



# 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

## CASE - PepsiCo Urban School Challenge Awards with IBM

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

### Middle School

5501 P8 Implementation of Metal-Oxide-Induced Agglomeration and Electromagnetic Filtration for Removal of Microplastics

Award 1 Student(s) Snigtha Mohanraj Grade 8 Town 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

5009 P7 Using Snell's Law to Calculate Index of Refraction of Solutions

Award 2 Student(s) Sydney Borst Grade 7 Town Danbury

- \* Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences 7th Grade Ind. - plaque
- \* Mathematics Awards - with ATOMIC --- 1st Place Middle School- \$300 and Plaque
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 2nd Place Middle School - \$200 and plaque, Medallion
- \* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- \* Connecticut College-Physics, Astronomy, & Geophysics Dept. --- Junior Award: Certificate, & teeshirt & \$25 Amazon Card from CSEF
- \* Urban School Challenge 1st Place Middle School Awards --- USC Highest Placing 7th grader- Project Oceanology's Ocean Camp
- \* Demos R Us Award --- \$150 Cash Award-- Clear Execution of Research- 7th Grade
- \* Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS



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2007 L7 The Effect of Bee Box Volume Size on Temperature and Humidity of a Wintering Bee Hive.

Award 3 Student(s) Luca LaRosa Grade 7 Town Danbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences 7th grade- \$200 & plaque
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 3rd Place Middle School - \$100 and plaque, Medallion
- \* Alexion Biotechnology Awards --- 4th Place- Biotechnology 7th grade- plaque
- \* Ricoh Americas Corporation --- Certificate, \$25 gift card given by CSEF
- \* National Center for Inquiry Learning --- Danielle & Maggie Award for Imagination - MS \$100
- \* Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

5504 P8 The Effect of an Insulator with Styrofoam on the Temperature Difference Between Two Pieces of Cardboard

Award 4 Student(s) Christopher Tomas Borges Grade 8 Town Danbury

- \* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 4th Place Middle School - plaque, Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion

2517 L8 Microplastic Concentration in Four Harbor Locations in Fairfield County, CT

Award 5 Student(s) Sofia Atehortua Grade 8 Town Bridgeport

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 5th Place Middle School - plaque, Medallion
- \* Environmental Sciences Awards with CACIWC --- 3rd Place MS- \$100, plaque
- \* National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF
- \* Project Oceanology --- Individual - 1 Ocean Camp slot + T-Shirt & cap, First Place Junior

2014 L7 Worms, Not Just For Composting Anymore

Award m Student(s) Stacy Sanchez-luna Grade 7 Town Bridgeport

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

2011 L7 The Effect of UV Light on Bacteria From a Horse Blt

Award m Student(s) Sophia Blumenreich Grade 7 Town Danbury

- \* PepsiCo / Pfizer Life Sciences Awards --- 2nd Place- Life Sciences 7th grade- \$100 & plaque
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology 7th grade - CSF Medallion
- \* NYUC Pony Club Equine Award --- \$100 Cash Award or excellence in equine studies
- \* Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS



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5511 P8 The Effects of Concentrations of Acetone on the Tensile Strength of Bioplastics

Award **m** Student(s) **Eric Guo** Grade 8 Town Danbury

- \* Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences 8th Grade Ind. - plaque
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- \* Collins Aerospace Engineering Awards --- 3rd Place- Engineering MS \$100 & plaque
- \* Alexion Biotechnology Awards --- 5th Place- Biotechnology 8th grade- plaque
- \* ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF
- \* U.S. Metric Association --- Certificate & \$25 gift card given by CSEF

5006 P7 Thermoelastic energy generation using variable temperature gradients

Award **m** Student(s) **Kiran Suri** Grade 7 Town Danbury

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- \* Alternative/Renewable Energy Awards --- 1st Place Middle School - \$300 Cash and plaque
- \* U.S. Air Force --- Certificate & \$25 gift card from CSEF
- \* Constellation, an Exelon Company --- 2nd: \$50.00 Cash - Grade 7 - 8: For Excellence in clean renewable / sustainable energy
- \* Society of Women Engineers - Hartford Section --- Scientific Calculator
- \* Wisner Chairman's Award --- \$500 cash & plaque MS

2510 L8 COVID-19's Impact on Water Quality in Recreational Areas Along the Long Island Sound Coastline

Award **m** Student(s) **Isabella D'Agostino** Grade 8 Town New Brittan

- \* PepsiCo / Pfizer Life Sciences Awards --- 5th Place- Life Sciences 8th grade- plaque
- \* Petit Family Foundation Women in Science & Engineering Awards --- 1st Place- Middle School \$300 / plaque
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- \* Environmental Sciences Awards with CACIWC --- 2nd Place MS- \$200, plaque
- \* Southeastern New England Marine Educators (SENEME) --- \$100 award and membership in SENEME - 1st Place Junior & T-Shirt
- \* Schoepfer Award for Excellence in Local Aquatic Science --- For excellence in a local water quality study, \$100 cash

2516 L8 The impacts of the presence of Canada Geese (Branta Canadensis) on the water quality in local ponds and lakes.

Award **m** Student(s) **Eva Quijada** Grade 8 Town Middletown

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Middle School Finalist - Medallion
- \* Environmental Sciences Awards with CACIWC --- MS Finalist - CSF Medallion



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### High School

3052 LS The Social Interactions and Learning Abilities Between Dogfish, Observed Using Two Different Methods of Target Training.

Award 1 Student(s) Clayton Nyiri Grade 12 Town Fairfield

- \* PepsiCo / Pfizer Life Sciences Awards --- 3rd Place- Life Sciences Senior High- \$200 & 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 Psychological Association --- Certificate, \$25 gift card given by CSEF

3072 LS The Effect of Dissolved Flavonoid Supplements on the Chelation of Iron in a Solution

Award 2 Student(s) Paige Gagnon Grade 12 Town Manchester

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 2nd Place High School - \$400 and Plaque, Medallion

3089 LS Determining the Efficacy of Zingiber Officinale to Promote the Degradation of Bioplastics Through Amylase Hydrolysis

Award 3 Student(s) Sienna Matregrano Grade 12 Town Fairfield

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 3rd Place High School - \$ 300 and Plaque, Medallion
- \* Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- \* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for HS Environmental, Energy, Ecology, or Biodiversity Project

3024 LS Developing an Adhesive Constructed from a Maize starch-based matrix Mixed with Chondrus crispus Carrageenan and Determining the Biodegradability of the Adhesive

Award 4 Student(s) Matthew Duffy Grade 12 Town Fairfield

- \* PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 4th Place High School - Plaque, Medallion
- \* U.S. Agency for International Development (USAID) --- Certificate and \$25 gift card given by CSEF



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6078 PS Development of a Novel Classification Model to Determine Vegetation Habitability of Exoplanet Atmospheres Via Random Forest Machine Learning Algorithms.

Award 5 Student(s) Joseph Gottlieb Grade 12 Town Stratford

- \* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- 5th Place High School - Plaque, Medallion
- \* Computer Science Awards --- Senior High Finalist - Medallion
- \* Raytheon Corporation Awards --- \$500, Plaque

3027 LS Investigating the Efficacy of Cannabidiol on the Elongation Time of the Coagulation Cascade to Mitigate Intravascular Clots.

Award m Student(s) Maria Elena Dos Santos Grade 12 Town Bridgeport

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

6016 PS Harnessing Bio-Kinetic Energy Through A Wearable Non-Invasive Generator

Award m Student(s) Alexander Vassallo Grade 12 Town Fairfield

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion
- \* Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 Cash and Plaque
- \* Wisner Memorial Award --- \$1,000 cash + Silver Bowl (\$2,000 cash if a team) High School

6088 PS A Novel Technique to Mitigate Harmful Algal Blooms by Utilizing Electromagnetic Pulses.

Award m Student(s) Savoy Volcy Grade 12 Town Stratford

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High 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)



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6032	PS	Gravity-Assisted Energy Conversion: Improving the Feasibility of Mechanically Powered Electricity Generators
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**Award** m      **Student(s)** Aiman-Imran Anuar      **Grade** 11      **Town** West Haven

- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion
- \* Jon Chapis Memorial Award --- John Chapis Spirit of Innovation Award - HS \$200
- \* University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$80,000, \$20,000 per year)
- \* Fred Olender Urban School Challenge Award --- \$250 Cash Award for HS student in USC school

6066	PS	Natural Function Restrictions, Identities, and Properties to Determine Finite Cardinalities of Solutions for Real-Valued Functions Projected onto Natural Space
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**Award** m      **Student(s)** Praneeth Chitirala      **Grade** 10      **Town** Milford

- \* Mathematics Awards - with ATOMIC --- High School Finalist - Medallion
- \* CASE • The Jackson Laboratory Urban School Challenge Awards --- Senior High Finalist - Medallion
- \* Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF
- \* Maplesoft Awards for Applied Mathematics and Modeling --- Maple software - For Excellence in Mathematics