive Removal of Microplastics and Oil from Contaminated Water

**Student(s)** Snigtha Mohanraj **Grade** 11 **Town** Ansonia

**New Haven** Hopkins School Phillip Stewart

6055 PS Profit from stock pricing

**Student(s)** Christina Cao **Grade** 11 **Town** Trumbull

**New Haven** Sound School Charles Mulligan

6511 PST Potential Impact of Watershed Runoff and Tidal Inundation on the Hydrologic Profile of a Coastal March

**Student(s)** Cora FitzGerald **Grade** 11 **Town** Guilford

**Tamzin Maines** **Grade** 11 **Town** Old Saybrook

**New Haven** Worthington Hooker School Douglas Jones

1020 LT Biodegradable Hydrogels: Improving our Agriculture's Sustainability

**Student(s)** Sofia Janiga **Grade** 8 **Town** New Haven

**Azalea Deener** **Grade** 8 **Town** New Haven

**Newtown** Newtown High School Timothy Dejulio

3083 LS Using Sunscreen as a way to distribute Beneficial Microorganisms for Corals (BMCs)

**Student(s)** Lydia Cox **Grade** 11 **Town** newtown

**Norwich** Norwich Technical High School Aleatha Pelloni

3526 LST Cultivating Green Growth: Harnessing Electroculture for Sustainable Gardening Practices

**Student(s)** Sophia Caballero **Grade** 11 **Town** Norwich

**Alejandra Cardona** **Grade** 11 **Town** New London

**Norwich** Norwich Technical High School Aleatha Pelloni

3509 LST Renewable fuel using anaerobic digestion

**Student(s)** Jasmine Coulombe **Grade** 11 **Town** Chaplin

**Tessa Lambert** **Grade** 11 **Town** Scotland

**Norwich** Norwich Technical High School Suzanne Edwards

6066 PS A Mathematical Analysis of the Variables Impacting the Performance of Wind Turbines as the Energy Converts from Kinetic to Mechanical to Electrical

**Student(s)** Leah Kozerefski **Grade** 9 **Town** Gilman

**Redding** CT STEM Fair Joyce Reed

3052 LS Determining the Ability of Different Mosses and Plants to Remove Algae Causing Phosphates and Nitrates From Water

**Student(s)** Emma Cannon **Grade** 11 **Town** New Canaan

**Salisbury** The Hotchkiss School Sid Yenugu

6103 PS A Resilient & Cost-Effective Prosthetic Device Tailored for the Accelerated Growth of Children

**Student(s)** Sia Reddy **Grade** 10 **Town** Avon

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**Simsbury** Westminster School Suzanne Bailey

6043	PS	Dual-Degree-of-Freedom Pneumatic Shoulder Rehabilitation Device Based on Flexible Materials
<b>Student(s)</b> Meiyin Ren		<b>Grade</b> 11 <b>Town</b> Simsbury

**South Windsor** South Windsor High School Danel Eitel

6501	PST	The Use of Piezoelectric Technology for a more Efficient and Cost-Effective Approach to Electronics Cooling
<b>Student(s)</b> Adithya Anand		<b>Grade</b> 11 <b>Town</b> South Windsor
Jason Thokchom		<b>Grade</b> 11 <b>Town</b> South Windsor

**South Windsor** South Windsor High School Danel Eitel

3524	LST	MushBox: In Situ Biodegradation of Municipal Solid Waste through Mycoremediation via Mycelium and Cellulosic Waste Integration
<b>Student(s)</b> Samarth Basanth		<b>Grade</b> 10 <b>Town</b> South Windsor
Tejbir Litt		<b>Grade</b> 10 <b>Town</b> South Windsor

**South Windsor** South Windsor High School Joshua Kraus

6035	PS	A novel approach to a biomimetic undersea generator aided by triboelectric nanogenerators to harness natural ocean currents
<b>Student(s)</b> Pranay Kakkar		<b>Grade</b> 11 <b>Town</b> South Windsor

**South Windsor** South Windsor High School Kevin Snyder

6013	PS	Scientific understanding of solar physics with image based neural networks
<b>Student(s)</b> Pragyan Yadav		<b>Grade</b> 12 <b>Town</b> South Windsor

**Southington** Joseph A. Depaolo Middle School Halime Agirman

2514	L8	Global Warming Management through Utilization of naturally occurring resources such as Eggshell-Derived Calcium Carbonate in Global Warming Reduction
<b>Student(s)</b> Esra Agirman		<b>Grade</b> 8 <b>Town</b> Southington

**Stamford** King School Victoria Schulman

6097	PS	DETICKT IT: A Machine Learning-Based Application for Real-Time Tick Identification and Spatiotemporal Disease Risk Assessment
<b>Student(s)</b> Antonia Kolb		<b>Grade</b> 12 <b>Town</b> New Canaan

**Stamford** King School Erik Rutyna

6078	PS	Utilizing Ground and Space-Based Sensors to Track Trajectories of Vehicles/Dangerous Objects and Monitor Climate Change/Environmental Issues
<b>Student(s)</b> Ryan Wempen		<b>Grade</b> 12 <b>Town</b> Stamford

**Stonington** St. Michael School Anna-Helene Grossomanides

5501	P8	Determining the Impact of pH on Seashell Dissolution
<b>Student(s)</b> Addison Cadmus		<b>Grade</b> 8 <b>Town</b> Pawcatuck

**Stonington** St. Michael School Anna-Helene Grossomanides

5008	P7	Expensive Fails or, Long Lasting Nails
<b>Student(s)</b> Maeve Nicholas		<b>Grade</b> 7 <b>Town</b> Stonington

**Stratford** St. Mark School Alexander Kennedy

2513	L8	Implicit Gender Bias
<b>Student(s)</b> Julianne Gonzalez		<b>Grade</b> 8 <b>Town</b> Stratford



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**Stratford** St. Mark School Alexander Kennedy  
4020 PT Does Color Affect the Way taste is perceived?  
Student(s) **Maeve McCloskey** Grade 7 Town Stratford  
**Stella Testo** Grade 7 Town Stratford

**Trumbull** Christian Heritage School Daniel Cote  
6102 PS Vision Through AI: Assisting the Visually Impaired By Building AI Smart Glasses  
Student(s) **Daylin Jerome** Grade 11 Town Bridgeport

**Trumbull** Christian Heritage School Nicole Camacho  
2517 L8 Do Storm drains keep trash out of water ways?  
Student(s) **Juliette Schwartz** Grade 8 Town Shelton

**Trumbull** Christian Heritage School Daniel Cote  
6037 PS Text to Speech and Speech to Text App for the Hearing Impaired  
Student(s) **Noah Scrofani** Grade 11 Town Trumbull

**Wallingford** Choate Rosemary Hall Jan Cook  
6051 PS Properties of Certain Quadrilaterals of Triangle Centers  
Student(s) **Kay Yeon Lee** Grade 11 Town Wallingford

**Wallingford** Choate Rosemary Hall Selena Gell  
6502 PST Construction of a Low-cost, Accurate Liquid Handling Device with 3D Printing for Polymerase Chain Reaction  
Student(s) **Calvin Moon** Grade 12 Town Wallingford  
**Jeffrey Moon** Grade 11 Town Wallingford

**Wallingford** Choate Rosemary Hall Andrew Murgio  
6525 PST AgriBotanical: An Intelligent Continuum-Maneuver Robot for Monitoring and Managing Arboreal Wild Bee Colonies  
Student(s) **Jingyuan Zhang** Grade 11 Town Wallingford  
**Xiyin Yang** Grade 11 Town Wallingford

**Waterbury** ACES at Chase Lisa Debany  
1007 LT Creating Safe Sunscreens For Coral Reefs With The Best U.V. Protection.  
Student(s) **Emily Ambrosini** Grade 7 Town Watertown  
**Taylor Boscarino** Grade 7 Town Thomaston

**Waterbury** ACES at Chase Sandra Solimene  
5503 P8 The Bag that Saved the Homeless  
Student(s) **Evaleise Diaz** Grade 8 Town Meriden

**Waterbury** ACES at Chase Kelly Horan  
5005 P7 What Design of Mesh Water Filtration Device Most Effectively Removes Microplastics?  
Student(s) **Jacob Godfrey** Grade 7 Town Waterbury

**Waterbury** ACES at Chase Waterbury  
2511 L8 Leaf Light Chlorophyll light bulb  
Student(s) **Toren Lott** Grade 8 Town Waterbury

[SchTown] [School] [Teacher]  
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**Waterbury** ACES at Chase Lisa Debany

2005 L7 Reducing *Lycorma delicatula*, Lantern Fly, Infestation: Using Essential Oils to Address Crop Damage and Food Shortages.

**Student(s)** Besjana Veliu **Grade** 7 **Town** Waterbury

**Westport** Greens Farms Academy Mathieu Freeman

5014 P7 Novel Radiation Shielding for Radiation Therapy and Arabidopsis on Mars

**Student(s)** Dylan Karpf **Grade** 7 **Town** Westport

**Wilton** Middlebrook School Nancy Wakeham

5010 P7 Wireless Power Transfer - Future of Energy

**Student(s)** Ishan Chugh **Grade** 7 **Town** Wilton

**Wilton** Middlebrook School William Desroches

1017 LT Beat The Peat - Rice Husk, The Sustainable And Eco-Friendly Alternative to Peat Moss

**Student(s)** Kabir Rokkam **Grade** 7 **Town** Wilton

Shushruth Balaji **Grade** 7 **Town** Wilton

**Wilton** Wilton High School Matthew Hoyt

3059 LS A Novel AI-Driven Approach for Tracking and Managing Invasive Plant Species

**Student(s)** Shriya Natarajan **Grade** 10 **Town** Wilton

**Wilton** Wilton High School Matthew Hoyt

3065 LS The Influence of Natural and Man-Made Substrata on Intertidal Community Structure

**Student(s)** Nandan Raman **Grade** 11 **Town** Wilton

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger

6009 PS Reinforcing the Cybersecurity of Medical Data via Software Countermeasures against Malware in Heart Monitoring Technology

**Student(s)** Sujay Chava **Grade** 11 **Town** Ellington

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger

6002 PS Integrating Piezoelectric Sensors and Photovoltaic Material in an Artificial Energy-Harvesting Model Tree

**Student(s)** Laasya Chintapalli **Grade** 11 **Town** Farmington

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger

4019 PT Using Vortex Hydropower Turbines to Harvest Electrical Energy

**Student(s)** Marcus Davis **Grade** 8 **Town** Broad Brook

Dylan Gao **Grade** 7 **Town** Coventry

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger

3004 LS Therapeutic Potential of Antibody Drug Conjugates Targeting The Expression of Trophoblast Cell-Surface Antigen 2 (TROP-2) On High Grade Serous Epithelial Ovarian Carcinoma

**Student(s)** Ana-Lois Davis **Grade** 12 **Town** Broad Brook

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger

3054 LS Optimizing Laterite Soil Microbial Fuel Cells for Community-Centric Electricity Generation in Tropical Underdeveloped Regions

**Student(s)** Namyanzi Edwards **Grade** 11 **Town** New Britain

# Conn. Science & Engineering Fair

## Special Award Winners

[SchTown] [School] [Teacher]  
[Proj#] [FCat] [Project Title]

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger  
6079 PS Using Biomimicry to Harvest Energy from the Sinusoidal Motion of an Eel  
**Student(s)** Vikram Haran **Grade** 11 **Town** Ellington

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger  
4011 PT Using Piezoelectric Sensors to Harvest Energy from Automobile Tires and the Road Surface  
**Student(s)** Palaniappan Manikandan **Grade** 8 **Town** Ellington  
Duke Clotney **Grade** 8 **Town** Hartford

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger  
4004 PT Integrating Pelton Turbines Into Industrial Pipes to Harvest Energy  
**Student(s)** Aaditya Sadhvani **Grade** 8 **Town** Ellington  
Roshan Kumar **Grade** 8 **Town** Ellington

**Windsor** Academy of Aerospace and Engineering Michelle Bellinger  
4001 PT Combining Optical Wireless Communications (OWC) and Neuromorphic Architecture for Large-Scale Computations  
**Student(s)** Rithvik Suren **Grade** 8 **Town** Ellington  
Aarav Chevva **Grade** 8 **Town** Ellington

**Windsor** The Loomis Chaffee School Koby Osei-Mensah  
6044 PS A Deep Semi-Supervised Domain Generalization Approach for Epileptic Seizure Prediction using Electro Encephalography (EEG)  
**Student(s)** Sunwoo An **Grade** 9 **Town** Seoul

**Woodbridge** Amity Regional High School Catherine Piscitelli  
6010 PS Creation of an Environment-Adaptive Reaction Algorithm Implemented on a Novel Smart Fluidic Servo Actuator to Provide a Sense of Pseudo-Exproprioception and Exteroception  
**Student(s)** Aditi Bhattamishra **Grade** 12 **Town** Orange

**Woodbridge** Amity Regional High School Catherine Piscitelli  
6020 PS Developing and Testing a Laminar Airfoil Utilizing Computational Fluid Dynamics to Implement Into General Aviation  
**Student(s)** Alejandro Huber **Grade** 12 **Town** Woodbridge

**Woodbridge** Amity Regional High School Catherine Piscitelli  
6503 PST Development of a Novel Spray Mechanism Using Real-Time Bee Auditory Data to Trigger an Entomopathogenic Fungal Miticide in Beehives to Control Varroa Destructor Infestations  
**Student(s)** Sophia Messina **Grade** 11 **Town** Woodbridge  
Nikhil Petrov **Grade** 11 **Town** Woodbridge

**Woodbridge** Amity Regional High School Catherine Piscitelli  
6098 PS Modeling Interactions Between the Neocortex and the Basal Ganglia During Temporal Sequential Learning Using a Hierarchical Temporal Memory Artificial Neural Network  
**Student(s)** Annika Yun **Grade** 12 **Town** Orange