



# Connecticut Science & Engineering Fair

## Quinnipiac University

March 3 - 15, 2025

### 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.**

**<https://ctsciencefair.org/finalists-special-awards-check-in>**

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

**Avon** Avon High School Andrea Galuska

6088 PS Harnessing the Power of the Wind: A Comparative Analysis on HAWT, Savonius and Darrieus Wind Turbines and Their Efficiency

**Student(s) Nate Lee**

**Grade 10 Town Avon**

**Bethel** Bethel High School Raymond Turek

6045 PS Evaluating the Effectiveness of Natural Antioxidants in Slowing Food Oxidation and Extending Shelf Life

**Student(s) Katie Bui**

**Grade 12 Town Bethel**

**Bethel** Bethel High School Turek Ray

6035 PS Advancing Personalized Seizure Control: A Cutting-Edge Real-Time EEG Feedback System for Precision Adaptive Neurostimulation

**Student(s) Srirama Desiraju**

**Grade 11 Town Bethel**

**Bozrah** Fields Memorial School Joshua Fish

4016 PT A Study of the Impact of Slope, Materials, and Lubrication on Friction.

**Student(s) Elise Kobelski**

**Grade 8 Town Bozrah**

**Hannah East**

**Grade 8 Town Bozrah**

**Serena BunkerCai**

**Grade 8 Town Bozrah**

**Bozrah** Fields Memorial School Joshua Fish

4011 PT What impact will different sphere and track variables have on the performance of a model roller coaster?

**Student(s) Benjamin Savoie**

**Grade 8 Town Gilman**

**Isaiah Negron-Rygielski**

**Grade 8 Town Bozrah**

**Bozrah** Fields Memorial School Joshua fish

1025 LT A study of the efficiency of ice melt substances and their environmental impact on roadside vegetation

**Student(s) Analise Williams**

**Grade 7 Town bozrah**

**Ella Sikorski**

**Grade 7 Town Bozrah**

**Bridgeport** Bridgeport Regional Aquaculture Center Kirk Shadle

6027 PS The Novel Application of Arbuscular Mycorrhizae to Improve the Vitality of Glycine max in Martian Regolith

**Student(s) Owen Dueck**

**Grade 12 Town Trumbull**

**Bridgeport** Fairchild Wheeler-Biotech Tara Liskov

6072 PS Energy Production from a Homemade Hydrogen Cell

**Student(s) Wyatt Speight**

**Grade 12 Town Fairfield**

**Bridgeport** Fairchild Wheeler-Infotech Ricki Chiem

6518 PST The Benefits of Designing Base Isolators for Earthquake Proof Structures

**Student(s) Ayden Gamble**

**Grade 10 Town Bridgeport**

**Eddie Bermudez**

**Grade 11 Town Bridgeport**

# Conn. Science & Engineering Fair

# Special Award Winners

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

**Bridgeport** John Winthrop School Srilakshmi Kongani

4005 PT Don't Quake, Choose the Right Shape!

**Student(s)** Kyleen Negron  
Leah Brioso

**Grade 8** **Town** Bridgeport  
**Grade 8** **Town** Bridgeport

**Bridgeport** Theodore Roosevelt School Sherita Paul

5522 P8 The Strength of Bridges

**Student(s)** Edmond Deshotel

**Grade 8** **Town** Bridgeport

**Cheshire** Cheshire Academy Breanna Craft

6013 PS A Tracking System.

**Student(s)** Deanna Dixon

**Grade 11** **Town** Cheshire

**Cheshire** Cheshire High School Julie Barker

6058 PS The Design and Development of a Smart and Effective Multi-Device Airline Seatbelt Alert System for Preventing Turbulence-Related Injuries Using IoT Technology

**Student(s)** Suchita Srinivasan

**Grade 11** **Town** Cheshire

**Danbury** Saint Gregory the Great School Christine Fahey

2012 L7 1 Pollutant: 4 Filtering Methods

**Student(s)** Dheer Bhavsar

**Grade 7** **Town** Danbury

**Danbury** Saint Gregory the Great School Christine Fahey

1003 LT Fertilizer vs Compost

**Student(s)** Lucia Molisani  
Gemma Molisani

**Grade 7** **Town** Redding  
**Grade 7** **Town** Redding

**Danbury** Saint Gregory the Great School Christine Fahey

2001 L7 Would You Like Plastic With That?

**Student(s)** Rahil Shah

**Grade 7** **Town** Danbury

**Danbury** Saint Joseph School Kathleen Spina

2520 L8 Crossed Up!

**Student(s)** Brayden Crabbe

**Grade 8** **Town** Danbury

**Danbury** Westside Middle School Academy Nancy Barlow

4002 PT Increasing The Flight Distance of The Football by Changing its Characteristics

**Student(s)** Brennen Denema  
Sean Kennedy  
Mathias Sanchez

**Grade 8** **Town** Danbury  
**Grade 8** **Town** Danbury  
**Grade 8** **Town** Danbury

**Danbury** Westside Middle School Academy Nancy Barlow

1005 LT Does heating or cooling a fruit/vegetable lower the amount of Brix?

**Student(s)** Mohammad Rehan  
Gowtham Vallinayagam

**Grade 7** **Town** Danbury  
**Grade 7** **Town** Danbury

**Danbury** Westside Middle School Academy Nancy Barlow

4012 PT How does the Type and Brand of a Battery Affect how Much Voltage it Loses Over Time?

**Student(s)** Logan Schneider  
Daniel Sposato

**Grade 7** **Town** Danbury  
**Grade 7** **Town** Danbury

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**Darien** Darien High School David Lewis

6054 PS The Detection of Circumstellar Debris Disks in Stellar Environments of 3 Habitable Small or Low-Mass Planet Candidates

**Student(s) Julian Du** **Grade 10** **Town Darien**

**Darien** Darien High School David Lewis

3131 LS Association Between Food Insecurity and Mortality Outcomes Among Cancer Survivors in the United States

**Student(s) Lily Keehlwetter** **Grade 12** **Town Darien**

**Darien** Darien High School Guy Pratt

3015 LS Correlation Between Depth and Transplantation Success Among 3 Coral Species

**Student(s) Emma Meyers** **Grade 12** **Town Darien**

**Darien** Darien High School Christine Leventhal

6030 PS Confirming TESS exoplanet candidates and searching for multi-planetary systems using transit photometry and timing variations

**Student(s) Allison Valji** **Grade 12** **Town Darien**

**Enfield** Chiaravalle Academy Tim Coleman

4003 PT Evaluating the Effectiveness of Rainwater Filtration

**Student(s) Leah Caswell** **Grade 8** **Town Enfield**

**Marin Czerwiec** **Grade 8** **Town Agawam**

**Arianna Plaz** **Grade 8** **Town Suffield**

**Enfield** Chiaravalle Academy Tim Coleman

4008 PT 1 Step Towards a Greener World

**Student(s) Megan Quinby** **Grade 8** **Town Windsor**

**Nathaniel Kelly** **Grade 8** **Town Longmeadow**

**Fairfield** Fairfield Warde Ryan Gleason

3536 LST The affect of invasive English Ivy on native Wild Ginger plants

**Student(s) Calista Gleason** **Grade 10** **Town Fairfield**

**Emma Speicher** **Grade 10** **Town Fairfield**

**Farmington** Miss Porter's School Christine Scanlon

6103 PS Development of a Gravitational Lensing Model: The Effect of Lens Position and Orientation on Image Distortion

**Student(s) Claire Lee** **Grade 10** **Town FARMINGTON**

**Greenwich** Brunswick School Dana Montanez

6073 PS Increasing Chlorophyll Production in Prochlorococcus via synchronous culturing with Trichodesmium: An effort to increase Photosynthetic Rate.

**Student(s) Shep McGovern** **Grade 10** **Town Greenwich**

**Greenwich** Brunswick School Dana Montanez

3117 LS Sleep to Succes: How Sleep Impacts Student Acedemic Performance

**Student(s) Harry Saunders** **Grade 10** **Town greenwich**

**Greenwich** Central Middle School Andrew Bramante

2505 L8 Development of a Thyme Oil-in-Hydromed Wearable Anklet for the Natural, Effective Repellant of Ticks

**Student(s) Clara Cahill** **Grade 8** **Town Greenwich**

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# Special Award Winners

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[Proj#] [FCat] [Project Title]

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**Greenwich** Central Middle School Andrew Bramante  
5504 P8 Highlighting the Prevalence of Microplastics at Tod's Point Through Waste Water and Ocean Currents Using Scanning Electron Microscopy Analysis  
**Student(s) Carter Henske** **Grade 8** **Town** Greenwich

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**Greenwich** Eastern Middle School Andrew Bramante  
2501 L8 Identification of the Optimal Wastewater Algae for Production of Degradable Bioplastics from PHB  
**Student(s) Leo Foell** **Grade 8** **Town** Greenwich

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**Greenwich** Greenwich Catholic School Timothy Koppe  
4015 PT MedAssist (Smart medicine storage)  
**Student(s) Artem Perekhodko** **Grade 7** **Town** stamford  
**Jose Miguel Bowles** **Grade 7** **Town** Greenwich  
**Ben Ballester** **Grade 7** **Town** Stamford

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**Greenwich** Greenwich Country Day School Nathan Haag  
6108 PS Effectiveness of a Smart Traffic Light Utilizing IoT Technologies for High School Campuses  
**Student(s) Christian Suy Pineda** **Grade 11** **Town** Stamford

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**Greenwich** Greenwich Country Day School Nathan Haag  
6099 PS Optimizing Vertical Take-Off and Landing (VTOL) Aircraft Efficiency Through Propeller Design: Making Air Flight More Accessible, Affordable, and Sustainable  
**Student(s) Cooper Taylor** **Grade 11** **Town** Greenwich

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**Greenwich** Greenwich High School Andrew Bramante  
3017 LS Neural Network Interpretation of EEG Scans for Accurate Diagnosis of Asymptomatic Concussions  
**Student(s) Isha Bharti** **Grade 9** **Town** Riverside

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**Greenwich** Greenwich High School Andrew Bramante  
3006 LS Targeted Delivery of a Melittin Anti-inflammatory Peptide via a Eudragit-Coated Sporopollenin Exine Capsule, for Effective Treatment of Crohn's Disease  
**Student(s) Hannah Dcruz** **Grade 10** **Town** Greenwich

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**Greenwich** Greenwich High School Andrew Bramante  
6020 PS Facilitated Ethylene Absorption and Freshness Preservation via All-Natural Sodium Chloride and  
**Student(s) Nishant Jain** **Grade 10** **Town** Riverside

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**Greenwich** Greenwich High School Andrew Bramante  
6009 PS Consideration of Location-specific Weather and Topographic Datasets to Model Efficient Deployment of Forest Fire Flame Retardants  
**Student(s) Iri Pullepu** **Grade 9** **Town** Old Greenwich

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**Greenwich** Greenwich High School Andrew Bramante  
3112 LS Development of nnU-Net model for pediatric brain tumor segmentation in multi-modality MRI images  
**Student(s) Sophie Yu** **Grade 10** **Town** Riverside

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**Greenwich** Sacred Heart Greenwich Mary Musolino  
2509 L8 Testing the Effectiveness of Green and Black Tea as a Plant Nutrient  
**Student(s) Paige Creegan** **Grade 8** **Town** Briarcliff Manor

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**Greenwich** Sacred Heart Greenwich Mary Musolino

2514 L8 Bamboo Bio-Plastic

**Student(s) Olivia Hastings**

**Grade 8 Town Greenwich**

**Greenwich** Sacred Heart Greenwich Mary Musolino

1013 LT The Effect of Silver Nanoparticles and Microplastics on the Reproductive Rate and Lifespan of Artemia Salina

**Student(s) Sophia Iyer**

**Grade 8 Town Darien**

**Sydney Bellissimo**

**Grade 8 Town Riverside**

**Greenwich** Sacred Heart Greenwich Mary Musolino Musolino

4020 PT Using Clay Flocculation to Reduce Harmful Algae Blooms in a Body of Water

**Student(s) Vivienne Vanderwilt**

**Grade 8 Town Greenwich**

**Nora Mulcahy**

**Grade 8 Town RYE**

**Ariel Almonacy**

**Grade 8 Town Greenwich**

**Greenwich** Western Middle School Andrew Bramante

5502 P8 Integration of Photoluminescent Manganese-doped ZnS Nanocrystals

**Student(s) Alexandra Rothstein**

**Grade 8 Town Greenwich**

**Hamden** Hamden Hall Country Day School Lucia Jilaveanu

3140 LS Caveolin-1 as a Biomarker and Potential Mediator of Melanoma Brain Metastasis

**Student(s) Andrei Balas**

**Grade 11 Town Cheshire**

**Hamden** Hamden Hall Country Day School Paulomi Aldo

5002 P7 Water Pressure Rocket

**Student(s) Russell Clune**

**Grade 7 Town Guilford**

**Hamden** Hamden Hall Country Day School Paulomi Aldo

5007 P7 How does dimple patterns affect a golf balls flight?

**Student(s) David Esposito**

**Grade 7 Town North Haven**

**Hamden** Hamden Hall Country Day School Robert Link

3134 LS Development and experimentation of an AI algorithm alongside a Near-Infrared LED device to assist in venipuncture.

**Student(s) Neev Makin**

**Grade 11 Town Hamden**

**Hamden** Hamden Hall Country Day School Jacob Marchesi

6506 PST Energy Absorption Efficiency of Various Crumple Zone Materials in Pendulum Impact Tests on Model Cars

**Student(s) Frida Ramirez Moreno**

**Grade 10 Town Meriden**

**Barbara Ramirez Moreno**

**Grade 11 Town Meriden**

**Hamden** Sacred Heart Academy Paula Napychank

3007 LS Assessing Hearing Risk: Analyzing Noise Levels of Hairdryers and Effective Sound Dampening Techniques

**Student(s) Alessandra Picard**

**Grade 9 Town MADISON**

**Kent** Kent School ZIHAO DU

6100 PS Three-Support Lower-Limb Exoskeleton Device Integrating Multifunctionality and Feedback Mechanisms

**Student(s) OliviaLu Feng**

**Grade 11 Town Guangzhou, China**

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[SchTown] [School] [Teacher]  
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**Manchester** Manchester High School Wendy Turek

3073 LS The Effect of Nitrogen Enrichment on the Arousal of *Astrangia Pocolata* from Quiescence

**Student(s)** Bailey Downey **Grade** 12 **Town** Manchester

**Manchester** Manchester High School Wendy Turek-Hernandez

3153 LS Flood Wave Reduction Due to Artificial Reefs

**Student(s)** Anas Hales **Grade** 12 **Town** Manchester

**Manchester** Saint James School Brianna Hawkins

5520 P8 Why is wool warmer than most fabric?

**Student(s)** Saanvi Sethi **Grade** 8 **Town** Manchester

**Milford** Platt Technical High School Sara Bruno

6516 PST Green Growth Academy

**Student(s)** Danyalis Perez-Cumba **Grade** 11 **Town** North Haven

Maureen Freire-Trejo **Grade** 11 **Town** Bridgeport

Karen Plazas **Grade** 11 **Town** Bridgeport

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

3008 LS Evaluating LYVE1 Gene Expression in Breast Cancer Using qPCR Analysis and Comparing with Hyperparameter-Tuned Models for LYVE1 Gene Expression in Pancreatic Cancer

**Student(s)** Nivrith Ananth Iyer **Grade** 11 **Town** West Haven

**New Haven** Engineering and Science University Magnet School Paula Matei-Grysiak

3003 LS Implementation and Validation of a Novel Machine-Learning-Based Mobile Gyrocardiography System for Arrhythmia Detection

**Student(s)** Ethan Joseph **Grade** 10 **Town** West Haven

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

2013 L7 Do we link certain titles to certain emotions?

**Student(s)** Srikar Mandalika **Grade** 7 **Town** Milford

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

5512 P8 Investigating the Chemical Properties and Efficiency of Homeade Batteries: A Focus on Voltage, Energy and Chemical Reactions

**Student(s)** Anabelle Silverman **Grade** 8 **Town** New Haven

**New Haven** Foote School Elliot Dickson

2016 L7 Studying Muscle Memory in Planaria to Understand Neurodegenerative Diseases

**Student(s)** Jessica Park **Grade** 7 **Town** New Haven

**New Haven** Sound School Chuck Mulligan

3042 LS Evaluation of Potential Filtration Enhancements Applied to Municipal Water: Assessing Potential Ways to Reduce Enterococcus Bacteria Levels Discharging From Wastewater Facilities

**Student(s)** Britney Xochipiltecatl Cuahtepitz **Grade** 12 **Town** New Haven

**New Haven** Worthington Hooker School Douglas Jones

2011 L7 Effects of Salinity, Water Temperature, and Distance on Electrolysis

**Student(s)** Samuel Kaplan-Fay **Grade** 7 **Town** New Haven

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[SchTown] [School] [Teacher]  
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**New Haven** Worthington Hooker School Douglas Jones

1020 LT Does Plant Orientation Affect Growth

**Student(s)** Sieun Yoo

**Grade 8 Town** New Haven

Clarissa Castillo

**Grade 8 Town** New Haven

**Norwich** Norwich Technical High School Aleatha Pelloni

3012 LS Proving Microplastics Transfer from Water to Living Organisms Through Vegetation

**Student(s)** Solibella Davis

**Grade 11 Town** New London

**Norwich** Norwich Technical High School Aleatha Pelloni

3509 LST Impact of Sunscreen Contaminants on Plutes Growth and Development

**Student(s)** Addison Hackett

**Grade 11 Town** Willimantic

Kaitlyn Tortorich

**Grade 11 Town** Windham

**Redding** CT STEM Lindsay McCarthy

3057 LS Evaluating the Antifungal Potential of Citronella and Cassia Essential Oils at Different Concentrations Against the Mycelia Growth of Bipolaris sorokiniana

**Student(s)** Elena Huber

**Grade 10 Town** Woodbridge

**Ridgefield** Ridgefield High School Patrick Hughes

6053 PS Synthetic Turf Fields Effect on Water Features

**Student(s)** Elayna Wright

**Grade 12 Town** Ridgefield

**Ridgefield** Ridgefield High School Patrick Hughes

3046 LS The Effects of Moisture Levels on Polystyrene Consumption in Tenebrio Molitor

**Student(s)** Elijah Yurkovsky

**Grade 12 Town** Ridgefield

**South Windsor** South Windsor High School Suma Basavarappa

3144 LS SiExo: Modular Bayesian-Optimized Dual-Ligand TfR/RVG Exosomes for siRNA Delivery and BBB Transcytosis in CNS Neurotherapeutics

**Student(s)** Samarth Basanth

**Grade 11 Town** South Windsor

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

6079 PS Biodegradable Packaging Materials: Using Polysaccharides found in Alginate Extract from Marine Macroalgae to mimic the structure and function of Conventional polymers

**Student(s)** Tanvi Mishra

**Grade 10 Town** South Windsor

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

6514 PST Waste to Watts

**Student(s)** Rishi Murali

**Grade 10 Town** South Windsor

Gavin Lippi

**Grade 10 Town** South Windsor

Prahaladhan Rajarajan

**Grade 10 Town** south windsor

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

6501 PST Watt Box

**Student(s)** Mason Smith

**Grade 10 Town** South Windsor

Prasun Modi

**Grade 10 Town** South Windsor

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

|                      |                           |                   |      |    |   |  |                 |                              |
|----------------------|---------------------------|-------------------|------|----|---|--|-----------------|------------------------------|
| <b>South Windsor</b> | South Windsor High School | Danel Eitel       | 6047 | PS | OatNET: Novel Neural Network architecture & mathematical model for reducing Dense Layer computational complexity via ternary weight decomposition & rank-1 magnitude approximation. | <b>Student(s)</b> Karthik Srikumar         | <b>Grade</b> 10 | <b>Town</b> South Windsor    |
| <b>Southington</b>   | Southington High School   | Ismail Agirman    | 3060 | LS | Mitigation of Cyclohexane Concentrations in Drinking Water using photosynthetic molecule Chlorophyll  | <b>Student(s)</b> Esra Agirman             | <b>Grade</b> 9  | <b>Town</b> Southington      |
| <b>Stamford</b>      | King School               | Victoria Schulman | 6104 | PS | A Voice Controlled Robotic Arm for Assisting Complex Surgical Tasks   | <b>Student(s)</b> Dillon Maltese           | <b>Grade</b> 11 | <b>Town</b> Greenwich        |
| <b>Stamford</b>      | King School               | Victoria Schulman | 6031 | PS | An Effective Water Treatment Method: Adsorption of Ni(II) Ions in Water Using DNA-Wrapped Carbon Nanotubes  | <b>Student(s)</b> Bruno Reinhoefer Ribeiro | <b>Grade</b> 11 | <b>Town</b> Riverside        |
| <b>Stamford</b>      | King School               | Victoria Schulman | 3069 | LS | Understanding the effect of nutrient additives on the growth and performance of the seaweeds Saccharina latissima and Gracilaria mammillaris  | <b>Student(s)</b> Lucia Vivanco            | <b>Grade</b> 11 | <b>Town</b> Stamford         |
| <b>Stamford</b>      | Laurel Springs School     | Vera Ulanovskaya  | 6046 | PS | Research on Autoimmune Disease Spectrometer (RAD-Spec): A Machine Learning-Based Application for Improving Accessibility to Autoimmune Research                                     | <b>Student(s)</b> Victoria Makarov         | <b>Grade</b> 11 | <b>Town</b> Stamford         |
| <b>Stratford</b>     | Saint Mark School         | Alexander Kennedy | 5004 | P7 | Metal Vs. Alloy, Which is Stronger?   | <b>Student(s)</b> Jaxon Keeler             | <b>Grade</b> 7  | <b>Town</b> Stratford        |
| <b>Trumbull</b>      | Christian Heritage School | Daniel Cote       | 6014 | PS | Converting Plastic Water Bottle to 3D Printing Filament   | <b>Student(s)</b> Zule Sun                 | <b>Grade</b> 11 | <b>Town</b> Trumbull         |
| <b>Wallingford</b>   | Choate Rosemary Hall      | Ben Small         | 3155 | LS | Development of an AI-Enabled Pressure-Sensing Mat System and Validation of Novel Gait Biomarkers Through Multi-Sensor Fusion for Early Detection of Neurodegenerative Disorders     | <b>Student(s)</b> Rhea Doshi               | <b>Grade</b> 10 | <b>Town</b> Farmington       |
| <b>Wallingford</b>   | Choate Rosemary Hall      | Shiyao Gu         | 6086 | PS | A Novel Fishbone-Shaped Smart Glove for Stroke Patients   | <b>Student(s)</b> Jingyan Liu              | <b>Grade</b> 9  | <b>Town</b> Shanghai         |
| <b>Wallingford</b>   | Choate Rosemary Hall      | ning tang         | 6012 | PS | Development of Innovative Low-Frequency Sound Absorption Structures Using Advanced Metamaterials  | <b>Student(s)</b> Neil Wang                | <b>Grade</b> 10 | <b>Town</b> long island city |
| <b>Wallingford</b>   | Choate Rosemary Hall      | Zhiyuan Hu        | 3075 | LS | Clinical Application of Early Cancer Diagnosis: Supervised and Semi-Supervised Neural Networking for the Detection and Classification of Circulating Tumor Cells                    | <b>Student(s)</b> Yumeng Wang              | <b>Grade</b> 11 | <b>Town</b> Wallingford      |



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[SchTown] [School] [Teacher]  
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**Waterbury** ACES at Chase Rachel Murray

5015 P7 Analyzing DNA

**Student(s) Doreen Cajuste**

**Grade 7 Town Wolcott**

**Waterbury** ACES at Chase Rachel Murray

5001 P7 What Materials Cause the Most Static Electricity to Light an Incandescent Light Bulb?

**Student(s) LaRaina Johnson**

**Grade 7 Town Waterbury**

**Watertown** Taft School Amanda Benedict

3105 LS Biomimetic Filtration: Applying the Voronoi Pattern of Sea Urchin Shells to Remove Lead from

**Student(s) Dongeon Rhee**

**Grade 9 Town Watertown**

**Watertown** Taft School Amanda Benedict

6008 PS Adaptive Multi-Link Portable Knee Exoskeleton

**Student(s) Dylan Shi**

**Grade 10 Town Watertown**

**Watertown** Taft School Amanda Benedict

6067 PS Bionic Shoulder Joint Based on Cable Powered Technology

**Student(s) Yan Chak So**

**Grade 10 Town Watertown**

**Westport** Greens Farms Academy Mathieu Freeman

5523 P8 Investigating Modified Dental X-Rays in Novel Digital Computed Radiography Imaging for Emergency Medical Services

**Student(s) Dylan Karpf**

**Grade 8 Town Westport**

**Westport** Greens Farms Academy Mathieu Freeman

5506 P8 How Different Wing Shapes Affect The Way That Model Planes Fly

**Student(s) Ben Kiev**

**Grade 8 Town Westport**

**Westport** Greens Farms Academy Mathieu Freeman

3050 LS Equus Caballus and Human Heart Rate Variability Synchronization as a Model for Potential Atrial Fibrillation Treatment

**Student(s) Adeline Thompson**

**Grade 12 Town Easton**

**Westport** Staples High School Amy Parent

3048 LS The Effects of Vitamin D Supplementation on Duchenne Muscular Dystrophy (DMD) in C. Elegans

**Student(s) Nolan Franics**

**Grade 11 Town Westport**

**Westport** Staples High School Amy Parent

3096 LS The Effect of the Nutritional Supplement, Curcumin, on Vulval induction to evaluate its role in Epidermal Growth Factor Driven Cancers

**Student(s) Alexis Krenzer**

**Grade 12 Town Westport**

**Wilton** Middlebrook School Janica Bagosy

5519 P8 The Effect of Screen Time on Your Body's Circadian Rhythms

**Student(s) Kanira Baskar**

**Grade 8 Town WILTON**

**Wilton** Middlebrook School Jessica Garcia

5527 P8 Smart Eye: Assistive Glasses for the Visually Impaired

**Student(s) Ishan Chugh**

**Grade 8 Town Wilton**

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[SchTown] [School] [Teacher]  
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**Wilton** Middlebrook School Leah Pariso

5013 P7 Cell Shield: Investigating Materials to Block Non-ionizing Radiofrequency Radiation from Common Cell Phone Use

**Student(s) Bennett Norful** **Grade 7** **Town WILTON**

**Wilton** Middlebrook School Debbie Mallozzi

5507 P8 Bus Notification System with Raspberry Pi

**Student(s) Vidit Prabhu** **Grade 8** **Town Wilton**

**Wilton** Wilton High School Krystyna de Jacq

6010 PS Leveraging natural language processing to identify real-time risk for mental health conditions among teens

**Student(s) Jackson Norful** **Grade 9** **Town WILTON**

**Windsor** Academy of Aerospace & Engineering Thomas Brown

6096 PS Investigating Aerodynamic In Shapes of Drone: How will it affect the speed, efficiency, and drag?

**Student(s) Aulona Misini** **Grade 12** **Town Hartford**

**Windsor** Academy of Aerospace & Engineering Charles Copeland

6109 PS Using Metal Cores as a Sustainable Energy Storage Solution Optimized by an AI-Driven Model to Predict Supply-Demand Dynamics of the Energy Market

**Student(s) Aaditya Sadhvani** **Grade 9** **Town Ellington**

**Windsor** The Loomis Chaffee School Koby Osei-Mensah

3130 LS Bioremediation of PFAS: Integrating Oyster Shell Waste from Connecticut's Oyster Trail

**Student(s) Hyeonho Kim** **Grade 9** **Town Windsor**

**Windsor** The Loomis Chaffee School Koby Osei-Mensah

6089 PS Band-aid Hydration Monitor

**Student(s) Ethan Liu** **Grade 9** **Town Farmington**

**Windsor** The Loomis Chaffee School Koby Osei-Mensah Koby Osei-

3107 LS Differentiation and Functional Analysis of hESC - Derived Cerebral Organoids for Modelling the AUTS2 Variant

**Student(s) JIAYI Liu** **Grade 11** **Town Windsor**

**Windsor** The Loomis Chaffee School Koby Osei

6098 PS A Multi-Modal Modular Robotic System: Self-Assembly and Navigation in Complex Terrains

**Student(s) Michael Ma** **Grade 9** **Town Medina**

**Windsor** The Loomis Chaffee School Koby Osei-Mensah

6002 PS A Stroke of Genius: Applying Smart Wearable Technology to Record and Improve Freestyle Stroke in Competitive Swimmers

**Student(s) George Mirgorodskiy** **Grade 11** **Town San Mateo**

**Woodbridge** Amity Regional High School Lindsay McCarthy

6017 PS Developing a Wireless, Discreet, Precise, and Painless Piezoelectric Micropump System for Diabetes Patients

**Student(s) Joy Deng** **Grade 11** **Town Orange**

**Woodbridge** Amity Regional High School Sarah Reeves

3128 LS Enhancing Coral Reef Resilience Through Utilizing a Two-Part Dosing System to Increase the pH levels of CO<sub>2</sub>-Acidified Ocean Water

**Student(s) Jason Liang** **Grade 11** **Town Woodbridge**

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

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**Woodbridge** Amity Regional High School Lindsay McCarthy

|      |    |   |
|------|----|---|
| 6076 | PS | Developing a Solar-Powered Water Purification Device Using Hybrid Nanomaterials for Atmospheric Water Harvesting and Filtration |
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**Student(s)** Nikhil Petrov

**Grade** 12 **Town** Woodbridge

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**Woodbridge** Amity Regional High School Sarah Reeves

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| 6037 | PS | Investigating the Relationship Between the Luminosity and the Extent of the [O III] Narrow-Line Region in Nearby Type 2 Seyfert Galaxies. |
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**Student(s)** Tony Zhang

**Grade** 11 **Town** Woodbridge