



# Connecticut Science & Engineering Fair

## Quinnipiac University

March 8 - 20, 2021

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### Final Judging Results

#### Award Legend

Plaque Winners = 1, 2, ...  
Medalists = m  
Winners = w

## Future Sustainability Awards

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

### Middle School

4005	PT	Self-Sustaining Indoor Garden		
<b>Award</b>	<b>1</b>	<b>Student(s)</b>	<b>Grade</b>	<b>Town</b>
		Noora Khaled	Grade 7	Suffield
		Bayan Abed	Grade 7	Rocky Hill
		Zainah Khaliq	Grade 7	Windsor

- \* Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences MS Team- \$100 each & plaque
- \* Future Sustainability Awards --- 1st Place Middle School - \$300 Cash and plaque
- \* Alexion Biotechnology Awards --- 3rd Place- Biotechnology 7th grade- \$100 & plaque

1006	LT	Studying Four Climate Change Factors that Impact Plant Growth		
<b>Award</b>	<b>2</b>	<b>Student(s)</b>	<b>Grade</b>	<b>Town</b>
		David Isaacs	Grade 7	Stamford
		Gabriel Haron	Grade 7	Stamford

- \* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences MS Team- \$100 each & plaque
- \* Future Sustainability Awards --- 2nd Place Middle School - \$200 Cash and plaque
- \* Alexion Biotechnology Awards --- 1st Place- Biotechnology 7th grade- \$300 & plaque
- \* NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF
- \* Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS for 1st - 4th MS winners

5501	P8	Implementation of Metal-Oxide-Induced Agglomeration and Electromagnetic Filtration for Removal of Microplastics		
<b>Award</b>	<b>3</b>	<b>Student(s)</b>	<b>Grade</b>	<b>Town</b>
		Snigtha Mohanraj	Grade 8	Ansonia

- \* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences 8th Grade Ind.- \$300 & plaque, invitation to compete in Broadcom Masters
- \* Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 1st Place Middle School - \$300 and plaque, Medallion
- \* Stanley Black & Decker Applied Technology Awards --- 1st Place Middle School - \$300 and Plaque, Medallion
- \* Environmental Sciences Awards with CACIWC --- 1st Place MS - \$300, plaque
- \* Future Sustainability Awards --- 3rd Place Middle School - \$100 Cash and 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
- \* Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- \* Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF
- \* Society of Women Engineers - Hartford Section --- Scientific Calculator
- \* Urban School Challenge 1st Place Middle School Awards --- USC Highest Placing 8th grader- Project Oceanology's Ocean Camp
- \* TurnKey Compliance Solutions Environmental Awards --- \$200 Cash Award Middle School- For excellence in environmental sciences
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for Highest Placing USC 8th grade Project
- \* Environmental / Energy Award- Urban Public School Award --- Environmental / Energy Award- Urban Public School Award - \$431.40



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

2004 L7 How efficient is aquaponics compared to traditional soil-based farming?

Award **m** Student(s) **Sarah Martin** Grade 7 Town **Bozrah**

- \* Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place- Middle School- \$200 / plaque
- \* Future Sustainability Awards --- Middle School Finalist - Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion
- \* American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- \* U.S. Agency for International Development (USAID) --- Certificate and \$25 gift card given by CSEF
- \* National Center for Inquiry Learning --- Danielle & Maggie Award for Imagination - MS \$100

5007 P7 Electrical Testing Board For Energy Consumption

Award **m** Student(s) **Andrew Pagnotta** Grade 7 Town **Bozrah**

- \* Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences 7th Grade Ind. - \$100 & plaque
- \* Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 Cash and plaque
- \* Future Sustainability Awards --- Middle School Finalist - Medallion
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- \* U.S. Air Force --- Certificate & \$25 gift card from 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.
- \* 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, middle school, \$100 cash award
- \* Susan Lessoff Award for Excellence In Chemistry --- Susan Lessoff Excellence In Chemistry Award -\$100 Cash and Plaque- Middle School
- \* Frank J. Link Family Award for Energy Related Research --- Frank J. Link Award for Energy Related Research - \$50

5004 P7 Purifying Water with Activated Charcoal

Award **m** Student(s) **Adeline Gibowicz** Grade 7 Town **Danbury**

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

4002 PT The Benefits of Debris Deflectors on Preventing Debris Buildup in Culverts

Award **m** Student(s) **David Thomas** Grade 8 Town **Danbury**  
**Cody Zhu** Grade 8 Town **Danbury**

- \* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Jr Team - CSF Medallion
- \* Environmental Sciences Awards with CACIWC --- MS Finalist - CSF Medallion
- \* Future Sustainability Awards --- Middle School Finalist - Medallion
- \* Collins Aerospace Engineering Awards --- 2nd Place- Engineering MS- \$200 & plaque
- \* Lemelson Early Inventor Award --- Certificate & \$100 cash award from Lemelson Foundation



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[Proj#] [FCat] [Project Title]

4001	PT	The Filtration of Soot and Carbon Molecules From Smoke			
Award	m	Student(s)	Grade	Town	
		Lainey Czerwiec	Grade 7	Feeding Hills	
		Bridget Kelly	Grade 7	Enfield	

- \* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Jr Team - CSF Medallion
- \* Future Sustainability Awards --- Middle School Finalist - Medallion

4003	PT	Toilet Power: Capturing Wasted Energy From Home Fixtures			
Award	m	Student(s)	Grade	Town	
		Lincoln Marshaus	Grade 8	Suffield	
		Chloe Walker	Grade 8	Somers	
		Francesca Lamattina	Grade 8	Somers	

- \* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences MS Team- \$100 each & plaque
- \* Stanley Black & Decker Applied Technology Awards --- 2nd Place Middle School - \$200 and Plaque, Medallion
- \* Future Sustainability Awards --- Middle School Finalist - Medallion
- \* American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- \* Constellation, an Exelon Company --- 1st: \$100.00 Cash - Grade 7 - 8: For Excellence in clean renewable / sustainable energy
- \* Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

1005	LT	Droughts Effect on Plants			
Award	m	Student(s)	Grade	Town	
		Hannah Cohen	Grade 7	Stamford	
		Rebecca Forti	Grade 7	Woodbridge	

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

2515	L8	Building and Testing a Simple Portable Constructed Wetland to Purify Greywater			
Award	m	Student(s)	Grade	Town	
		Tasneem Zoghlo	Grade 8	Enfield	

- \* Environmental Sciences Awards with CACIWC --- MS Finalist - CSF Medallion
- \* Future Sustainability Awards --- Middle School Finalist - Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- \* Talcott Mountain Science Center & Academy --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Life Science



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**Future Sustainability Awards**

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

**High School**

6501 PST Recirculating Shower Filtration System: Utilizing Natural, Cost-Efficient, and Effective Materials to Consolidate The Purification of Water

**Award** 1 **Student(s)** Myles Spiess **Grade** 11 **Town** Old Greenwich  
 Nicholas Altman **Grade** 11 **Town** Mount Kisco

- \* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences Senior High Team- \$500 (split) & Plaque
- \* Future Sustainability Awards --- 1st Place High School - Plaque & \$800 Stipend to Compete at GENIUS Olympiad
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place HS Future Sustainability

6517 PST Creating a Renewable Energy System Powered by Pressurized Gas to Limit Production of Greenhouse Gases

**Award** 2 **Student(s)** Hunter Spiess **Grade** 10 **Town** Old Greenwich  
 Collin Eschricht **Grade** 10 **Town** Old Greenwich

- \* Future Sustainability Awards --- 2nd Place High School - \$300 Cash and Plaque

6044 PS Towards Clean Energy via Radioactivity: An Investigation of the Dissipation of Electrons in an Ultra High Vacuum Environment

**Award** 3 **Student(s)** Luke Apostolides **Grade** 11 **Town** Greenwich

- \* Mathematics Awards - with ATOMIC --- High School Finalist - Medallion
- \* Future Sustainability Awards --- 3rd Place High School - \$200 Cash and Plaque
- \* Raytheon Corporation Awards --- \$500, Plaque
- \* U.S. Metric Association --- Certificate & \$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
- \* Maplesoft Awards for Applied Mathematics and Modeling --- Maple software - For Excellence in Mathematics

3009 LS Exploring Earthworm Ecotypes: Carbon Source or Sink?

**Award** m **Student(s)** Lillian Kane **Grade** 12 **Town** Groton

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* Alexion Biotechnology Awards --- 3rd Place- Biotechnology Senior High- \$300 & plaque
- \* NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF
- \* University of Connecticut - Early College Experience --- UCONN Early College Experience Program: Life Sciences - Co-Op \$100 Gift Certificate



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### Future Sustainability Awards

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 [Proj#] [FCat] [Project Title]

6516	PST	An Investigation of Current-Powered, Aquatic Turbines as Alternative Energy Source
<b>Award</b>	<b>m</b>	<b>Student(s)</b> <b>Teddy Danforth</b> <b>Grade 10</b> <b>Town</b> Greenwich
		<b>Trip Williams</b> <b>Grade 10</b> <b>Town</b> Greenwich

- \* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* Constellation, an Exelon Company --- 2nd: \$100.00 Cash - Grade 9 - 12: For Excellence in clean renewable / sustainable energy

6515	PST	Reduction of Atmospheric Carbon Dioxide via production of Ammonium Carbonate by way of aqueous carbon sink.
<b>Award</b>	<b>m</b>	<b>Student(s)</b> <b>Henry Sorbaro</b> <b>Grade 10</b> <b>Town</b> Greenwich
		<b>Campbell Officer</b> <b>Grade 10</b> <b>Town</b> Greenwich

- \* Future Sustainability Awards --- High School Finalist - Medallion

6058	PS	Design of a MFe <sub>2</sub> O <sub>4</sub> /Bentonite/Graphite Coated Polyurethane Sponge for Economical and Eco-Friendly Oil Spill Recovery
<b>Award</b>	<b>m</b>	<b>Student(s)</b> <b>Autumn Kim</b> <b>Grade 12</b> <b>Town</b> Greenwich

- \* Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque
- \* Stanley Black & Decker Applied Technology Awards --- 3rd Place High School - \$ 200 and Plaque, Medallion
- \* Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* 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
- \* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR
- \* National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEFF
- \* The Goodwin-Niering Center for the Environment --- \$100 for "Excellence in Environmental Conservation Studies"

3025	LS	Low-Pressure Application of Metal Nanoparticles to Soybean Seeds to Provide Increased
<b>Award</b>	<b>m</b>	<b>Student(s)</b> <b>Uma Pendkar</b> <b>Grade 12</b> <b>Town</b> Old Greenwich

- \* 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
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* Institute of Food Technologists, Nutmeg Section --- \$100 award + invitation to Awards Night Dinner with guest
- \* 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



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[Proj#] [FCat] [Project Title]

6077 PS Using SiO<sub>2</sub> Spray to Reduce Microplastics Dissolved Into the Oceans  
Award m Student(s) Leo Southam Grade 10 Town Shelton

\* Future Sustainability Awards --- High School Finalist - Medallion

3032 LS The Effects of Bacillus and Trichoderma Inoculant and Lepidum Sativum on  
Award m Student(s) Alexandra Hamza Grade 11 Town Manchester

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion
- \* University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$80,000 (\$20,000 per year)

3004 LS The Use of Pleurotus Ostreatus As Mycoremediation for Poly-Lactic Acid Plastic In Landfills.  
Award m Student(s) Alexis Ogrinz Grade 11 Town Easton

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion
- \* Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF

6511 PST Analyzing the Ability of the SCiO Spectrometer to Detect the Presence of Nutrients in Soil  
Award m Student(s) Megan Dunphy Grade 12 Town Ridgefield  
Kelsi Wilkenloh Grade 12 Town Ridgefield

- \* Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences Senior High Team - Plaque
- \* Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- \* Future Sustainability Awards --- High School Finalist - Medallion

6073 PS The Electrochemical Oxidation of Methane in a Fuel Cell Utilizing Carbon Sequestration  
Award m Student(s) Samuel Hillenmeyer Grade 12 Town Stamford

\* Future Sustainability Awards --- High School Finalist - Medallion

6091 PS Comparison of Machine Learning Models for Short-Term Forecasting of Solar Power Generation Output: A Case Study  
Award m Student(s) Derek Yuan Grade 11 Town Branchburg

\* Future Sustainability Awards --- High School Finalist - Medallion



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

6513	PST	Creating an Optical Fiber Daylighting System for Hydroponics With Raspberry Pi Active Dual Axis Solar Tracking
<b>Award</b>	<b>m</b>	<b>Student(s)</b> Philip London Adarsh Kongani
		<b>Grade</b> 12 <b>Town</b> Orange
		<b>Grade</b> 12 <b>Town</b> Orange

\* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion  
 \* Future Sustainability Awards --- High School Finalist - Medallion