



# Conn. Science & Engineering Fair

## Quinnipiac University

### March 9 - 14, 2020

*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:

- Fair Category
- Finalist standing in regular fair (1st, 2nd, etc)
- Project number

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

## Life Sciences - High School Individual

**West Haven** Engineering and Science University Magnet School Roger Rushworth

3125 Comparative Analysis of the Mitigation and Emissions Rates of Volatile-Organic Compounds in Various Ornamental Plants Using a Monitored Environment

**Student(s)** Patricia Joseph **Grade** 10 **Town** Hamden

- \* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences 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

**Westport** Greens Farms Academy Mathieu Freeman

3036 Impacts of Blue Light on the Eye Structure and Brain Activity of Drosophila Melanogaster

**Student(s)** Ava Ewing **Grade** 12 **Town** Darien

- \* PepsiCo / Pfizer Life Sciences Awards --- 2nd Place- Life Sciences Senior High- \$300 & Plaque
- \* American Psychological Association --- Certificate, \$25 gift card given by CSEF
- \* Kathleen & David Smith Awards --- Kathleen & David Smith Award for Laser Application - \$100

**Glastonbury** Glastonbury High School Diane Pintavalle

3014 Understanding the antimicrobial properties of type 2 Abeacin

**Student(s)** Andrei Radulescu **Grade** 12 **Town** Glastonbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 3rd Place- Life Sciences Senior High- \$200 & Plaque

**Greenwich** Greenwich High School Andrew Bramante

3127 Discovery of a Novel Therapeutic Vulnerability in Pancreatic Ductal Adenocarcinoma via an Unbiased High-Throughput Drug Screen

**Student(s)** Melissa Woo **Grade** 12 **Town** Riverside

- \* PepsiCo / Pfizer Life Sciences Awards --- 4th Place- Life Sciences Senior High- Plaque

**Greenwich** Greenwich High School Mr. Andrew Bramante

3120 Design of a Lateral-Flow, Species-specific Rapid Diagnostic Test for Malaria

**Student(s)** John Trudeau **Grade** 10 **Town** Greenwich

- \* PepsiCo / Pfizer Life Sciences Awards --- 5th Place- Life Sciences Senior High- Plaque
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- \* Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- plaque

**Greenwich** Greenwich High School Bramante

3018 Non-Invasive Augmentation of Modern Depression Phototherapy through Targeting

**Student(s)** Charlie Decker **Grade** 11 **Town** Old Greenwich

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* Otero Family Award --- The Otero Family Award; \$200 cash
- \* University of Connecticut Academic Excellence Scholarship --- Academic Excellence Life Sciences scholarship - \$7,500/year, four academic years- (\$30,000 total)

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

**Greenwich** Greenwich High School Andrew Bramante

3020 Metal Oxide Nanoparticle Suppression of Coffee Rust Using a Alternaria, Stomata-

**Student(s)** **Edgar Sosa** **Grade** 11 **Town** Greenwich

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Environmental Sciences Awards with CACIWC --- 3rd Place HS- \$100, Plaque
- \* Future Sustainability Awards --- 1st Place High School - Plaque & \$800 Stipend to Compete at GENIUS Olympiad
- \* Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF
- \* University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Science or Mathematics \$27,000
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place HS Future Sustainability

**Greenwich** Greenwich High School Andrew Bramante

3024 Plant Growth Enhancement & Fungal Disease Suppression via Copper and Zinc Nanoparticle Foliar Sprays

**Student(s)** **Alexander Patti** **Grade** 11 **Town** Bedford Hills

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

**Windsor** Academy of Aerospace and Engineering Dr. Aramli

3026 The effect of grafting on the sugar content of cherry tomatoes.

**Student(s)** **Kayla Flint** **Grade** 11 **Town** Ellington

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

**Stamford** King School Victoria Schulman

3041 Classifying Subtypes of Renal Cell Carcinoma

**Student(s)** **Ryan Heaton** **Grade** 11 **Town** Pound Ridge

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

**Woodbridge** Amity Regional High School Catherine Piscitelli

3070 Analyzing the Role of Sonic Hedgehog Signaling in Germinal Center B-Cell Differentiation

**Student(s)** **Wendy Zhang** **Grade** 11 **Town** Woodbridge

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF
- \* University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Science or Mathematics \$27,000

**Greenwich** Brunswick School Dana Montanez

3076 Predicting Droughts from Satellite Images using Novel Convolutional Neural Network Techniques

**Student(s)** **Ali Hindy** **Grade** 11 **Town** Greenwich

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* American Meteorological Society --- Certificate & \$25 gift card given by CSEF

**Greenwich** Greenwich High School Andrew Bramante

3094 Carbon Nanowire Lab-on-Chip as a Rapid, Inexpensive, Lyme Disease Detection System

**Student(s)** **Sofia Pronina** **Grade** 11 **Town** Greenwich

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Applied Technology Awards --- Senior High Finalist - Medallion
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion
- \* Biophysical Society --- Biophysics Award- \$100

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

**Greenwich** Greenwich High School Andrew Bramante

3103 Improved Design and Field Verification of Varroa destructor Control with a Dual-function, Thymol-

**Student(s)** Raina Jain **Grade** 12 **Town** Riverside

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Environmental Sciences Awards with CACIWC --- 1st Place HS- Plaque & \$800 Stipend to Compete at GENIUS Olympiad
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- \* MTU Aero Engines North America, Inc. --- MTU Aero Engines Mechanical Engineering Innovative Concept Award - \$100
- \* Jon Chapitis Memorial Award --- John Chapitis Spirit of Innovation Award - HS \$200
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place HS Environmental Project

### Life Sciences - High School Teams

**Farmington** Farmington High School Xiaodi Wang

3517 Wavelet-Based Machine Learning Algorithms to Enhance Cardiovascular Disease Diagnosis

**Student(s)** Veronica Pegkou Christofi **Grade** 12 **Town** Farmington

Rafaela Kottou **Grade** 12 **Town** Farmington

- \* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High Team- \$500 (split) & Plaque
- \* Mathematics Awards - with ATOMIC --- 3rd Place High School - Plaque, \$200 from People's United Bank

**Norwich** Norwich Technical High School Aleatha Pelloni

3525 The Effects of Biochar on Plant Growth in a Large Scale Setting

**Student(s)** Max DeWolf **Grade** 11 **Town** Canterbury

Owen Blanchard **Grade** 11 **Town** Scotland

- \* PepsiCo / Pfizer Life Sciences Awards --- 2nd Place- Life Sciences Senior High Team- \$300 (split) & Plaque
- \* Technical High School Science & Technology Awards --- 2nd Place- Technical High School , \$300, Plaque

**Greenwich** Sacred Heart Greenwich Mary Musolino

3533 Using Nile Red Dye to test for the Presence of Microplastics in Bottled Water

**Student(s)** Julia Welsh **Grade** 12 **Town** Greenwich

Erin O'Connor **Grade** 12 **Town** Greenwich

Renata Trevino **Grade** 12 **Town** Stamford

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

**Greenwich** Sacred Heart Greenwich Mary Musolino

3503 Using Microbiome Analysis to Determine the Effectiveness of a Unique Ceramic Water Filter

**Student(s)** Avery McCloskey **Grade** 12 **Town** Bronxville

Kellie Ulmer **Grade** 12 **Town** Rye

Gabriella DiBiase **Grade** 12 **Town** Greenwich

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion
- \* Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition

**West Haven** Engineering and Science University Magnet School Roger Rushworth

3506 Biomarker model for cancer: Novel approach to correlate the ratio of reduced and oxidized glutathione, and immune cells

**Student(s)** Ray Nassar **Grade** 9 **Town** Milford

Praneeth Chitralia **Grade** 9 **Town** Milford

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

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

**Greenwich** Sacred Heart Greenwich Mary Musolino

3515 The Effect of Construction on the Quality of Water in the Mianus River

**Student(s)** **Isabella Rogers** **Grade** 12 **Town** Cos Cob

**Cameron Calcano** **Grade** 12 **Town** Greenwich

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

**Norwich** Norwich Technical High School Aleatha Pelloni

3520 The Effects of Alternating Red Wiggler Worms Gut Microbes to Degrade Lignin in Plants for Biofuels

**Student(s)** **Jessie Adams** **Grade** 11 **Town** Killingly

**Ontasia Perry** **Grade** 11 **Town** Norwich

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

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

\* The Goodwin-Niering Center for the Environment --- \$100 for "Excellence in Environmental Conservation Studies"

**Norwich** Norwich Technical High School Aleatha Pelloni

3534 The Effects of Dextrose on Drosophila melanogaster with fragile x

**Student(s)** **Olivia Corrente** **Grade** 11 **Town** Plainfield

**Kevin Clark** **Grade** 11 **Town** Voluntown

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

### Life Sciences - Middle School 7th Grade

**West Haven** Engineering and Science University Magnet School Roger Rushworth

2007 Effectiveness of the Organic Polymers for Removing Microplastic in an Aqueous Solution

**Student(s)** **Snigtha Mohanraj** **Grade** 7 **Town** Ansonia

\* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences 7th grade- \$200 & trophy and Invitation to Compete Broadcom MASTERS

\* CASE • The Jackson Laboratory Urban School Challenge Awards with IBM --- 1st Place Middle School - \$300 and Trophy, Medallion

\* Environmental Sciences Awards with CACIWC --- 1st Place MS - \$300, Trophy

\* 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

\* Alexion Biotechnology Awards --- 1st Place- Biotechnology 7th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS

\* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF

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

\* Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to Awards Night Dinner with guest

\* J.A. Augustine Award --- \$100 for excellence in biology

\* Urban School Challenge 1st Place Middle School Awards --- USC Highest Placing 7th grader- Project Oceanology's Ocean Camp

\* TurnKey Compliance Solutions Environmental Awards --- \$200 Cash Award Middle School- For excellence in environmental sciences

\* Broadcom MASTERS --- The Lemelson Early Inventor Prize

**Greenwich** Greenwich Academy Kristin Gannon

2018 The Effects of Fertilizers on the Diversity and Density of Soil Microbes

**Student(s)** **Ruby Montanez** **Grade** 7 **Town** Greenwich

\* PepsiCo / Pfizer Life Sciences Awards --- 2nd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS

\* Environmental Sciences Awards with CACIWC --- 3rd Place MS- \$100, Trophy

\* Alexion Biotechnology Awards --- 4th Place- Biotechnology 7th grade- trophy and Invitation Compete in Broadcom MASTERS

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

**Danbury** Saint Joseph School Jennifer Reilly

2014 Beverage Stains on Teeth

**Student(s)** Charles Doran **Grade 7** **Town** Danbury

\* PepsiCo / Pfizer Life Sciences Awards --- 3rd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS

**New Haven** Celentano Magnet School Ashley Mulligan

2026 Correlation Between Fertilizer Use and Grass Growth

**Student(s)** Nurializ Torres **Grade 7** **Town** New Haven

\* PepsiCo / Pfizer Life Sciences Awards --- 4th Place- Life Sciences 7th grade- trophy and Invitation Compete in Broadcom MASTERS

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

**Pawcatuck** St. Michael School Mrs. Anna-Helene Grossomanides

2029 Showdown of the Sugars: The Effect of Sugar Substitutes on Yeast Growth

**Student(s)** Emerson Baltrukonis **Grade 7** **Town** Pawcatuck

\* PepsiCo / Pfizer Life Sciences Awards --- 5rd Place- Life Sciences 7th grade- trophy

\* Sister Mary Christine Life Sciences Award --- \$100 for excellence in the life sciences by a catholic middle school project

**Bridgeport** Multicultural Magnet School Mrs. Corina Starn

2006 HUMIDITY IMPACT

**Student(s)** Sofia Atehortua **Grade 7** **Town** Bridgeport

\* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Sciences 7th grade - CSF Medallion

\* American Meteorological Society --- Certificate & \$25 gift card given by CSEF

**Hartford** Environmental Sciences Magnet School Mrs Hays

2012 Now You Sea It

**Student(s)** Isabella D'Agostino **Grade 7** **Town** New Britain

\* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Sciences 7th grade - CSF Medallion

\* American Meteorological Society --- Certificate & \$25 gift card given by CSEF

\* Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF

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

\* Schoepfer Award for Excellence in Local Aquatic Science --- For excellence in a local water quality study, \$100 cash

**Forestville** St. Matthew School Miss Persichetti

2024 Does age affect memory?

**Student(s)** Victoria Matkowski **Grade 7** **Town** Bristol

\* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Sciences 7th grade - CSF Medallion

### Life Sciences - Middle School 8th Grade

**Canton** Canton Middle School Ashley LaPane

2501 Concentration of Microplastics in Four Farmington River Locations

**Student(s)** Lauren Marze **Grade 8** **Town** Canton

\* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences 8th grade- \$300 & trophy and Invite to Compete Broadcom MASTERS

\* Environmental Sciences Awards with CACIWC --- 2nd Place MS- \$200, Trophy

\* Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Life Sciences 8th Grade - \$500 and invite to CSTA Award Banquet

\* Talcott Mountain Science Center & Academy --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Phys Science

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

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

**Danbury** Westside Middle School Academy Jonathan Neuhausel

2515 The Effect of Habitat Loss on a Cockroaches Stress and Well Being

**Student(s)** **Kaitlyn Salvatore** **Grade 8** **Town** Danbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 2nd Place- Life Sciences 8th grade- \$200 & trophy and Invite to Compete Broadcom MASTERS
- \* Petit Family Foundation Women in Science & Engineering Awards --- 1st Place- Middle School \$300 / trophy
- \* CASE • The Jackson Laboratory Urban School Challenge Awards with IBM --- 3rd Place Middle School - \$100 and Trophy, Medallion
- \* Alexion Biotechnology Awards --- 1st Place- Biotechnology 8th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS

**Danbury** Westside Middle School Academy Jonathan Neuhausel

2527 Kombucha SCOBY Infused Hydrogels as a Natural Bandaid Stopping the Growth of Escherichia coli

**Student(s)** **Ella Brown** **Grade 8** **Town** Danbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 3rd Place- Life Sciences 8th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
- \* CASE • The Jackson Laboratory Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion
- \* Alexion Biotechnology Awards --- 2nd Place- Biotechnology 8th grade- \$200 & trophy and Invitation Compete in Broadcom MASTERS
- \* Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School Life Sciences

**Danbury** Westside Middle School Academy Jonathan Neuhausel

2502 Tumor Suppression of Agrobacterium tumefaciens in Daucus carota

**Student(s)** **Maria Eduarda Sousa** **Grade 8** **Town** Danbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 4th Place- Life Sciences 8th grade- trophy and Invitation Compete in Broadcom MASTERS
- \* CASE • The Jackson Laboratory Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion
- \* Alexion Biotechnology Awards --- 5th Place- Biotechnology 8th grade- trophy

**Washington** Rumsey Hall Liz Butler

2512 A Heart Rate Monitor to Predict Autistic Meltdowns

**Student(s)** **Junting Wang** **Grade 8** **Town** Washingtín Depot

- \* PepsiCo / Pfizer Life Sciences Awards --- 5th Place- Life Sciences 8th grade- trophy
- \* Computer Science Awards --- 3rd Place Middle School- \$100, Trophy
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- \* 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.

**Danbury** Westside Middle School Academy Jonathan Neuhausel

2510 Testing Escherichia coli's Resistance to Different Dilutions of Bacteriophage Coliphage T4 and Coliphage T4R

**Student(s)** **Sabrina Serpa-Smith** **Grade 8** **Town** danbury

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion

### Life Sciences - Middle School Teams

**Wilton** Middlebrook Middle School Ms. Garcia

1014 Effects of Fertilizer on Algae Growth

**Student(s)** **Illeas Paschalidis** **Grade 8** **Town** Wilton

**Shawn Gregory** **Grade 8** **Town** Wilton

- \* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences MS Team- \$100 each & trophy and Invite to Compete Broadcom MASTERS
- \* Alexion Biotechnology Awards --- 4th Place- Biotechnology 8th grade- trophy and Invitation Compete in Broadcom MASTERS

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

**Enfield** Chiaravale Academy Timothy Coleman

1005 Using Charcoal as a Fertilizer Supplement

<b>Student(s)</b>	<b>Joella Asapokhai</b>	<b>Grade 7</b>	<b>Town</b> South Windsor
	<b>Alexandria Croal</b>	<b>Grade 7</b>	<b>Town</b> Enfield
	<b>Jordan Roy</b>	<b>Grade 7</b>	<b>Town</b> Enfield

- \* PepsiCo / Pfizer Life Sciences Awards --- 2nd Place- Life Sciences MS Team- \$100 each & trophy and Invite Compete Broadcom MASTERS
- \* Ricoh Americas Corporation --- Certificate, \$25 gift card given by CSEF

**Meriden** Thomas Edison Middle School Caitlin Lombardi

1001 Sliding Soil

<b>Student(s)</b>	<b>Jacie Carrero</b>	<b>Grade 7</b>	<b>Town</b> Meriden
	<b>Faith Rose</b>	<b>Grade 7</b>	<b>Town</b> Waterbury
	<b>Grace Rose</b>	<b>Grade 7</b>	<b>Town</b> Waterbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 3rd Place- Life Sciences MS Team- trophy and Invite to Compete Broadcom MASTERS

**West Haven** Engineering and Science University Magnet School Roger Rush worth

1020 How different genres of Music affect focus and memory.

<b>Student(s)</b>	<b>Henry Rugemer</b>	<b>Grade 8</b>	<b>Town</b> New Haven
	<b>jack jessen</b>	<b>Grade 8</b>	<b>Town</b> New haven

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

### Physical Sciences - High School Individual

**Woodbridge** Amity Regional High School Catherine Piscitelli

6036 Using an Automated Coating System to Optimize Nitric Oxide Release Patterns of Antibacterial Catheters

<b>Student(s)</b>	<b>Abigail Slanski</b>	<b>Grade 12</b>	<b>Town</b> Woodbridge
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- \* Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & 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

**Greenwich** Greenwich High School Andrew Bramante

6035 Enhancement of a Flow-Through, Solar Water Disinfection System using Combined UV/Riboflavin Photocatalytic Treatment

<b>Student(s)</b>	<b>Colin Speaker</b>	<b>Grade 11</b>	<b>Town</b> Greenwich
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- \* Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Individual - \$300 & Plaque

**Greenwich** Greenwich High School Andrew Bramante

6091 Incorporation of TiO<sub>2</sub>-Ag Nanostructures into LDPE Bags, to Create an Antifungal Plastic Wrap to Reduce Food Waste

<b>Student(s)</b>	<b>Alexandra Mark</b>	<b>Grade 12</b>	<b>Town</b> Greenwich
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- \* Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences Senior High Individual - \$200 & Plaque
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion

**Greenwich** Greenwich High School Andrew Bramante

6072 Creation of a CO<sub>2</sub>-free Energy via a Solar-Powered Cu<sub>2</sub>O Nanowire Microbial - Algae Photosynthetic Bioreactor

<b>Student(s)</b>	<b>Madeline Minichetti</b>	<b>Grade 9</b>	<b>Town</b> Greenwich
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- \* Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences Senior High Individual - Plaque
- \* United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- \* Constellation, an Exelon Company --- 1st: \$150.00 Cash - Grade 9 - 12: For Excellence in clean renewable / sustainable energy
- \* MIT Club of Hartford K-12 Initiative --- For excellence in science & technology of energy related research, high school, \$75 cash award

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

**Stamford** King School Victoria Schulman

6001 Temperature Dependence of the Electrochemical Conversion of Methane to Methanol

**Student(s)** Samuel Hillenmeyer **Grade** 11 **Town** Stamford

\* Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences Senior High Individual - Plaque

**Danbury** Immaculate High School Daniel Baluha

6013 Effective Removal of Systemic Pesticides from Fresh Fruits

**Student(s)** Elias Haddad **Grade** 11 **Town** Danbury

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

\* University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Engineering, or Technology, \$27,000

**Hamden** Sacred Heart Academy Dr. Sibani Sengupta

6018 Oil Spill Management Using Plant Products

**Student(s)** Mehr Chhatre **Grade** 10 **Town** Hamden

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

**Greenwich** Greenwich High School Andrew Bramante

6059 Scale-up of Water-Splitting Hydrogen Production Using Piezo-Electrochemical Nanostructures and Ambient Processes

**Student(s)** Zachary Mester **Grade** 12 **Town** Cos Cob

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

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

\* United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report

\* MTU Aero Engines North America, Inc. --- MTU Aero Engines Mechanical Engineering Applied Principles Award - \$100

**Greenwich** Greenwich High School Andrew Bramante

6066 Development of a Superhydrophobic Coating for Vehicular Surfaces to Promote Spontaneous Water Droplet Trampolining, Repulsion, and Reduced Icing Tendencies at Normal Pressures

**Student(s)** Chiara Rissola **Grade** 11 **Town** Old Greenwich

\* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF 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 certificate given by ONR

**Darien** Darien High School Christine Leventhal

6083 Minimally invasive pancreatoduodenectomy versus open pancreatoduodenectomy in the current era: systematic review and meta-analysis of available literature

**Student(s)** Ethan Zhang **Grade** 11 **Town** Darien

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

### Physical Sciences - High School Teams

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

6517 Cyber Attack Identification in the Electric Power Grid by Anomaly Detection

**Student(s)** Trevor Brunette **Grade** 12 **Town** Glastonbury

Christopher Reed **Grade** 12 **Town** Enfield

\* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences Senior High Team- \$500 (split) & Plaque

\* IEEE, Connecticut Section --- \$100 Honorable Mention

\* Frank J. Link Family Award for Energy Related Research --- Frank J. Link Award for Energy Related Research - \$50



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

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

6509 Optimization of Energy Production through Active Augmentation of Hydro-Turbine Body and Blade Design.

**Student(s)** **Avaneesh Sathish** **Grade 12** **Town** South Windsor  
**Nikhlesh Sivakumar** **Grade 12** **Town** Rocky Hill

- \* Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Team- \$300(split) & Plaque
- \* CASE • The Jackson Laboratory Urban School Challenge Awards with IBM --- 2nd Place High School - \$400 and Plaque, Medallion
- \* Applied Technology Awards --- 3rd Place High School - \$ 200 and Plaque, Medallion
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for HS Environmental, Energy, Ecology, or Biodiversity Project
- \* Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2

**Greenwich** Brunswick School Dana Montanez

6510 Desalination and Purification of Seawater using Solar-Powered Electrodialysis

**Student(s)** **Gregory Kapp** **Grade 10** **Town** Greenwich  
**Michael Montgomery** **Grade 10** **Town** Greenwich

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

### Physical Sciences - Middle School 7th Grade

**Avon** Talcott Mountain Academy Mr John Pellino

5007 Dampening, Quantifying, and Recording Tremor

**Student(s)** **Ariana Pourkavoos** **Grade 7** **Town** Avon

- \* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences 7th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- \* Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place- Middle Schools- \$100 / trophy
- \* Alexion Biotechnology Awards --- 2nd Place- Biotechnology 7th grade- \$200 & trophy and Invitation Compete in Broadcom MASTERS
- \* Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a Middle School student, \$100 cash
- \* Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School, Physical Sciences
- \* John S. Kendall Memorial Awards --- \$300 John S. Kendall Award for Excellence In Mechanical Engineering - Middle School

**Windsor** Madina Academy Mr. Timothy Coleman

5023 Developing a Novel Eco-Friendly System that Recovers Wasted Thermal and Kinetic Energy From a Dryer Exhaust

**Student(s)** **Tasneem Zoghol** **Grade 7** **Town** Enfield

- \* Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
- \* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- \* Demos R Us Award --- \$150 Cash Award-- Clear Execution of Research- 7th Grade

**East Hartford** St. Christopher School Dr. James F. Tanguay

5013 Exploring Magnetism

**Student(s)** **Daniel Mitchell** **Grade 7** **Town** Marlborough

- \* Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS

**Bridgeport** Discovery Magnet School Helena Coatsworth

5006 PH's Color

**Student(s)** **Beatriz Maia** **Grade 7** **Town** bridgeport

- \* Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences 7th Grade Ind. - trophy and Invitation Compete in Broadcom MASTERS

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

**New Canaan** St. Aloysius School Mrs. Phillips

5020 The relationship between Tree species and BTUs

**Student(s)** **Richard Marquis** **Grade 7** **Town** Norwalk

\* Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences 7th Grade Individual - trophy

### Physical Sciences - Middle School 8th Grade

**Westport** Greens Farms Academy Mrs. Modupe Oshin

5512 Water Filter and Water Turbine

**Student(s)** **Jakob Zapanta** **Grade 8** **Town** Bridgeport

- \* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences 8th Grade Ind.- \$300 & trophy, invite to compete Broadcom MASTERS
- \* Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- \* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF

**Wilton** Middlebrook Middle School Debbie Mallozzi

5518 Heart Safe

**Student(s)** **Anup Pilla** **Grade 8** **Town** Wilton

- \* Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences 8th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- \* Alexion Biotechnology Awards --- 3rd Place- Biotechnology 8th grade- \$100 & trophy and Invitation Compete in Broadcom MASTERS

**Bethany** Amity Middle School - Bethany Kevin Berean

5510 A More Efficient Microbial Fuel Cell

**Student(s)** **Iris Yan** **Grade 8** **Town** Woodbridge

- \* Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences 8th Grade Ind, - \$100 & trophy, invite to compete Broadcom MASTERS
- \* U.S. Agency for International Development (USAID) --- Certificate and \$25 gift card given by CSEF
- \* MIT Club of Hartford K-12 Initiative --- For excellence in science & technology of energy related research, middle school, \$75 cash award
- \* Frank J. Link Family Award for Energy Related Research --- Frank J. Link Award for Energy Related Research - \$50

**Bozrah** Fields Memorial School Mrs. E. Brown

5513 Producing Renewable Energy With Rainwater Gutter Systems Using Micro Hydro-Turbines

**Student(s)** **Elle Okoney** **Grade 8** **Town** BOZRAH

- \* Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences 8th Grade Ind. - trophy and Invitation Compete in Broadcom MASTERS
- \* Applied Technology Awards --- 2nd Place Middle School - \$200 and Trophy, Medallion
- \* Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 Cash and Trophy
- \* Collins Aerospace Engineering Awards --- 2nd Place- Engineering MS- \$200 & trophy and Invitation Compete in Broadcom MASTERS
- \* United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- \* 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.
- \* IEEE, Connecticut Section --- \$250 Honors Award -Junior
- \* J.A. Augustine Award --- \$100 for excellence in physical sciences
- \* Kathleen & David Smith Awards --- Kathleen & David Smith Award for Innovative Concept - \$100
- \* Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2

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

**Branford** CT Experiential Learning Center Middle School Melinda Alcosser

5537 From Waste to Paper

**Student(s)** **Ethan Reynolds** **Grade 8** **Town** Durham

- \* Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences 8th Grade Ind. - trophy
- \* Demos R Us Award --- \$200 Cash Award- Clear Execution of Research- 8th Grade

### Physical Sciences - Middle School Teams

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

4033 Effect of Bamboo, plastic on the strength of concrete

**Student(s)** **Rawan Ibrahim** **Grade 7** **Town** Bristol  
**Vikram Haran** **Grade 12** **Town** Ellington

- \* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
- \* ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF
- \* 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.

**Windsor** Academy of Aerospace and Engineering Dr.Bellinger

4001 Transforming Ocean Wave Energy to Electrical Energy

**Student(s)** **Sujay Chava** **Grade 7** **Town** Ellington  
**Atul Shreyas Konda** **Grade 7** **Town** Cromwell

- \* Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
- \* CASE • The Jackson Laboratory Urban School Challenge Awards with IBM --- 4th Place Middle School - Trophy, Medallion
- \* Collins Aerospace Engineering Awards --- 1st Place- Engineering Middle School- \$400 & trophy and Invitation Compete in Broadcom MASTERS
- \* IEEE, Connecticut Section --- \$100 Honorable Mention
- \* Society of Women Engineers - Hartford Section --- Scientific Calculator
- \* Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2

**Bethany** Amity Middle School - Bethany Kevin Berean

4037 Utilizing Nanotechnology to Clean Up Oil Spills

**Student(s)** **Adam Liu** **Grade 8** **Town** Woodbridge  
**Alesandro Gopal** **Grade 8** **Town** Woodbridge

- \* Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences MS Team- trophy, invite to compete Broadcom MASTERS
- \* Future Sustainability Awards --- 2nd Place Middle School - \$200 Cash and Trophy
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion