



Conn. Science & Engineering Fair

Quinnipiac University

March 7 - 19, 2022

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

Regular Fair Awards - Finalists

Sorted by:
 - School Town
 - School
 - Last Name

[SchTown]	[School]	[Teacher]	[Proj#]	[Project Title]	Student(s)	Grade	Town
Avon	Avon Old Farms School	Dan Ismailescu	6024	On the smallest (n-1)-gon containing a convex n-gon	Keun Hyong Kwak	Grade 11	Town Gangnam-gu
<ul style="list-style-type: none"> * Mathematics Awards --- 1st Place High School - \$500 and Plaque * Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF 							
Avon	Farmington Valley Academy Montessori	Bobbi Jo Woodbury	2501	Adjusting to Our Modernized World with Smart Farms	Michael Guiliano	Grade 8	Town Canton
<ul style="list-style-type: none"> * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion 							
Avon	Talcott Mountain Academy	Brigette Zacharczenko	2019	How Ocean Acidification Affects Shelled Marine Life	Rhea Doshi	Grade 7	Town Farmington
<ul style="list-style-type: none"> * PepsiCo Life Sciences Awards --- 2nd Place- Life Sciences 7th grade - \$100 & Plaque * Environmental Sciences Awards with CACIWC --- 1st Place MS - \$300 and Plaque * Alexion Biotechnology Awards --- 2nd Place- Biotechnology 7th grade - \$200 & Plaque * NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF * Ricoh Americas Corporation --- Certificate, \$25 gift card given by CSEF * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS * TurnKey Compliance Solutions Environmental Awards --- \$200 Cash Award Middle School- For excellence in environmental sciences 							
Avon	Talcott Mountain Academy	Brigette Zacharczenko	2003	Amounts of bacteria on Organic and Non-Organic fruits and vegetables	Iana Mezheritskiy	Grade 7	Town Avon
<ul style="list-style-type: none"> * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion 							
Avon	Talcott Mountain Academy	Brigette Zacharczenko	2018	Well-being in middle schoolers using intervention strategies	Nandini Panigrahi	Grade 7	Town west hartford
<ul style="list-style-type: none"> * PepsiCo Life Sciences Awards --- Finalist - Life Sciences 7th grade - CSF Medallion * American Society of Safety Professionals, CT Valley Chapter --- \$150 grade 7-8 project 							
Avon	Talcott Mountain Academy	Lydia Gibb	5525	Pellet-"O"-Trap: Capturing Plastic Pellets Through a Multi-Filter System & Analyzing Their Progression Using Binary Image Processing	Sia Reddy	Grade 8	Town Avon
<ul style="list-style-type: none"> * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences 8th Grade Ind.- \$300 & Plaque * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion * Environmental Sciences Awards with CACIWC --- 2nd Place MS- \$200 and Plaque * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion * Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Sciences 8th Grade - \$500 and invite to CSTA Award Banquet * Society of Women Engineers - Hartford Section --- Scientific Calculator * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS 							

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

Avon Talcott Mountain Academy Anya Jensen

2503 Applications of Machine Learning in the Prediction and Clustering of COVID-19 Deaths

Student(s) Vanessa Slepini **Grade 8** **Town** West Hartford

* PepsiCo Life Sciences Awards --- 5th Place- Life Sciences 8th grade - Plaque

Avon Talcott Mountain Academy Anya Jensen

2515 The RightSwitch: An Automatic Light Switch Sterilization Device

Student(s) Samuel Wu **Grade 8** **Town** Avon

- * PepsiCo Life Sciences Awards --- 1st Place- Life Sciences 8th grade - \$300 & Plaque
- * EnergizeCT Future Sustainability Awards --- 1st Place Middle School - \$300 and Plaque
- * Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Life Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology 8th grade - \$300 & Plaque
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Bozrah Fields Memorial School Mr.Fish

5521 Alerting Drivers That a Child was Forgotten in a Vehicle With a Circuit Sequence Alert System (CSAS)

Student(s) Andrew Pagnotta **Grade 8** **Town** Bozrah

- * Stanley Black & Decker Applied Technology Awards --- 1st Place Middle School - \$300 and Plaque, Medallion
- * U.S. Air Force --- Certificate & \$25 gift card from CSEF
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * Society of Women Engineers - Hartford Section --- Scientific Calculator

Bozrah Fields Memorial School Mr. Fish

4002 Measurement Techniques and Mathematical Analysis of Gum Bubbles

Student(s) Reagan Reid **Grade 7** **Town** Bozrah

Leah Kozerefski **Grade 7** **Town** Gilman

- * Mathematics Awards --- 1st Place Middle School - \$300 and Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

3007 Using Pyrethrum extract from Chrysanthemum cinerariifolium as a natural insecticide against Grylloidea

Student(s) Albert Capodanno **Grade 12** **Town** Fairfield

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * Susan and Stanley Lessoff Memorial --- Susan and StanleyLessoff Memorial Award - \$250 Cash and Plaque HS

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

6009 The Use of Sodium Bicarbonate as a Local Buffer to Decrease Ocean Acidity in Localized Areas to Increase the Oyster Growth

Student(s) Kennedy Carr **Grade 12** **Town** Fairfield

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

3061 A novel mitigation technique to control the spread of the invasive Spotted Lanternfly (L. Delicatul) through cardiac glycoside extracts

Student(s) Cooper Carr **Grade 12** **Town** Fairfield

- * Environmental Sciences Awards with CACIWC --- 1st Place HS- \$500 and Plaque
- * TurnKey Compliance Solutions Environmental Awards --- \$300 Cash Award High School- For excellence in environmental sciences
- * GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place HS Environmental Project with \$700 stipend
- * Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a High School Student

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

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

3002 Quantifying the interspecific impacts of the native relationships of the Long Island Sound

Student(s) Sarah Davis **Grade 12** **Town** Trumbull

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 2nd Place High School - \$400 and Plaque, Medallion
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * Banning Family Life Science Award --- For excellence in invasive species research, \$100 cash
- * GENIUS Olympiad --- GENIUS Olympiad Competition for HS Environmental, Energy, Ecology, or Biodiversity Project with \$700 stipend

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

6072 Absorbing High Concentrations of Nitrogen using Biochar as a Preventative Measure to Mitigate the Dinoflagellate *Karenia brevis*.

Student(s) Kelsey Farber **Grade 12** **Town** Fairfield

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

6057 An Inexpensive, Simple and Effective Application of Off the Grid Solar Disinfection For Potable Water

Student(s) Allison Greenberg **Grade 12** **Town** Fairfield

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

3006 The Use of Secondary Plant Metabolites to Reduce *Pseudogymnoascus destructans* Transmission Among North American Bats

Student(s) Grace Hilton **Grade 12** **Town** Fairfield

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 5th Place High School - Plaque, Medallion

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

6063 Utilizing Rooftop Gardens as a Means of Geothermal Energy Through Ground to Air Heat Transfer Systems

Student(s) Aidan King **Grade 12** **Town** Milford

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion
- * EnergizeCT Alternative/Renewable Energy Awards --- 1st Place High School - \$500 and Plaque
- * EnergizeCT Future Sustainability Awards --- 3rd Place High School - \$200 and Plaque
- * American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- * Frederick Olender USC Award in Memory of G. Robert Wisner --- \$250 Cash Award for HS student in USC school

Bridgeport Bridgeport Aquaculture Center Kirk Shadle

6067 Optimizing Desalinization of Industrial Brine Through Temperature Swing Solvent Extraction

Student(s) Jackson Warters **Grade 12** **Town** Milford

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 3rd Place High School - \$ 300 and Plaque, Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion

Bridgeport John Winthrop School Susan Beres

1017 How do fears change with age?

Student(s) Shiloh Gutierrez **Grade 8** **Town** Bridgeport
Alyssa Cruz **Grade 8** **Town** Bridgeport

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion

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

Bridgeport John Winthrop School Ms. Beres

2516 Which Filtration Material Leads to the Best Drinking Water?

Student(s) **Wayne Lewis** **Grade 8** **Town** Bridgeport

- * PepsiCo Life Sciences Awards --- 4th Place- Life Sciences 8th grade - Plaque
- * American Psychological Association --- Certificate, \$25 gift card given by CSEF
- * Ricoh Americas Corporation --- Certificate, \$25 gift card given by CSEF

Bridgeport Park City Prep Charter School Mr. Jaekle

5522 The Connection of Coronal Mass Ejections and Sunspots

Student(s) **Marcus Rosario** **Grade 8** **Town** Bridgeport

- * Lockheed Martin Physical Sciences Awards --- 5th Place - Physical Sciences 8th Grade Ind. - Plaque
- * Mathematics Awards --- 3rd Place Middle School - \$100 and Plaque

Cheshire Cheshire High School Julie Barker

6030 How Raspberry Pi Microcomputers and Computer Vision Artificial Intelligence Can Be Utilized to Provide Aid to the Visually Impaired Community

Student(s) **Siddhant Bhardwaj** **Grade 11** **Town** Cheshire

- * Stanley Black & Decker Applied Technology Awards --- 2nd Place High School - \$300 and Plaque Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Zepke Awards --- \$125 - For the Best Use of Electronic Circuitry- Senior High
- * Jon Stone Memorial Award --- Jon Stone Award for Innovative Engineering- \$100

Cheshire Cheshire High School Julie Barker

6048 A Drunk-Driving Alerting Device using an HX711 Weight Sensor and MQ-3 Alcohol sensor

Student(s) **Sagarika Srinivasan** **Grade 11** **Town** Cheshire

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion

Cheshire Dodd Middle School Clare Gonzalez

5509 A Domestic Violence Alerting Device Comprised of an Analog Sound Level Meter OLED Display and iOS Mobile App built using Swift

Student(s) **Suchita Srinivasan** **Grade 8** **Town** Cheshire

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place - Middle Schools- \$100 / Plaque
- * Collins Aerospace Engineering Awards --- 1st Place- Engineering Middle School- \$400 & Plaque
- * Society of Women Engineers - Hartford Section --- Scientific Calculator
- * Connecticut Academy of Audiology --- \$200 Award MS- For Excellence in Audiology and Acoustics, opport. to shadow an audiologist
- * Robert Francoeur Memorial Award --- Creative or innovative project in engineering or computer science by female students - \$100
- * Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a Middle School Student
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Cheshire St. Bridget School Michelle. Carroll

5011 Coding an Affordable Goat Identification System for All Farmers

Student(s) **Avery Fowler** **Grade 7** **Town** Cheshire

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences 7th Grade Ind. - \$200 & Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * EnergizeCT Future Sustainability Awards --- Middle School Finalist - Medallion
- * National Center for Inquiry Learning --- Danielle & Maggie Award for Imagination - MS \$100
- * Dreams Unlimited Award --- \$100 Cash Award + Certificate to each student
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

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

Cheshire St. Bridget School Mrs. Michelle Carol

5504 Electrolyte Challenge

Student(s) Hailey Greasley **Grade 8** **Town** Naugatuck

- * Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- * American Society of Safety Professionals, CT Valley Chapter --- \$150 grade 7-8 project

Danbury Danbury High School Victoria McClelland

6064 Comparing Various Machine Learning Models while Predicting Taxonomy using Codon Combinations

Student(s) Shriya Jonnalagadda **Grade 10** **Town** Danbury

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion

Danbury St. Gregory the Great School Mrs. Fahey

1004 Sun vs. Moon

Student(s) Briella Dunkle **Grade 8** **Town** Newtown
Nicole Dicello **Grade 8** **Town** Southbury
Sophia DaSilva **Grade 8** **Town** Danbury

- * PepsiCo Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion
- * EnergizeCT Future Sustainability Awards --- 3rd Place Middle School - \$100 and Plaque

Danbury St. Gregory the Great School Mrs. Fahey

4015 Light it up with wind energy

Student(s) Lukas Muiy-cardenas **Grade 8** **Town** Danbury
David Perez **Grade 8** **Town** Danbury

- * EnergizeCT Future Sustainability Awards --- Middle School Finalist - Medallion

Danbury Westside Middle School Academy Jon Neuhausel

5510 The Effects of Ice Mitigation Strategies on Livestock Waterers

Student(s) Sophia Blumenreich **Grade 8** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences 8th Grade Ind. - \$200 & Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- * J.A. Augustine Award --- \$100 for excellence in physical sciences
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Danbury Westside Middle School Academy Jon Neuhausel

5514 Model System Design For Technology-Assisted Insulin Regulation

Student(s) Sydney Borst **Grade 8** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences 8th Grade Ind, - \$100 & Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * Pfizer Computational Biology and Bioinformatics Awards --- 1st Place Middle School - \$300, Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 2nd Place Middle School - \$200 and Plaque, Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Alexion Biotechnology Awards --- 2nd Place- Biotechnology 8th grade - \$200 & Plaque
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * GENIUS Olympiad --- GENIUS Olympiad Competition for Highest Placing USC 8th grade Project with \$700 stipend
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

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

Danbury Westside Middle School Academy Jon Neuhausel

4013 Benefit of Granular and Mesh Filters on Concentrations of Microplastics in Water

Student(s) **Krrish Brahmkshatriya** **Grade 8** **Town** Danbury
Benjamin Miller **Grade 8** **Town** Danbury
Alexander Herzegovitch **Grade 8** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences MS Team - Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- * Environmental Sciences Awards with CACIWC --- MS Finalist - CSF Medallion
- * Alexion Biotechnology Awards --- 5th Place- Biotechnology 8th grade - Plaque
- * John S. Kendall Memorial Awards --- \$300 John S. Kendall Award for Excellence In Mechanical Engineering - Middle School

Danbury Westside Middle School Academy Jonathan Neuhausel

5009 Impact of prediction methods on the percentage accuracy of a stock forecast.

Student(s) **Alejandro Mayorga** **Grade 7** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences 7th Grade Ind. - \$100 & Plaque
- * Mathematics Awards --- 2nd Place Middle School - \$200 and Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 3rd Place Middle School - \$100 and Plaque, Medallion
- * Talcott Mountain Science Center & Academy --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Phys Science

Danbury Westside Middle School Academy Jonathan Neuhausel

5505 Design and Testing of an Integrated 360 Degree Pi Camera System for Deep Well Rescue Mission

Student(s) **Sandhya Sudarsanam** **Grade 8** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- 4th Place - Physical Sciences 8th Grade Ind. - Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place - Middle School- \$200 / Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 4th Place Middle School - Plaque, Medallion
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * Computer Science Awards --- 1st Place Middle School - \$300, Plaque
- * Collins Aerospace Engineering Awards --- 2nd Place- Engineering MS- \$200 & Plaque
- * Raytheon Corporation Awards --- \$500, Plaque
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- * IEEE, Connecticut Section --- \$250 Honors Award -Junior
- * Jon Chapis Memorial Award --- John Chapis Spirit of Innovation Award - MS \$100
- * Zepke Awards --- \$100 - For the Best Use of Electronic Circuitry- Middle School
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Darien Darien High School David Lewis

3097 The effect of microplastic ingestion on the health of parasites (Cryptocotyle lingua) in periwinkles (Littorina littorea).

Student(s) **Alison Enters** **Grade 12** **Town** Darien

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Project Oceanology --- Individual - 1 Ocean Camp slot + T-Shirt & cap, First Place Senior

Darien Darien High School David Lewis

6071 Cloud Identification in Mars Daily Global Maps with Deep Learning

Student(s) **Sebastian Mengwall** **Grade 12** **Town** Darien

- * Lockheed Martin Physical Sciences Awards --- 5th Place - Physical Sciences Senior High Individual - Plaque
- * Mathematics Awards --- 2nd Place High School - \$300 and Plaque
- * Computer Science Awards --- Senior High Finalist - Medallion
- * Raytheon Corporation Awards --- \$500, Plaque
- * MapleSoft Awards for Applied Mathematics and Modeling --- For excellence in Mathematics and Modeling - Maple Software and T-shirt

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

East Lyme East Lyme High School Fred Willson

6001 The Hydrogen Motor

Student(s) **Benjamin England** **Grade 12** **Town** salem

* EnergizeCT Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Ellington Ellington Middle School Scott Raiola

5007 Wall climbing soft robot

Student(s) **Thomas Gerlach** **Grade 7** **Town** Ellington

* Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences 7th Grade Ind. - \$100 & Plaque

* Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion

* Quinnipiac University Scholarships --- \$30,000, 4 year scholarship (\$7,500 per year) to Quinnipiac University for MS Student

* CT Architecture Foundation - The William M. Mack, AIA Award --- \$250 Gift Certificate to Barnes and Noble from the Connecticut Architecture Foundation, William M. Mack, AIA Award.

* Demos R Us Award --- \$150 Cash Award-- Clear Execution of Research- 7th Grade

* Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Enfield Chiaravalle Academy Timothy Coleman

1014 Sodium Bicarbonate as a Cost Effective Method for Raising the pH of Soil

Student(s) **Lainey Czerwiec** **Grade 8** **Town** Feeding Hills

Olivia Keise **Grade 8** **Town** South Windsor

Bridget Kelly **Grade 8** **Town** Enfield

* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion

* U.S. Agency for International Development (USAID) --- Certificate and \$25 gift card given by CSEF

Enfield Chiaravalle Academy Tim Coleman

1001 Do Essential Oils Promote the Growth of Yeast Cells?

Student(s) **John Donnelly** **Grade 7** **Town** Suffield

John Pereira IV **Grade 7** **Town** Enfield

* Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion

Enfield Chiaravalle Academy Tim Coleman

1016 Improving Composting During the Winter Months

Student(s) **Delainey Pappas** **Grade 7** **Town** Enfield

Sabrina Plaz **Grade 7** **Town** Suffield

Madeline Agrafojo **Grade 7** **Town** Suffield

* PepsiCo Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion

* Alexion Biotechnology Awards --- 4th Place- Biotechnology 7th grade - Plaque

Enfield Chiaravalle Academy Mr. Coleman

1002 Optimum Composting For Eisenia fetida

Student(s) **Sage Pierce** **Grade 8** **Town** Enfield

Catherine Wilcox **Grade 8** **Town** Enfield

* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion

* Connecticut Science Supervisors Association --- \$125 for a middle school project

* NYUC Pony Club Equine or Animal Science Award --- \$100 Cash Award or excellence in equine studies

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

Enfield Chiaravalle Academy Timothy Coleman

4014 Can You Separate Solids and Liquids Going Down Your Sink

Student(s) **Caleb Quinby** **Grade 7** **Town** Windsor
Holt Serrano **Grade 7** **Town** Somers

- * Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences MS Team- \$100 each & Plaque
- * Environmental Sciences Awards with CACIWC --- MS Finalist - CSF Medallion
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Enfield Chiaravalle Academy Timothy Coleman

1003 Comparing Kale Growth In Hydroponics Versus Potting Soil In Winter

Student(s) **Carys Wilson** **Grade 7** **Town** Somers
Delphine Lamattina **Grade 7** **Town** West Hartford

- * PepsiCo Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * EnergizeCT Future Sustainability Awards --- 2nd Place Middle School - \$200 and Plaque
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology 7th grade - \$300 & Plaque
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Enfield Chiaravalle Academy Timothy Coleman

4010 Determining the Most Efficient and Effective Method of Filtration for the Purpose of Creating Potable Water

Student(s) **Rhys Wilson** **Grade 8** **Town** Somers
Oliver Kolb **Grade 8** **Town** Longmeadow
Jacek Cieslak **Grade 8** **Town** Monson

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Jr Team - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- MS Finalist - CSF Medallion
- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology 8th grade - \$100 & Plaque

Farmington Miss Porter's School Betty Wang

3078 Using Single-Cell Analysis to Explore Prognostic Genes in Prostate Cancer

Student(s) **Junyue Ma** **Grade 11** **Town** Farmington

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Pfizer Computational Biology and Bioinformatics Awards --- 3rd Place High School - \$200, Plaque
- * Regeneron Biomedical Science Award --- Certificate & \$500.00 cash

Glastonbury Glastonbury High School Diane Pintavalle

3020 Machine Learning Analysis of EEG Signals to Predict Working Memory Performance in Healthy and Schizophrenic Adults

Student(s) **Niteesh Kalangi** **Grade 11** **Town** Glastonbury

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Pfizer Computational Biology and Bioinformatics Awards --- 2nd Place High School - \$300, Plaque

Greenwich Brunswick School Dana Montanez

3502 Metal-Mediated Electromagnetic Radiation:

Student(s) **Collin Eschricht** **Grade 11** **Town** OLD GREENWICH
Hunter Spiess **Grade 11** **Town** Old Greenwich

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion

Greenwich Brunswick School Dana Montanez

6061 Optimization of the Sleep Cycle by Activation of the Parasympathetic Nervous System Using Low-frequency Vibrations and Heart Rate Variability Analysis.

Student(s) **Ryan Kulsakinun** **Grade 11** **Town** Armonk

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Lunch with a Patent Attorney --- Lunch with a Patent Attorney

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

Greenwich Brunswick School Dana Montanez

6501 Thermal Desalination: A More Efficient and Sustainable Alternative to Reverse Osmosis

Student(s) **Robert MacNaughton** **Grade** 10 **Town** Bronxville
Michael Yeager **Grade** 10 **Town** Greenwich

- * EnergizeCT Future Sustainability Awards --- 2nd Place High School - \$300 and Plaque
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition
- * CT Architecture Foundation - The William M. Mack, AIA Award --- \$250 Gift Certificate to Barnes and Noble from the Connecticut Architecture Foundation, William M. Mack, AIA Award.

Greenwich Brunswick School Dana Montanez

3509 Utilizing the Mycorrhizal relationship between plants as a biological control to prevent insect invasion and disease in plant populations.

Student(s) **Jack Morningstar** **Grade** 10 **Town** Greenwich
Sebastian DeAngelis **Grade** 10 **Town** Darien

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion

Greenwich Brunswick School Dana Montanez

3507 Identification and purification of algal supplements as a means to reduce methane production within ruminants

Student(s) **James O'Connor** **Grade** 10 **Town** Rye
Whip Gorman **Grade** 10 **Town** New Cannan

- * PepsiCo Life Sciences Awards --- 2nd Place- Life Sciences Senior High Team - \$300 (split) & Plaque
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion

Greenwich Brunswick School Dana Montanez

3512 Determining the optimal concentration of nitrogen in fertilizer by examining Wheat samples with NIR spectroscopy.

Student(s) **Campbell Officer** **Grade** 11 **Town** Greenwich
Henry Sorbaro **Grade** 11 **Town** Greenwich

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion

Greenwich Greenwich Academy Dr. Monica Ortiz

6038 Using Artificial Intelligence to Analyze the Changes in Opioid Prescriptions and Usages Brought by Efforts to Reduce Overdoses

Student(s) **Karthika Siva** **Grade** 11 **Town** Stamford

- * Computer Science Awards --- Senior High Finalist - Medallion

Greenwich Greenwich Catholic School Mrs. Carol Lutz

1007 Ready, Set, Grow

Student(s) **Nicholas Barone** **Grade** 7 **Town** Stamford
Luke Mannello **Grade** 7 **Town** Stamford

- * PepsiCo Life Sciences Awards --- 1st Place- Life Sciences MS Team - \$100 each & Plaque
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

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

Greenwich Greenwich High School Andrew Bramante

6027 Simple Remediation of Heavy Metal and Fertilizer Runoff Water Contaminants via Carbon Nanotube Infused Pinus strobus Xylem Filtration

Student(s) Justin Bernstein **Grade 9** **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- 3rd Place HS- \$100 and Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF
- * John S. Kendall Memorial Awards --- \$500 John S. Kendall Award for Excellence In Mechanical Engineering - High School

Greenwich Greenwich High School Andrew Bramante

3025 Rapid, Visual Detection of Benadryl Cocktails via Competitive, Amine-Responsive Fluorophores

Student(s) Angelina Fogarty **Grade 11** **Town** old greenwich

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology Senior High - \$300 & Plaque
- * Connecticut Science Supervisors Association --- \$125 for a high school project

Greenwich Greenwich High School Andrew Bramante

3030 Design of a Novel, Dual-Functioning Tissue Plasminogen Activator and Anticoagulant Therapeutic for Rapid Ischemic Stroke Treatment

Student(s) Ambika Grover **Grade 11** **Town** Riverside

- * PepsiCo Life Sciences Awards --- 1st Place- Life Sciences Senior High - \$500 & Plaque
- * Collins Aerospace Engineering Awards --- 1st Place- Engineering Senior High- \$500 & Plaque
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering --- Life Sciences Senior 1st HS- \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg
- * Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High - \$300 & Plaque
- * U.S. Metric Association --- Certificate & \$25 gift card given by CSEF
- * Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF

Greenwich Greenwich High School Andrew Bramante

3059 The Influence of Social Capital on Covid-19 Vaccine Hesitancy

Student(s) Zara Haque **Grade 9** **Town** Riverside

- * Mathematics Awards --- High School Finalist - Medallion
- * MapleSoft Awards for Applied Mathematics and Modeling --- For excellence in Mathematics and Modeling - Maple Software and T-shirt

Greenwich Greenwich High School Andrew Bramante

6080 Remediation of Fire-Foam PFAs from Contaminated Water Using an Eco-Friendly and Reusable Water Filtration System

Student(s) Adam Kleshchelski **Grade 11** **Town** Cos Cob

- * Lockheed Martin Physical Sciences Awards --- 4th Place - Physical Sciences Senior High Individual - Plaque
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * EnergizeCT Future Sustainability Awards --- High School Finalist - Medallion
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition
- * University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Engineering, or Technology, \$30,000 (\$7,500 per year)

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

Greenwich Greenwich High School Andrew Bramante

6039 Eco-Friendly Remediation of Polycyclic Aromatic Hydrocarbons in Stormwater via Magnesium-Infused Calcite Crystal, Supramolecular Hydrogel Scaffolding

Student(s) Audrey Lin **Grade** 10 **Town** Riverside

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- 2nd Place HS- \$200 and Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * GENIUS Olympiad --- GENIUS Olympiad Competition for HS Environmental, Energy, Ecology, or Biodiversity Project with \$700 stipend

Greenwich Greenwich High School Andrew Bramante

3091 Development of Readily Accessible Machine Learning Diagnostics for Early Stage Mild TBI using Eye Tracking Methods

Student(s) Ashley Malkin **Grade** 9 **Town** Greenwich

- * PepsiCo Life Sciences Awards --- 5th Place- Life Sciences Senior High - Plaque
- * Computer Science Awards --- 1st Place High School - \$400, Plaque
- * Alexion Biotechnology Awards --- 4th Place- Biotechnology Senior High - Plaque

Greenwich Greenwich High School Andrew Bramante

6060 Increasing Elasticity, Durability, and Function of Wearable PANI-Sense pH Health Monitors via a Superhydrophobic, Textile Framework

Student(s) Madeline Minichetti **Grade** 11 **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Engineering, or Technology, \$30,000 (\$7,500 per year)

Greenwich Greenwich High School Andrew Bramante

3107 Inhibition of Covid-19 Induced Cell Inflammation via R-954 B1R Antagonist Disruption of the Bradykinin Storm

Student(s) Ella Moore **Grade** 12 **Town** Greenwich

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

Greenwich Greenwich High School Andrew Bramante

6082 Biomimetic Removal of Microspheres Water Contaminants, via Calcite-Infused, Coral-like Melamine Sponges

Student(s) Naomi Park **Grade** 10 **Town** Riverside

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * Collins Aerospace Engineering Awards --- 2nd Place- Engineering Senior High- \$400 & Plaque
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering --- Physical Sciences 1st HS \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg
- * Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF
- * Southeastern New England Marine Educators (SENEME) --- \$100 award and membership in SENEME - 1st Place Senior & T-Shirt

Greenwich Greenwich High School Andrew Bramante

3063 Design of a Wearable, Skin-Specific UVB Sensor for Instantaneous Detection of Skin-Damaging Radiation

Student(s) Yurika Sakai **Grade** 11 **Town** Greenwich

- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High - Plaque
- * U.S. Metric Association --- Certificate & \$25 gift card given by CSEF
- * American Society of Safety Professionals, CT Valley Chapter --- \$200 grade 9-12 project
- * University of Connecticut Academic Excellence Scholarship --- Academic Excellence Life Sciences scholarship
- * Jon Stone Memorial Award --- Jon Stone Award for Innovative Engineering- \$100

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

Greenwich Greenwich High School Andrew Bramante
6050 On the machine learning-assisted generation of Alcubierre-like spacetime metrics with consideration for use in interstellar travel

Student(s) Yuxuan Song **Grade** 11 **Town** Old Greenwich

* Computer Science Awards --- Senior High Finalist - Medallion

Greenwich Greenwich High School Andrew Bramante
6042 Controlled Delivery of Sulfoxaflo Pesticide via Cinnamaldehyde-infused Hydrogels to Reduce Toxicity to Honey and Wild Bee Pollinators

Student(s) Elizabeth Wallace **Grade** 11 **Town** Old Greenwich

* Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences Senior High Individual - \$200 & Plaque
* Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
* Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF
* The Goodwin-Niering Center for the Environment --- \$100 for "Excellence in Environmental Conservation Studies"

Greenwich Sacred Heart Greenwich Joan Fei
6091 Designing and Testing an Activated Carbon Cloth Storm Drain Filter to Reduce the Prevalence of Phosphates and Nitrates in the Long Island Sound

Student(s) Abby Barnett **Grade** 12 **Town** Darien

* Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place - High School- \$150 / Plaque
* American Meteorological Society --- Certificate & \$25 gift card given by CSEF
* Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition
* Connecticut College-Physics, Astronomy, & Geophysics Dept. --- Senior Award: Certificate, & teshirt & \$25 Amazon Card from CSEF

Greenwich Sacred Heart Greenwich Ms. Fei
3082 Forest Restoration after Wildfire: The Effect of the Addition of Saccharides on Seedling Survival After Replanting in Burnt Soil

Student(s) Regina Finn **Grade** 12 **Town** Old Greenwich

* Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion

Greenwich Sacred Heart Greenwich Joan Fei
6514 Association between Aggressive Behavior and Allele 1820272961:A:C in Purebred and Mixed Breed Canines

Student(s) Gigi Pascal **Grade** 12 **Town** Darien

Sarah Augustine **Grade** 12 **Town** Greenwich

Caroline Nemec **Grade** 12 **Town** Darien

* Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences Senior High Team - Plaque

Guilford Guilford High School Dr. James Carlson
6065 A New Hybrid: Harnessing the Power of Friction

Student(s) Michael Neiss **Grade** 11 **Town** Guilford

* EnergizeCT Alternative/Renewable Energy Awards --- 3rd Place High School - \$200 and Plaque
* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR
* Vanderbilt Chemicals, LLC --- \$150 Vanderbilt Chemicals Award for Excellence in Tribology and Sustainable Lubrication
* University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$96,000 (\$24,000 per year)

Hamden Hamden Hall Country Day School Frank Gasparro
5507 2009 MacBook Restoration

Student(s) Andrei Balas **Grade** 8 **Town** Cheshire

* Stanley Black & Decker Applied Technology Awards --- 3rd Place Middle School - \$100 and Plaque, Medallion
* Computer Science Awards --- Middle School Finalist - Medallion
* Wisner Chairman's Award --- \$500 cash & Plaque MS

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

Hamden Hamden Hall Country Day School Doctor Frank Gasparro

5515 iAAA band (Impact-absorbing and alerting band)

Student(s) **Ravindu Karunaratne** **Grade 8** **Town** Hamden

- * Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- * Lemelson Early Inventor Award --- Certificate & \$100 cash award from Lemelson Foundation
- * American Society of Safety Professionals, CT Valley Chapter --- \$150 grade 7-8 project

Hamden Hamden Hall Country Day School Brian Christman

2517 The Latch

Student(s) **Neev Makin** **Grade 8** **Town** Hamden

- * PepsiCo Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion
- * Stanley Black & Decker Applied Technology Awards --- 2nd Place Middle School - \$200 and Plaque, Medallion
- * Computer Science Awards --- 3rd Place Middle School- \$100, Plaque
- * Collins Aerospace Engineering Awards --- 3rd Place- Engineering MS \$100 & Plaque
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2

Hamden Hamden Hall Country Day School Paulomi Aldo

2509 Copper Contamination of Freshwater sources which pollute and harm the ecosystem and its consumers (Phytoremediation)

Student(s) **Sophia Vash** **Grade 8** **Town** Fairfield CT

- * PepsiCo Life Sciences Awards --- 2nd Place- Life Sciences 8th grade - \$200 & Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- 1st Place - Middle School \$300 / Plaque
- * Environmental Sciences Awards with CACIWC --- 3rd Place MS- \$100 and Plaque
- * Fox Pest Control for Environmental Management --- \$150 Cash for Excellence in Environmental Management
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Hamden Hamden Hall Country Day School Frank Gasparro

3527 Determining Carbon Dioxide Levels in Classroom Settings

Student(s) **Yue Zhuo** **Grade 10** **Town** Woodbridge
Huiwen Zeng **Grade 10** **Town** Cheshire

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion

Hamden Sacred Heart Academy Dr. Sibani Sengupta

3054 Anti-Viral Properties within Ayurvedic Remedies and their Potential COVID-19 Applications

Student(s) **Mehr Chhatre** **Grade 12** **Town** Hamden

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion

Hartford Environmental Sciences Magnet School Ms. Hays

2010 Mealybug Management 101
A Study of Household Plant Pest Treatment Options

Student(s) **Avni Manish** **Grade 7** **Town** Newington

- * PepsiCo Life Sciences Awards --- 4th Place- Life Sciences 7th grade - Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 5th Place Middle School - Plaque, Medallion
- * EnergizeCT Future Sustainability Awards --- Middle School Finalist - Medallion
- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology 7th grade - \$100 & Plaque

Hartford Renzulli Academy Foifon Teawdatwan

5006 It's not a pro, It's a robot?

Student(s) **Gavin Dusel** **Grade 7** **Town** Newington

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- * U.S. Air Force --- Certificate & \$25 gift card from CSEF

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

Kent Kent School Jesse Klingebiel

6003 Flexibility with Flying: Replicable and Attachable Aerial Robot with Multi-Degree-of-Freedom

Student(s) Siyi Lu **Grade** 11 **Town** Kent

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place - High School \$250 / Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$96,000 (\$24,000 per year)

Manchester Manchester High School Ms. Wendy Turek-Hernandez

3008 The Effect of Azospirillum lipoferum on the Microbial Recovery of Corn Soil after a Moderate-Intensity Fire

Student(s) Alexandra Hamza **Grade** 12 **Town** Manchester

- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion

Manchester St. James School Ellen Oei

5005 Power to the Puck

Student(s) Jameson Fisher **Grade** 7 **Town** EAST HARTFORD

- * Lockheed Martin Physical Sciences Awards --- 5th Place - Physical Sciences 7th Grade Individual - Plaque
- * Connecticut College-Physics, Astronomy, & Geophysics Dept. --- Junior Award: Certificate, & teeshirt & \$25 Amazon Card from CSEF
- * Samantha Freeman Award for Excellence in Sports Science or Engineering --- For Excellence in Sports Science or Engineering by a Middle School student, \$100 cash

Middlebury Westover School Sydney Kadiyala

6032 Flexible mechanical worm based on steering gear

Student(s) Xinyi Xie **Grade** 11 **Town** Middlebury

- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Raytheon Corporation Awards --- \$500, Plaque
- * Wisner Memorial Award --- \$ 1000 cash + Silver Bowl (\$2000 cash if a team) High School
- * Jon Chapis Memorial Award --- John Chapis Spirit of Innovation Award - HS \$200

Milford Platt Technical High School Sara Bruno

3519 The Palingenesis Project

Student(s) Ashley Ramos **Grade** 11 **Town** Bridgeport
Bruno Valdivia **Grade** 11 **Town** West Haven
Katelyn Zayas **Grade** 11 **Town** New Haven

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion
- * EnergizeCT Technical High School Science & Technology Awards --- 1st Place- Technical High School, \$500, Plaque
- * GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place Technical High School with \$700 stipend

New Canaan St. Aloysius School Deborah Philips

2016 Are You "Bready" For Some Mold?

Student(s) Maria Victoria Triantafyllos **Grade** 7 **Town** Stamford

- * PepsiCo Life Sciences Awards --- 5rd Place- Life Sciences 7th grade - Plaque
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion

New Haven Engineering and Science University Magnet School Roger Rushworth

1005 Flocculants to Mitigate Harmful Algal Blooms (HABS)

Student(s) Saket Aliminate **Grade** 8 **Town** Milford
Sahithi Aliminate **Grade** 7 **Town** Milford

- * PepsiCo Life Sciences Awards --- 3rd Place- Life Sciences MS Team - Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion

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

New Haven Engineering and Science University Magnet School Roger Rushworth
 [4006] Which Type of Rocket Fln will affect a Rocket's Time, Height, and Distance the Greatest?
Student(s) **Nivriith Ananth Iyer** **Grade 8** **Town** West Haven
Parth Gokhale **Grade 8** **Town** Milford

* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
 * Raytheon Corporation Awards --- \$500, Plaque

New Haven Engineering and Science University Magnet School Roger Rushworth
 [2006] Catalace
Student(s) **Ethan Joseph** **Grade 7** **Town** West Haven

* PepsiCo Life Sciences Awards --- 1st Place- Life Sciences 7th grade - \$200 & Plaque
 * CASE • The Jackson Laboratory Urban School Challenge Awards --- 1st Place Middle School - \$300 and Plaque, Medallion
 * Computer Science Awards --- 2nd Place Middle School - \$200, Plaque
 * Connecticut Academy of Science and Engineering Middle School Urban School Challenge Award --- Urban School Challenge 1st MS - \$250 Cash Award, Invite to attend CASE's Annual Meeting
 * Urban School Challenge 1st Place Middle School Awards --- USC Highest Placing 7th grader- Project Oceanology's Ocean Camp
 * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

New Haven Engineering and Science University Magnet School Roger Rushworth
 [3009] Implementing Nontoxic Modified Magnetic Metal Oxide Nanoparticle Enhanced Biochar Filtration for the Efficient Removal of Emerging Contaminants in an Aqueous Solution
Student(s) **Snigtha Mohanraj** **Grade 9** **Town** Ansonia

* PepsiCo Life Sciences Awards --- 2nd Place- Life Sciences Senior High - \$300 & Plaque
 * CASE • The Jackson Laboratory Urban School Challenge Awards --- 1st Place High School - \$500 and Plaque, Medallion
 * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering --- \$500 to 1st HS Urban School Challenge Science Department for Equipment/Supplies
 * American Meteorological Society --- Certificate & \$25 gift card given by CSEF
 * ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF

New Haven Engineering and Science University Magnet School Roger Rushworth
 [2001] The Effects of Run-off Pollutants on the Harmful Algal Bloom (HAB) model C. Vulgaris
Student(s) **Adithi Variar** **Grade 7** **Town** Wallingford

* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
 * Schoepfer Award for Excellence in Local Aquatic Science --- For excellence in a local water quality study, \$100 cash
 * The Community Foundation for Greater New Haven Ecology, Environmental, and Alternative Energy Research Prize --- Urban Public School Environmental / Energy Award- \$459

New Haven Hopkins School Murali Chiravuri
 [2512] Rapid Screening for Hypertrophic Cardiomyopathy in Athletes
Student(s) **Bodhan Chiravuri** **Grade 8** **Town** Bridgeport

* Pfizer Computational Biology and Bioinformatics Awards --- 2nd Place Middle School - \$200, Plaque
 * Alexion Biotechnology Awards --- 4th Place- Biotechnology 8th grade - Plaque

New Haven Hopkins School Dr. Phillip Stewart
 [6054] Real-Time Motion Tracking System and Data Analytics for Live Insects Using Three-Wheeled Servosphere Robot
Student(s) **Nicholas Lee** **Grade 11** **Town** Trumbull

* Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences Senior High Individual - \$300 & Plaque
 * Computer Science Awards --- Senior High Finalist - Medallion
 * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
 * Yale Science & Engineering Association, Inc. --- 1 Certificate, Medallion and 1- \$25 gift card given by CSEF
 * IEEE, Connecticut Section --- \$100 Honorable Mention

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

Norwich Norwich Technical High School Tiffani Kaminski

3503 Comparing the effects of sugar-beet juice on river microenvironments against traditional ice salt runoff

Student(s) **Damian Diaz** **Grade** 11 **Town** Moosup
Jay Podziewski **Grade** 11 **Town** Montville

* EnergizeCT Technical High School Science & Technology Awards --- 3rd Place- Technical High School , \$200, Plaque

Norwich Norwich Technical High School Tiffani Kaminski

3522 Using Different Compounds to Reduce Hydrophobicity in Soil After a Forest Fire

Student(s) **Janelle Lambert** **Grade** 11 **Town** Scotland
Hailey Ruddock **Grade** 11 **Town** Oakdale

* PepsiCo Life Sciences Awards --- 3rd Place - Life Sciences Senior High Team - Plaque

* EnergizeCT Technical High School Science & Technology Awards --- 2nd Place- Technical High School , \$300, Plaque

Norwich Norwich Technical High School Tiffani Kaminski

3515 Biodegradation of Polystyrene by Bacteria Found in The Gut of Tenebrio Molitor Larvae

Student(s) **Tori Simmons** **Grade** 11 **Town** Norwich
Sara Smith **Grade** 11 **Town** New London

* PepsiCo Life Sciences Awards --- 1st Place- Life Sciences Senior High Team - \$500 (split) & Plaque

* EnergizeCT Technical High School Science & Technology Awards --- Technical High School Finalist - medallion

* University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$96,000 (\$24,000 per year)

* University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$96,000 (\$24,000 per year)

Pawcatuck St. Michael School Anna-Helene Grossomanides

2012 American Juvenile Horseshoe Crab Aquaculture

Student(s) **Gianna Giovanelli** **Grade** 7 **Town** Westerly

* PepsiCo Life Sciences Awards --- 3rd Place- Life Sciences 7th grade - \$100 & Plaque

* Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion

* Alexion Biotechnology Awards --- 5th Place- Biotechnology 7th grade - Plaque

* Ricoh Americas Corporation --- Certificate, \$25 gift card given by CSEF

* Southeastern New England Marine Educators (SENEME) --- \$100 award and membership in SENEME - 1st Place Junior & T-Shirt

* Project Oceanology --- Individual - 1 Ocean Camp slot + T-Shirt & cap, First Place Junior

Pawcatuck St. Michael School Anna-Helene Grossomanides

5008 Underground Life

Student(s) **Owen Nicholas** **Grade** 7 **Town** Pawcatuck

* Lockheed Martin Physical Sciences Awards --- 4th Place - Physical Sciences 7th Grade Ind. - Plaque

* EnergizeCT Alternative/Renewable Energy Awards --- 2nd Place Middle School - \$200 and Plaque

Redding CT STEM Foundation Cathrine Piscitelli

3041 Determining Position Preference of Different Species of Insect Galls in Relation to Each Other on the Solidago altissima

Student(s) **Sophia Liu** **Grade** 11 **Town** Orange

* Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion

Redding CT STEM Foundation Catherine Piscitelli

6025 Developing a Graphical User Interface to Organize Ecommerce Product Attributes

Student(s) **Haoyue Yang** **Grade** 11 **Town** Woodbridge

* Computer Science Awards --- Senior High Finalist - Medallion

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

Ridgefield Ridgefield High School Aine Kapell

3106 Assessing the efficacy of botanical repellents against blacklegged ticks

Student(s) Ava Anderson **Grade** 11 **Town** Ridgefield

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Science or Mathematics \$30,000 (\$7,500 per year)

Ridgefield Ridgefield High School Patrick Hughes

6056 A Wavelet-based Method for Generalizing Molecular Latent Spaces for Assisted Traversal

Student(s) Ian Murdock **Grade** 12 **Town** Ridgefield

- * Mathematics Awards --- 3rd Place High School - \$200 and Plaque
- * Connecticut Association of Physics Teachers --- \$100 Senior project

Ridgefield Ridgefield High School Ryan Gleason

6069 Short-Term Biodegradation Analysis of Greener Alternatives to Plexiglass Pilot Study

Student(s) Evia Rodriguez **Grade** 12 **Town** Ridgefield

- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion

Shelton Shelton Intermediate School Erica Napoli

4007 Sheets that Dry, Which one is Fly?

Student(s) Sailor Martin **Grade** 8 **Town** Shelton

Quinn Wherley **Grade** 8 **Town** Shelton CT

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Jr Team - CSF Medallion

Shelton Shelton Intermediate School Erica Napoli

2504 The Power of Teeth Whitening

Student(s) Reese Vartelas **Grade** 8 **Town** Shelton

- * PepsiCo Life Sciences Awards --- 3rd Place- Life Sciences 8th grade - \$100 & Plaque

Stamford Bi-Cultural Hebrew Academy Christopher Graseck

1009 Best Plants For Short Term Growth

Student(s) Elliot Nerenberg **Grade** 7 **Town** Stamford

Sheldon Heyman **Grade** 7 **Town** Westport

- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion

Stamford Bi-Cultural Hebrew Academy Mr. Graseck

2014 How Do Small Amounts of Sodium Chloride Affect the Growth of Brassica Rapa (Mustard Plants)

Student(s) Joshua Schwartz **Grade** 7 **Town** Stamford

- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion
- * U.S. Agency for International Development (USAID) --- Certificate and \$25 gift card given by CSEF

Stamford King School Victoria Schulman

3096 Drosophila melanogaster locomotion, myonuclei size, and myonuclei position are affected by differential gene expression

Student(s) Giovanna Armetta **Grade** 12 **Town** Stamford

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

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

Stamford King School Victoria Schulman

3032 A Convolutional Neural Network for Real-Time Tick Classification and Disease Risk Analysis

Student(s) Antonia Kolb **Grade** 10 **Town** New Canaan

- * Pfizer Computational Biology and Bioinformatics Awards --- 1st Place High School - \$400, Plaque
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2

Stamford King School Victoria Schulman

6028 Electrochromism paired with Finite Difference Time Domain Modeling allows for the Successful Prediction of Color Change Achieved by Electrochromic Reactions

Student(s) Gouri Krishnan **Grade** 11 **Town** Darien

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * MIT Club of Hartford K-12 Initiative
- C/O Leon Kaatz; 111 Oak Street; Hartford, CT 06106 --- For excellence in science & technology of energy related research, high school, \$100 cash award
- * Frank J. Link Family Award for Energy Related Research --- Frank J. Link Award for Energy Related Research - \$50

Stamford King School Victoria Schulman

3038 The use of Prime Editing to Induce and Correct the CFTR-F508del mutation in iPSCs.

Student(s) Benjamin Persily **Grade** 11 **Town** Scarsdale

- * PepsiCo Life Sciences Awards --- 4th Place- Life Sciences Senior High - Plaque
- * Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF

Stamford King School Victoria Schulman

3071 The essential 23S rRNA methyltransferase rv3579c confers intrinsic macrolide resistance in Mycobacterium tuberculosis

Student(s) Yuriy Sandmeier **Grade** 11 **Town** New Rochelle

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

Suffield Suffield Academy Suika Liu

6014 On the Casas-Alvero's Conjecture

Student(s) Jiaxuan Su **Grade** 10 **Town** Shanghai

- * Mathematics Awards --- High School Finalist - Medallion
- * Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF

Trumbull Christian Heritage School Dr. Daniel Code

5516 Are LED's affected by heat?

Student(s) Alessandro Ochoa **Grade** 8 **Town** Wilton

- * EnergizeCT Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion
- * EnergizeCT Future Sustainability Awards --- Middle School Finalist - Medallion

Trumbull Christian Heritage School Mr Daniel Cote

5508 The Luboni

Student(s) Lucille Presbrey **Grade** 8 **Town** Ridgefield

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- * EnergizeCT Alternative/Renewable Energy Awards --- 1st Place Middle School - \$300 and Plaque
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * Robotics And Beyond --- Middle School- For excellence in engineering design; \$200 toward Robotics And Beyond STEM and Design summer camp, \$50 cash if cannot attend camp. Certificate.

Trumbull Christian Heritage School Dr. Dan Cote

5506 Building an Electric Skateboard

Student(s) Elijah Teixeira **Grade** 8 **Town** Bridgeport

- * EnergizeCT Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 and Plaque

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

Wallingford Choate Rosemary Hall Murali Chiravuri

3117 Development of a Home N-Terminal Pro-Brain Natriuretic Peptide Assay for the Diagnosis of Congestive Heart Failure.

Student(s) Maya Chiravuri **Grade** 11 **Town** Bridgeport

- * PepsiCo Life Sciences Awards --- 3rd Place- Life Sciences Senior High - \$200 & Plaque
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High - \$500 & Plaque
- * Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF

Wallingford Choate Rosemary Hall Dr. Chris Hogue

6049 JARVITS: A Novel Deep Learning IoT Traffic Control System for Real-time Detection and Signal Optimization

Student(s) Ryan Kim **Grade** 11 **Town** New Haven

- * Computer Science Awards --- 3rd Place High School- \$200, Plaque
- * Collins Aerospace Engineering Awards --- 3rd Place- Engineering Senior High- \$200 & Plaque
- * Raytheon Corporation Awards --- \$500, Plaque
- * Quinnipiac University Scholarships --- \$30,000, 4 year scholarship (\$7,500 per year) to Quinnipiac University for HS Student

Wallingford Choate Rosemary Hall Jan Cook

6011 Application of Soft Robots in Building Collapse Rescues

Student(s) Ann Song **Grade** 9 **Town** Farmington

- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * American Society of Safety Professionals, CT Valley Chapter --- \$200 grade 9-12 project
- * IEEE, Connecticut Section --- \$100 Honorable Mention

Wallingford Choate Rosemary Hall Xin Wang

3101 A clinicogenomic prediction model for the early diagnosis of lung cancer

Student(s) Isabella Wu **Grade** 10 **Town** Stony Brook

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Computer Science Awards --- 2nd Place High School - \$300, Plaque
- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

Westport Greens Farms Academy Mathieu Freeman

3005 The Effects of Green Tea on β -Amyloid-Induced Alzheimer's Disease in *Lymnaea Stagnalis*

Student(s) Avery Woodworth **Grade** 12 **Town** Fairfield

- * Petit Family Foundation Women in Science & Engineering Awards --- 1st Place - High School \$500 / Plaque

Westport Staples High School Amy Parent

3110 Alzheimer's Disease Identification with Machine Learning Based on Wavelet Transform

Student(s) Aalok Bhattacharya **Grade** 11 **Town** Westport

- * PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion

Westport Staples High School Nick Morgan

6016 Finding Gravitationally Lensed Quasar Systems by using a Polar Shapelet Decomposition Approach

Student(s) Ishan Prasad **Grade** 12 **Town** Westport

- * Computer Science Awards --- Senior High Finalist - Medallion
- * Astronomical Society of Greater Hartford - The Charles Hammond Award for Excellence in Astronomy --- Senior Project-\$150, subscription to Sky and Telescope, ASGH membership and meeting invitation
- * University of Connecticut - Early College Experience --- UCONN Early College Experience Program: Frontiers in Science - Co-Op \$100 Gift Certificate
- * Arthur & Ruth Mensing Award --- Mensing Award Excellence in the Physical Sciences - \$500

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

Wilton Middlebrook School Kendra Norman

4003 School Bus Approach Alert System

Student(s) **Leonardo Kulon** **Grade 7** **Town** Wilton
Sanaka Dash **Grade 7** **Town** Wilton

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences MS Team- \$100 each & Plaque
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * Raytheon Corporation Awards --- \$500, Plaque
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Wilton Middlebrook School Deborah Mallozzi

4009 Illusion v. Reality

Student(s) **Arista Sullivan** **Grade 8** **Town** Wilton
Meredith Sullivan **Grade 8** **Town** Wilton

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Jr Team - CSF Medallion

Wilton Middlebrook School Carol Festa

1012 A novel way to solve coral bleaching

Student(s) **Preethi Vijay** **Grade 8** **Town** Wilton
Trisha Prabhu **Grade 8** **Town** Wilton

- * PepsiCo Life Sciences Awards --- 2nd Place- Life Sciences MS Team - \$100 each & Plaque
- * J.A. Augustine Award --- \$100 for excellence in biology
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

Windsor Academy of Aerospace & Engineering Michelle Bellinger

6504 Beyond Sunshine: Robotic Optimization for Maximum Efficiency of Solar Energy Production

Student(s) **Aiden Christy** **Grade 12** **Town** Glastonbury
Neel Vachhani **Grade 11** **Town** South Windsor

- * EnergizeCT Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- * EnergizeCT Future Sustainability Awards --- High School Finalist - Medallion

Windsor Academy of Aerospace & Engineering Dr. Michelle Bellinger

6502 The Effect Of Altering The Material Composition in Ultra High-Performance Concrete (UHPC) With Regional Materials On Compressive Strength

Student(s) **Justin Ho** **Grade 11** **Town** Suffield
Nathan Magold **Grade 11** **Town** Southington

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Team- \$500 (split) & Plaque
- * ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF

Windsor Academy of Aerospace & Engineering Dr. Michelle Bellinger

6505 Piezoelectric Wind Harvesting Electrical Energy Conversion

Student(s) **Dylan Pueschel** **Grade 12** **Town** Hebron
John Watrous **Grade 12** **Town** Hartford

- * Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences Senior High Team- \$300(split) & Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 4th Place High School - Plaque, Medallion
- * EnergizeCT Future Sustainability Awards --- 1st Place High School - \$500 and Plaque
- * Raytheon Corporation Awards --- \$500, Plaque
- * GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place HS Future Sustainability with \$700 stipend

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

Windsor Academy of Aerospace & Engineering Michelle Bellinger

3514 Computational Hydroponics

Student(s) **Zahrion Watson** **Grade 11** **Town** bloomfield
Vanessa Weir **Grade 11** **Town** Hartford
Khaley-shai Wyndham **Grade 11** **Town** windsor

* CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion

Windsor The Loomis Chaffee School Koby Osei-Mensah

3068 Computational Psychiatry: Application of Machine Learning Methods to Analyze Marijuana Addictions and Craving

Student(s) **Sean Lee** **Grade 12** **Town** Los Altos

* PepsiCo Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
* Pfizer Computational Biology and Bioinformatics Awards --- Senior High Finalist - Medallion

Windsor The Loomis Chaffee School Koby Osei-Mensah

6021 NeRF-UAV: Inexpensive 3-D Colored Video Reconstruction Using RGB Camera Equipped Drone Swarms and Neural Radiance Fields

Student(s) **Eric Sun** **Grade 11** **Town** Flushing

* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
* Computer Science Awards --- Senior High Finalist - Medallion

Windsor The Loomis Chaffee School Koby Osei-Mensah

6079 Introduction to Surreal Numbers: Exploring Real, Infinite and Infinitesimal Values and Their Hackenbush Games

Student(s) **Yat Him Cyrus Wong** **Grade 12** **Town** Hong Kong

* Mathematics Awards --- High School Finalist - Medallion
* Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF

Woodbridge Amity Regional High School Catherine Piscitelli

6090 The Optimization of a Ground Collision Avoidance System and Application to Inhibit Controlled Flight Into Terrain Accidents For Single Engine Aircraft

Student(s) **Mason Beaudette** **Grade 12** **Town** Orange

* Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
* Computer Science Awards --- Senior High Finalist - Medallion
* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR
* American Institute of Aeronautics & Astronautics - Connecticut Section --- \$200 award, certificate

Woodbridge Amity Regional High School Catherine Piscitelli

6031 Theoretical Modelling and Parameterization of a Novel-Actuator-Based Transtibial Pediatric Prosthetic

Student(s) **Aditi Bhattamishra** **Grade 10** **Town** Orange

* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
* Stanley Black & Decker Applied Technology Awards --- 1st Place High School - \$500 and Plaque, Medallion
* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
* IEEE, Connecticut Section --- \$250 Honors Award -Senior
* Wisner Chairman's Award --- \$500 cash & Plaque HS
* Otero Family Award --- The Otero Family Award; \$250 cash

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

Woodbridge Amity Regional High School Catherine Piscitelli

6021 Creating a Frequency-Emitting Program to Enhance Mosquito Capture and Surveillance Efforts in Response to the Spread of Mosquito-Borne Diseases

Student(s) Daniel Liu **Grade** 11 **Town** Woodbridge

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Science or Mathematics \$30,000 (\$7,500 per year)
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2

Woodbridge Amity Regional High School Catherine Piscitelli

6058 The Manufacture and Expanded Function of a Locking Container to Eliminate the Distraction of Phones While Driving

Student(s) Scott Lowder **Grade** 12 **Town** Orange

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR

Woodbridge Amity Regional High School Catherine Piscitelli

6013 Optimizing a Portable Vertical Axis Wind Turbine with Improved Construction Methods and Testing of Various Airfoils

Student(s) Brodey Lu **Grade** 12 **Town** Orange

- * EnergizeCT Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 and Plaque
- * EnergizeCT Future Sustainability Awards --- High School Finalist - Medallion
- * Raytheon Corporation Awards --- \$500, Plaque

Woodbridge Amity Regional High School Catherine Piscitelli

3520 Development of an Autonomous WatchOS Application that uses HRV and Vibrational Pulses to Reduce Stress

Student(s) Sheehan Munim **Grade** 11 **Town** Orange

Allen Liu **Grade** 11 **Town** Woodbridge

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion

Woodbridge Amity Regional High School Catherine Piscitelli

6015 Creating a Systematic ESG (Environmental Social Governance) Scoring System using Social Network Analysis and Machine Learning to Influence Company Practices to be More Sustainable

Student(s) Aarav Patel **Grade** 10 **Town** Orange

- * Stanley Black & Decker Applied Technology Awards --- 3rd Place High School - \$ 200 and Plaque, Medallion
- * Kathleen & David Smith Awards --- Kathleen & David Smith Award for Innovative Concept - \$100

Woodbridge Amity Regional High School Catherine Piscitelli

6081 Developing a Machine Learning Algorithm to Accurately Predict Geomagnetic Storms

Student(s) Iris Yan **Grade** 10 **Town** Woodbridge

- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF
- * Westinghouse Electric Company/New England Chapter of North American Young Generation in Nuclear --- 1st place, Excellence in Energy Research, \$100 cash award

Woodbridge Amity Regional High School Catherine Piscitelli

6066 Using an Artificial Neural Network Modelled After the Human Neocortex to Gain a Better Understanding of How the Neocortex Creates New Ideas

Student(s) Annika Yun **Grade** 10 **Town** Orange

- * Pfizer Computational Biology and Bioinformatics Awards --- Senior High Finalist - Medallion
- * Computer Science Awards --- Senior High Finalist - Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion