



Connecticut Science & Engineering Fair

Quinnipiac University

March 8 - 20, 2021

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

Preliminary Judging Results

Honors Received in Regular Fair Preliminary Judging

[SchTown]	[School]	[Teacher]	[Proj#]	[FCat]	[Honors]	[Project Title]			
Avon	Avon High School	John Salerni	3070	LS	3	Proteomics for precision medicine in diabetes	Student(s)	Mark Wang	Grade 11 Town Avon
Avon	Talcott Mountain Academy	Brigitte Zacharczenko	2503	L8	2	Circadian Rhythms with Manduca Sexta Caterpillars	Student(s)	Soleil Asano	Grade 8 Town Torrington
Avon	Talcott Mountain Academy	Jennifer Travers	2002	L7	2	How Different Sounds Affect an Individual's Concentration	Student(s)	Phydena Liu	Grade 7 Town Avon, CT
Avon	Talcott Mountain Academy	Brigitte Zacharczenko	2509	L8	2	The Use of "Essential Oils" as Punishing Stimuli on Dubia Roaches	Student(s)	Oliver Morrison	Grade 8 Town Farmington
Avon	Talcott Mountain Academy	Lydia Gibb	2015	L7	2	Bedrock vs. Trees: Is There A Connection?	Student(s)	Aarna Panigrahi	Grade 7 Town West Hartford
Avon	Talcott Mountain Academy	Ms. Lydia Gibb	5506	P8	2	Ventilation for COVID-19: What is Effective?	Student(s)	Ariana Pourkavoos	Grade 8 Town Avon
Avon	Talcott Mountain Academy	John Pellino	5014	P7	1	Tennis Ball Disinfecter	Student(s)	Sia Reddy	Grade 7 Town Avon
Avon	Talcott Mountain Academy	John Pellino	5015	P7	2	Secure Stove	Student(s)	Elias Starr	Grade 8 Town AVON
Avon	Talcott Mountain Academy	Dr. Brigitte Zacharczenko	2013	L7	2	How do x-ray wavelengths affect the growth of seeds?	Student(s)	Sam Wu	Grade 7 Town Avon
Bethel	Bethel High School	Raymond Turek	3019	LS	3	The Effect of Nondiscrimination Legislation on LGBT Students	Student(s)	Sophie Morris	Grade 12 Town Bethel
Bethel	Bethel High school	Mr. Raymond Turek	6080	PS	3	Turf Vs. Grass Fields	Student(s)	Justyn Peralta	Grade 12 Town Bethel

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Bozrah Fields Memorial School Evelyn Brown

2504 L8 1 Does personality type correlate to types of emotional responses to the Covid-19 pandemic?
Student(s) Kali Kapilotis **Grade 8** **Town** Bozrah

Bozrah Fields Memorial School Evelyn Brown

2004 L7 2 How efficient is aquaponics compared to traditional soil-based farming?
Student(s) Sarah Martin **Grade 7** **Town** Bozrah

Bozrah Fields Memorial School Mrs. Brown

5007 P7 1 Electrical Testing Board For Energy Consumption
Student(s) Andrew Pagnotta **Grade 7** **Town** Bozrah

Bridgeport Bridgeport Regional Aquaculture Center Mr. Kirk Shadle

3027 LS 2 Investigating the Efficacy of Cannabidiol on the Elongation Time of the Coagulation Cascade to Mitigate Intravascular Clots.
Student(s) Maria Elena Dos Santos **Grade 12** **Town** Bridgeport

Bridgeport Bridgeport Regional Aquaculture Center Mr. Kirk Shadle

3024 LS 1 Developing an Adhesive Constructed from a Maize starch-based matrix Mixed with Chondrus crispus Carrageenan and Determining the Biodegradability of the Adhesive
Student(s) Matthew Duffy **Grade 12** **Town** Fairfield

Bridgeport Bridgeport Regional Aquaculture Center Mr. Kirk Shadle

6078 PS 1 Development of a Novel Classification Model to Determine Vegetation Habitability of Exoplanet Atmospheres Via Random Forest Machine Learning Algorithms.
Student(s) Joseph Gottlieb **Grade 12** **Town** Stratford

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

3089 LS 2 Determining the Efficacy of Zingiber Officinale to Promote the Degradation of Bioplastics Through Amylase Hydrolysis
Student(s) Sienna Matregrano **Grade 12** **Town** Fairfield

Bridgeport Bridgeport Regional Aquaculture Center Mr. Kirk Shadle

3052 LS 1 The Social Interactions and Learning Abilities Between Dogfish, Observed Using Two Different Methods of Target Training.
Student(s) Clayton Nyiri **Grade 12** **Town** Fairfield

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

3067 LS 2 Determining the Proliferation of Cellular Oxidative Stress through Blue Light Induced Reactive Oxygen Species Formation
Student(s) Gabriella Silva **Grade 12** **Town** Bridgeport

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6019 PS 1 Yielding High Value Secondary Products from fossil fuel waste utilizing electrolysis
Student(s) Dylan Steer **Grade 12** **Town** Stratford

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6056 PS 2 Anthropogenic Radiofrequency-Electromagnetic Field Impacts To Nervous System Stability Through Neuron Spiking Characterization And Identifying High EMF Zones In The Environment
Student(s) Aki Tsutsumi **Grade 12** **Town** 70 Maureen St

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6016 PS 2 Harnessing Bio-Kinetic Energy Through A Wearable Non-Invasive Generator
Student(s) Alexander Vassallo **Grade 12** **Town** Fairfield

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Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6088 PS 2 A Novel Technique to Mitigate Harmful Algal Blooms by Utilizing Electromagnetic Pulses.

Student(s) Savoy Volcy

Grade 12 **Town** Stratford

Bridgeport Central High School Mr. Dufe

3049 LS 3 Can orange peels help plants to grow?

Student(s) Aliyah Smith

Grade 9 **Town** Bridgeport

Bridgeport Fairchild Wheeler Aerospace Mr. Bergquist

6519 PST 3 The Efficiency of Newer and Older Aircraft Designs.

Student(s) Domenic Cammarota

Grade 10 **Town** Fairfield

Max Markowsky

Grade 10 **Town** Newtown

Bridgeport Fairchild Wheeler Aerospace Douglas Strickland

6502 PST 3 The Drinker Dehumidifier

Student(s) Rohan Mistry

Grade 12 **Town** Milford

Andrew Dunning

Grade 12 **Town** Stratford

Bridgeport Fairchild Wheeler Biotechnology Cynthia Crudale

3080 LS 3 A Natural Remedy to Decrease Asthma

Student(s) Shahmima Akther

Grade 12 **Town** Bridgeport

Bridgeport Fairchild Wheeler Biotechnology Sidra Rafaqat

3502 LST 2 Green Tea: The Bacteria Killer?

Student(s) Sophie Uanino

Grade 9 **Town** Shelton

Angeline Tran

Grade 9 **Town** Shelton

Bridgeport Interdistrict Discovery Magnet Helena Coatsworth

5508 P8 1 Crystal Current

Student(s) Arden Mauborgne

Grade 8 **Town** Easton

Bridgeport Multicultural Magnet School Corina Starn

2517 L8 1 Microplastic Concentration in Four Harbor Locations in Fairfield County, CT

Student(s) Sofia Atehortua

Grade 8 **Town** Bridgeport

Bridgeport Multicultural Magnet School Corina Starn

2008 L7 1 Will it Survive?

Student(s) Stephanie Cuaya

Grade 7 **Town** Bridgeport

Bridgeport Park City Prep Charter School Vasiliki Boudreau

2001 L7 2 Does water temperature affect lentil seed germination.

Student(s) Dylann Delgado

Grade 7 **Town** Bridgeport

Bridgeport Park City Prep Charter School Jonathan Jaekle

2501 L8 3 The Circulatory System

Student(s) Christopher Huerta-Arriaga

Grade 8 **Town** Bridgeport

Bridgeport Park City Prep Charter School Ms. Boudreau

5016 P7 3 The Algorithms of the Rubik's Cube

Student(s) Marcus Rosario

Grade 7 **Town** Bridgeport

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Bridgeport Park City Prep Charter School Mrs. Boudreau

2014 L7 3 Worms, Not Just For Composting Anymore

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

Bridgeport Barnum School Yeritza Vega

2012 L7 3 Does the 5 Second Rule really work?

Student(s) Kayce Ochoa **Grade 7** **Town** Bridgeport

Canton Canton High School Marsha Jorgensen

3044 LS 1 Allelopathic Effects of Invasive Species Garlic Mustard (*Alliaria petiolata*) on Germination of Black Eyed Susan (*Rudbeckia hirta*)

Student(s) Lauren Marze **Grade 9** **Town** Canton

Cheshire Cheshire Academy Mr. Ferraro

3033 LS 3 Tumor Reversion in Claudin-low Triple Negative Breast Cancer

Student(s) Kavin Kathir **Grade 11** **Town** Cheshire

Cheshire Cheshire Academy Anthony Ferraro

6047 PS 3 Artificial Intelligence Medical Question-answering Robot

Student(s) Yiya Qi **Grade 11** **Town** China

Cheshire Cheshire Academy Mariam Aboian

3101 LS 3 Role of PET/ MRI in evaluating brain tumors and tumor recurrence

Student(s) Julia Shatalov **Grade 12** **Town** Cheshire

Cheshire Cheshire High School Julie Barker

6027 PS 3 Project Regrow: Cutting-Edge Technology to Fight Deforestation

Student(s) Siddhant Bhardwaj **Grade 10** **Town** Cheshire

Cheshire Cheshire High School Julie Barker

6064 PS 3 VISTA: a device that measures temperature and humidity levels, by using a complex set of algorithms to calculate the temperature variance and heat index of its environment.

Student(s) Sagarika Srinivasan **Grade 10** **Town** Cheshire

Cheshire Cheshire High School Julie Barker

6095 PS 3 Determining Whether an Inorganic Reaction can be Determined to be Redox or Non-Redox Based on the Number of Unique Elements and Compounds in the Reaction

Student(s) Vincent Zhu **Grade 11** **Town** Cheshire

Cheshire Dodd Middle School Clare Gonzalez

5005 P7 2 Separation of Food Dyes Via Column Chromatography

Student(s) Adwitha Gadhachanda **Grade 7** **Town** Cheshire

Cheshire Dodd Middle School Clare Gonzalez

5002 P7 1 A Covid-19 Social Distancing Device Using a PIR Motion Sensor and a US-100 Ultrasonic Distance Sensor

Student(s) Suchita Srinivasan **Grade 7** **Town** Cheshire, CT

Cheshire St. Bridget School Mrs. Michelle Carroll

2508 L8 1 No To Nanosilver: A Natural Approach to Nanosilver Filtration

Student(s) Nilan Kathir **Grade 8** **Town** Cheshire

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Coventry Captain Nathan Hale Middle School Mrs. Chelsea Long
5012 P7 3 Metal Hardening: Heating, Hammering and Holding Atoms Together
Student(s) Alexander Campbell **Grade 7** **Town** Coventry

Danbury Saint Joseph School Mrs. Reilly
2514 L8 2 Light 'Em Up
Student(s) Maris Chirayil **Grade 8** **Town** Danbury

Danbury Saint Joseph School Jennifer Reilly
2513 L8 1 Effectiveness of Whitening Toothpastes
Student(s) Charles Doran **Grade 8** **Town** Danbury

Danbury Saint Joseph School Mrs. Jennifer Reilly
5013 P7 3 Jumping Distance
Student(s) Daniel Ferrucci **Grade 7** **Town** Danbury

Danbury Saint Joseph School Mrs. Reilly
2520 L8 2 Heart Rate Recovery Time
Student(s) Tatiana Frouge **Grade 8** **Town** Danbury

Danbury Saint Joseph School Jennifer Reilly
5004 P7 2 Purifying Water with Activated Charcoal
Student(s) Adeline Gibowicz **Grade 7** **Town** Danbury

Danbury Saint Joseph School Jennifer Reilly
2502 L8 3 Oil and Feathers
Student(s) Cynthia Silverman **Grade 8** **Town** Danbury

Danbury Saint Joseph School Jennifer Reilly
2010 L7 3 Extracting Onion DNA
Student(s) Stefan Weber **Grade 7** **Town** Danbury, CT

Danbury Saint Joseph School Mrs. Reilly
4007 PT 2 What Is The Effect of Water Depth On Tsunamis?
Student(s) Benjamin Werner **Grade 7** **Town** Danbury
Matthew Werner **Grade 7** **Town** Danbury

Danbury St. Gregory the Great School Mrs. Fahey
5003 P7 3 Potato vs. lemon
Student(s) Briella Dunkle **Grade 7** **Town** Danbury

Danbury St. Gregory the Great School Mrs. Fahey
5517 P8 2 Convection Heat Transfer & Mixing Methods
Student(s) Brendan Kelly **Grade 8** **Town** Danbury

Danbury Westside Middle School Academy Jonathan Neuhausel
2011 L7 1 The Effect of UV Light on Bacteria From a Horse Blt
Student(s) Sophia Blumenreich **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Jonathan Neuhausel
5009 P7 1 Using Snell's Law to Calculate Index of Refraction of Solutions
Student(s) Sydney Borst **Grade 7** **Town** Danbury

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Danbury Westside Middle School Academy Jonathan Neuhausel
2006 L7 2 The Effects of Soil Type on Allolobophora caliginosa's Enrichment of NPK, pH, and Moisture Value in Soil.

Student(s) Krrish Brahmshatriya **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Jon Neuhausel
5512 P8 2 The Effect of River Medium on River Erosion

Student(s) Benjamin Chaleski **Grade 8** **Town** Danbury

Danbury Westside Middle School Academy Jonathan Neuhausel
2005 L7 2 The effects of a clinostat on Garden Cress

Student(s) Zachariah Colon **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Jonathan Neuhausel
5511 P8 1 The Effects of Concentrations of Acetone on the Tensile Strength of Bioplastics

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

Danbury Westside Middle School Academy Jon Neuhausel
2007 L7 1 The Effect of Bee Box Volume Size on Temperature and Humidity of a Wintering Bee Hive.

Student(s) Luca LaRosa **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Jon Neuhausel
5006 P7 2 Thermoelastic energy generation using variable temperature gradients

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

Danbury Westside Middle School Academy Jonathan Neuhausel
4002 PT 1 The Benefits of Debris Deflectors on Preventing Debris Buildup in Culverts

Student(s) David Thomas **Grade 8** **Town** Danbury

Cody Zhu **Grade 8** **Town** Danbury

Danbury Westside Middle School Academy Walter Mayhew
5504 P8 1 The Effect of an Insulator with Styrofoam on the Temperature Difference Between Two Pieces of Cardboard

Student(s) Christopher Tomas Borges **Grade 8** **Town** Danbury

Danbury Danbury High School Karen Lamb
6079 PS 3 Utilizing Machine learning to Analyze Twitter posts and Predict the Election Outcome

Student(s) Shriya Jonnalagadda **Grade 9** **Town** Danbury

Darien Darien High School Mr. Lewis
3041 LS 2 Optogenetic Stimulation of Neurons in the Brain to Treat Parkinson's Disease

Student(s) Abby Bouton **Grade 11** **Town** Darien

Darien Darien High School Guy Pratt
3022 LS 2 Use of Accelerometers to Determine Gait Irregularity

Student(s) Victor Calmon Coelho **Grade 12** **Town** Darien

Darien Darien High School Guy Pratt
3076 LS 3 The Landscape of Fear of Squirrels in Urban and Rural Environments

Student(s) Nicholas Levinson **Grade 12** **Town** Darien

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Darien Darien High School Mr. Pratt

3064 LS 2 The Impact of Location, Nursery vs Reef, on Survival and Growth Rates of Coral Species Orbicella Annularis and Acropora Palmata, in St. Croix, USVI.

Student(s) Anna Seymour **Grade** 12 **Town** Darien

Darien Darien High School Guy Pratt

3045 LS 2 Exercise Therapy to Treat Anxiety: The Effect of Running on Anxiety Levels

Student(s) Abby St Jean **Grade** 12 **Town** Darien

Darien Darien High School Ting Wang

3073 LS 1 Identification of Epigenetic Determinants of Zebrafish Pigment Cell Fate.

Student(s) Sophie Xu **Grade** 10 **Town** Darien

Darien Darien High School Christine Leventhal

6071 PS 3 Robotic Pancreatoduodenectomy (PD) vs. Open PD: A Meta-analysis-driven Algorithm to Enhance Surgical Decision Making

Student(s) Ethan Zhang **Grade** 12 **Town** Darien

East Lyme East Lyme High School Frederic Clark

6520 PST 3 Biomimicry of Whale Baleen to Remove Microplastics from Water

Student(s) Jenny Guo **Grade** 11 **Town** East Lyme
 Yurina Shirai **Grade** 11 **Town** Niantic

East Lyme East Lyme High School Frederic Clark

6010 PS 2 Two Speed Mechanical BMX Race Gearbox

Student(s) Jacob Hatt **Grade** 10 **Town** Salem

East Lyme East Lyme High School Frederic Clark

6065 PS 3 Examining the Relationship Between Labor Cost and Firm Strategy Through Mixed Methods Content Analysis on Panel Data and SEC Filings

Student(s) Aditya Kabra **Grade** 11 **Town** Niantic

East Lyme East Lyme High School Frederic Clark

3079 LS 2 Investigating Interplay Between Amyloid- β and Tau and its Contribution to Neuroinflammation in Alzheimer's Disease Progression

Student(s) Avni Kabra **Grade** 9 **Town** Niantic

East Lyme East Lyme High School Frederic Clark

6505 PST 3 Stock Simulator

Student(s) Aman Patel **Grade** 11 **Town** Niantic
 Mason Gallo **Grade** 11 **Town** East Lyme
 Evan Lombardo **Grade** 11 **Town** Salem

East Lyme East Lyme High School Frederic Clark

3515 LST 2 The Striking Strawkin Duo

Student(s) Sam Yang **Grade** 10 **Town** East Lyme
 Nikhita Bolineni **Grade** 10 **Town** East Lyme
 Riddhi Bansal **Grade** 10 **Town** East Lyme

Ellington Ellington Middle School Victoria Schilling

2512 L8 2 Role Of Macronutrients (NPK) In Plant Growth and Development

Student(s) Saisuhruth Choppakatta **Grade** 8 **Town** Ellington

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Enfield Chiaravalle Academy Timothy Coleman
4001 PT 1 The Filtration of Soot and Carbon Molecules From Smoke
Student(s) **Lainey Czerwicz** **Grade 7** **Town** Feeding Hills
Bridget Kelly **Grade 7** **Town** Enfield

Enfield Chiaravalle Academy Timothy Coleman
1008 LT 1 A Comparison of Three Types of Honey on CO2 Emissions from Yeast Fermentation
Student(s) **Alexander Gumkowski** **Grade 8** **Town** North Haven
Tyler Salisbury **Grade 8** **Town** South Windsor

Enfield Chiaravalle Academy Tim Coleman
4003 PT 1 Toilet Power: Capturing Wasted Energy From Home Fixtures
Student(s) **Lincoln Marshaus** **Grade 8** **Town** Suffield
Chloe Walker **Grade 8** **Town** Somers
Francesca Lamattina **Grade 8** **Town** Somers

Enfield Chiaravalle Academy Timothy Coleman
1001 LT 3 do bugs survive in the winter
Student(s) **Sage Pierce** **Grade 7** **Town** Enfield
Catherine Wilcox **Grade 7** **Town** Enfield

Enfield Chiaravalle Academy Mr. Timothy Coleman
5513 P8 1 Can Diodes Be Used to Reduce the Negative Impacts of Road Salt on Streams?
Student(s) **Abigail Quinby** **Grade 8** **Town** Windsor

Enfield Chiaravalle Academy Mr.Coleman
1004 LT 1 Agricultural Plants reaction to Climate Change
Student(s) **Maya Serrano** **Grade 8** **Town** Somers
Joella Asapokhai **Grade 8** **Town** South Windsor
Alexandria Croal **Grade 8** **Town** Enfield

Enfield Chiaravalle Academy Timothy Coleman
4004 PT 2 How the science of thermoelectricity can improve warmth in colder climates.
Student(s) **Rhys Wilson** **Grade 7** **Town** Somers
Jacek Cieslak **Grade 7** **Town** Monson
Oliver Kolb **Grade 7** **Town** East Longmeadow

Fairfield Fairfield College Preparatory School Anthony Dotolo
3038 LS 3 Oil consuming bacteria vs algae. Which is better at bioremediating oil spills?
Student(s) **Antonios Boudreau** **Grade 12** **Town** Ansonia

Fairfield Fairfield College Preparatory School Anthony Dotolo
6042 PS 2 Natural Lubricant Substitute for Railroad Applications.
Student(s) **David Boudreau** **Grade 11** **Town** Ansonia

Fishers Island Fishers Island School Carol Giles
3046 LS 3 Ocean Acidification: How it effects population growth in the phytoplankton species Nannochloropsis oculata
Student(s) **Arabella Hatfield** **Grade 12** **Town** Groton, CT

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Fishers Island Fishers Island School Carol Giles

3009	LS	1	Exploring Earthworm Ecotypes: Carbon Source or Sink?
Student(s) Lillian Kane			Grade 12 Town Groton

Glastonbury Glastonbury High School Diane Pintavalle

3056	LS	2	Synthesis and Evaluation of Recombinant Therapeutic Antibodies for Metastatic Breast Cancer
Student(s) Nathan Azimov			Grade 11 Town Glastonbury

Glastonbury Glastonbury High School Diane Pintavalle

3061	LS	1	The Role of Alternative Splicing in Metastatic Osteosarcoma
Student(s) Sonia Ghoshal			Grade 11 Town Glastonbury

Glastonbury Glastonbury High School Ms.Pintavalle

6036	PS	3	Point Cloud Generation from Multifocal Drone Footage
Student(s) Sandesh Ramesh			Grade 11 Town glastonbury

Glastonbury Glastonbury High School Diane Pintavalle

3016	LS	2	Chromosomal Instability of RB1 in Osteosarcoma
Student(s) Palash Vora			Grade 11 Town Glastonbury

Greenwich Brunswick School Dana Montanez

6044	PS	2	Towards Clean Energy via Radioactivity: An Investigation of the Dissipation of Electrons in an Ultra High Vacuum Environment
Student(s) Luke Apostolides			Grade 11 Town Greenwich

Greenwich Brunswick School Dana Montanez

6504	PST	2	Creation of a Malleable Hydrogel Bandage for Long Term Wound Treatment
Student(s) John Brown			Grade 11 Town Greenwich
Student(s) Caleb Boateng			Grade 11 Town Bronx

Greenwich Brunswick School Dana Montanez

6516	PST	1	An Investigation of Current-Powered, Aquatic Turbines as Alternative Energy Source
Student(s) Teddy Danforth			Grade 10 Town Greenwich
Student(s) Trip Williams			Grade 10 Town Greenwich

Greenwich Brunswick School Dana Montanez

3506	LST	2	Density of Microplastics: An investigation to determine concentration in the dorsal tissue of <i>Morone saxtilis</i>
Student(s) Tomas Delgado			Grade 10 Town Riverside
Student(s) Jackson Wolfram			Grade 10 Town Riverside

Greenwich Brunswick School Dana Montanez

3040	LS	3	An economically feasible application of germicidal irradiation to Personal Protective Equipment
Student(s) Jackson Fels			Grade 10 Town Riverside

Greenwich Brunswick School Dana Montanez

6512	PST	1	Harnessing and Repurposing Processing Heat Gradient Produced by a Computer to Reduce the Battery Lost to a Cooling Fan
Student(s) Gregory Kapp			Grade 11 Town Greenwich
Student(s) Michael Montgomery			Grade 11 Town Greenwich

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Greenwich	Brunswick School	Dana Montanez	3104	LS	3	Designing a Blood Alcohol Tracker through Transdermal Alcohol Content to Increase User Awareness	Student(s) William Klein	Grade 10	Town GREENWICH
Greenwich	Brunswick School	Dana Montanez	3514	LST	1	Regenerating Transformed Plant Cells Expressing Algal Cytochrome c6 to Increase Photosynthetic Yield in Plants	Student(s) Maximilian Konzerowsky Ashton Arjomand	Grade 11 Grade 11	Town Darien Town Greenwich
Greenwich	Brunswick School	Dana Montanez	6034	PS	2	Designing a Data-collecting Robotic System to Negate the Effects of Eutrophication	Student(s) Ryan Kulsakdinun	Grade 10	Town Armonk
Greenwich	Brunswick School	Dana Montanez	6508	PST	1	The Development of an Auto-Disable Syringe to Combat the Spread of Bloodborne Diseases via Intravenous Injection Drug Use	Student(s) Aidan Marks Samuel Guadalupe	Grade 11 Grade 11	Town Riverside Town Greenwich
Greenwich	Brunswick School	Dana Montanez	6515	PST	2	Reduction of Atmospheric Carbon Dioxide via production of Ammonium Carbonate by way of aqueous carbon sink.	Student(s) Henry Sorbaro Campbell Officer	Grade 10 Grade 10	Town Greenwich Town Greenwich
Greenwich	Brunswick School	Dana Montanez	6517	PST	2	Creating a Renewable Energy System Powered by Pressurized Gas to Limit Production of Greenhouse Gases	Student(s) Hunter Spiess Collin Eschricht	Grade 10 Grade 10	Town Old Greenwich Town Old Greenwich
Greenwich	Brunswick School	Dana Montanez	6501	PST	1	Recirculating Shower Filtration System: Utilizing Natural, Cost-Efficient, and Effective Materials to Consolidate The Purification of Water	Student(s) Myles Spiess Nicholas Altman	Grade 11 Grade 11	Town Old Greenwich Town Mount Kisco
Greenwich	Greenwich Academy	Kristin Gannon	3011	LS	2	Spider Silk Amino Acid Composition and Its Impact on Structure Function: A Novel Computational Approach.	Student(s) Helena Servin-DeMarrais	Grade 11	Town Westport
Greenwich	Greenwich Academy	Dr. Patrick Ashby	6008	PS	1	Using Fractal Metamaterials with Non-Integer Dimensionality to Manipulate the Propagation of Acoustic Waves	Student(s) Natalie Shell	Grade 11	Town Greenwich
Greenwich	Greenwich High School	Andrew Bramante	3020	LS	2	Design of a Rapid, Temperature-Independent, Highly-Accurate Dual-Antigen COVID-19 Detection Card	Student(s) Steven Blank	Grade 11	Town Greenwich

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Greenwich	Greenwich High School	Andrew Bramante	3075	LS	2	Colorimetric Smartphone-Based Detection of Salivary SOD2 on Photonic Opal Structures for the Rapid Diagnosis of Hepatocellular Carcinoma	Student(s) Halla Clausi	Grade 12	Town Cos Cob
Greenwich	Greenwich High School	Andrew Bramante	6040	PS	1	Increasing Aerofoil Lift via Artificial Amplification of the Coanda Effect using Heat	Student(s) Timothy Drinkall	Grade 12	Town Old Greenwich
Greenwich	Greenwich High School	Andrew Bramante	6086	PS	3	Generalized Correction of Spatially and X-Z Correlated Errors through Adaptive Minimum-Weight Perfect Matching Topological Algorithms	Student(s) Samuel Florin	Grade 12	Town Greenwich
Greenwich	Greenwich High School	Andrew Bramante	3018	LS	1	Linking Continued Exposure to E-cigarette Vapor Constituents with Chronic Obstructive Pulmonary Disease	Student(s) Hannah Goldenberg	Grade 12	Town Old Greenwich
Greenwich	Greenwich High School	Andrew Bramante	3037	LS	1	Rapid, Noninvasive, Fluorescence-Based Detection for Elevated Levels of Nitric Oxide in Exhaled Breath, As a Marker for Hazardous PM2.5 Exposure	Student(s) Ambika Grover	Grade 10	Town Riverside
Greenwich	Greenwich High School	Andrew Bramante	6058	PS	1	Design of a MFe2O4/Bentonite/Graphite Coated Polyurethane Sponge for Economical and Eco-Friendly Oil Spill Recovery	Student(s) Autumn Kim	Grade 12	Town Greenwich
Greenwich	Greenwich High School	Andrew Bramante	3100	LS	1	Identification of Irrationality and Risk Preference Variation In Generational Cohorts Using Proposed Risk Scenarios	Student(s) Adam Kleshchelski	Grade 10	Town Riverside
Greenwich	Greenwich High School	Andrew Bramante	3085	LS	3	Role of ICAM-1 in Facilitating Leukocyte Migration Across the Blood-Brain Barrier in the Progression of Multiple Sclerosis	Student(s) Prathit Kurup	Grade 11	Town Riverside
Greenwich	Greenwich High School	Andrew Bramante	6070	PS	2	Design of a Wearable, Self-Powered, and Supercapacitor Energy-Storing Biosensor for Non-invasive Real Time Blood Alcohol Monitoring via Sweat	Student(s) Madeline Minichetti	Grade 10	Town Greenwich
Greenwich	Greenwich High School	Andrew Bramante	3107	LS	1	Inhibition of Covid-19 Respiratory Complications Via an R-954 Peptide Bradykinin 1 Receptor Antagonist	Student(s) Ella Moore	Grade 11	Town Greenwich
Greenwich	Greenwich High School	Andrew Bramante	3025	LS	1	Low-Pressure Application of Metal Nanoparticles to Soybean Seeds to Provide Increased	Student(s) Uma Pendkar	Grade 12	Town Old Greenwich

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Greenwich Greenwich High School Mr. Andrew Bramante

3111 LS 1 Prolonged, Smart Treatment of Multi-Drug Resistant Bacteria of Chronic Wounds via an EGCG-AgNP HydroMed Dressing

Student(s) Yurika Sakai

Grade 10 Town Greenwich

Greenwich Greenwich High School Andrew Bramante

6018 PS 2 Eco-friendly Remediation of Arsenic from Contaminated Water Resources Using Iron Fortified Spinach Roots and Biochar

Student(s) Elizabeth Wallace

Grade 10 Town Greenwich

Greenwich Sacred Heart Greenwich Joan Fei

6041 PS 1 Testing an Activated Carbon Cloth Filter to Reduce the Prevalence of Phosphates and Nitrates in the Long Island Sound

Student(s) Abby Barnett

Grade 11 Town Darien

Greenwich Sacred Heart Greenwich Joan Fei

3055 LS 3 Testing for the Presence of Antibiotics in Poultry

Student(s) Grace Coale

Grade 12 Town Stamford

Greenwich Sacred Heart Greenwich Joan Fei

3054 LS 1 Surveying Adolescent Public Opinion and Knowledge on Nuclear Energy

Student(s) Emma Rose Connolly

Grade 12 Town Yonkers

Greenwich Sacred Heart Greenwich Ms. Fei

3043 LS 1 The Effect of Applied Glucose on Moisture Retention and Growth of Saplings After Simulated Forest Fires.

Student(s) Regina Finn

Grade 11 Town Old Greenwich

Greenwich Sacred Heart Greenwich Joan Fei

6003 PS 2 Uncovering Abnormalities in Asteroids Using Asteroid Occultation

Student(s) Katherine May

Grade 10 Town Wilton

Greenwich Sacred Heart Greenwich Alycia Crane

3039 LS 3 Testing for Arsenic Contamination in Well, Municipal, and Agricultural Sources

Student(s) Sam Novak

Grade 12 Town stamford

Greenwich Sacred Heart Greenwich Joan Fei

3105 LS 3 The Effects of Vitamin B9 on the Health and Lifespan of Tenebrionidae, the Darkling Beetle

Student(s) Fatima Scheggia

Grade 12 Town Old Greenwich

Guilford Guilford High School Luke Rosnick

6035 PS 3 Impact of Holidays and Other Celebrations on Spread of COVID-19

Student(s) Jason Li

Grade 9 Town Guilford

Guilford Guilford High School Luke Rosnick

6001 PS 1 Assessing the relationship between COVID-19 prevalence and optimal pool testing size

Student(s) Jerry Li

Grade 11 Town Guilford

Guilford Guilford High School Dr. James Carlson

6023 PS 2 Developing a More Consistent Renewable Energy Source

Student(s) Michael Neiss

Grade 10 Town Guilford

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Hamden Hamden Hall Country Day School Gina D'Angelo
3081 LS 2 Influence of COVID-19 pandemic on swimming performance
Student(s) Evan Huang **Grade 10** **Town Guilford**

Hamden Hamden Hall Country Day School Frank Gasparro
6077 PS 2 Using SiO₂ Spray to Reduce Microplastics Dissolved Into the Oceans
Student(s) Leo Southam **Grade 10** **Town Shelton**

Hamden Sacred Heart Academy Dr. Sibani Sengupta
3051 LS 2 Analysis of COVID-19 Treatment Options- Ayurvedic and Allopathic: Possible Combination Therapy Design
Student(s) Mehr Chhatre **Grade 11** **Town Hamden**

Hamden Sacred Heart Academy Elizabeth Christophy
3001 LS 2 Cyanobacteria and Its Effect on Elephant Population
Student(s) Megan Doyle **Grade 10** **Town Cheshire**

Hamden Sacred Heart Academy Elizabeth Christophy
3006 LS 3 Transmission of COVID-19 Through Aerosols Spread by Musical Instruments
Student(s) Gianna Gassira **Grade 10** **Town North Branford**

Hamden Sacred Heart Academy Dr. Christophy
6090 PS 2 Space X; Friend or Foe
The Starlink Operation and its Potentially Devasting Effects.
Student(s) Grace Gogliettino **Grade 10** **Town New Haven**

Hamden Sacred Heart Academy Sibani Sengupta
3102 LS 2 Forest Fires Fuel Droughts
Student(s) Emma Kirck **Grade 10** **Town Orange**

Hamden Sacred Heart Academy Pamela Brownell
3068 LS 3 CO₂ Emissions to Polar Bears: How Reducing CO₂ Emissions Can Protect The Ursus Maritimus
Student(s) Alexandra Van Gelder **Grade 10** **Town Branford**

Hartford Environmental Sciences Magnet School Mrs. Hays
2510 L8 1 COVID-19's Impact on Water Quality in Recreational Areas Along the Long Island Sound Coastline
Student(s) Isabella D'Agostino **Grade 8** **Town New Brittan**

Hartford Environmental Sciences Magnet School MS. HAYS
2511 L8 1 Dog- Be Gone- Plastic: An evaluation of dog waste bag materials and biodegradation
Student(s) Patroklos Pitsoulis **Grade 8** **Town EAST HARTFORD**

Hartford Environmental Sciences Magnet School Rebecca Hays
2516 L8 3 The impacts of the presence of Canada Geese (Branta Canadensis) on the water quality in local ponds and lakes.
Student(s) Eva Quijada **Grade 8** **Town Middletown**

Hartford Renzulli Academy Ms. Teawdatwan
5010 P7 2 How Fast Can Fabrics Dry?
Student(s) Dorian Ciscel **Grade 7** **Town Hartford**

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Hartford Renzulli Academy Foifon Teawdatwan
5516 P8 2 Fingerprint Preservation
Student(s) Melinda Das **Grade 8** **Town Hartford**

Hartford Renzulli Academy Foifon Teawdatwan
2003 L7 3 Do gender and age affect smiling
Student(s) Amaris DeRosia-Estwick **Grade 7** **Town Enfield**

Hartford Renzulli Academy Foifon Teawdatwan
5507 P8 2 Rusting Nails
Student(s) Amanda Eneh **Grade 8** **Town Windsor**

Kensington St. Paul School Stacey Herbette
2009 L7 2 Does Color Affect Memory
Student(s) Ciara Colon **Grade 7** **Town Berlin**

Kensington St. Paul School Ms. Herbette
5011 P7 2 What Material Conducts Electricity Best?
Student(s) Luke Kelly **Grade 7** **Town Middletown**

Kent Kent School Kevin Saxton
6075 PS 3 Wildlife Recognition from Camera Trap Data using Computer Vision Algorithms
Student(s) Yuanqin (Albert) Dai **Grade 11** **Town Newton**

Kent Kent School Michael Green
6089 PS 2 Influence of magnetic field on the viscosity of fluids doped with conducting and non-conducting particulates
Student(s) Shaun Gu **Grade 11** **Town Beijing**

Kent Kent School Jesse Klingebiel
3086 LS 2 Examining the energy efficiency of variations of Synechocystis nigrescens and Shewanella oneidensis bioinks in biophotovoltaic cells
Student(s) Youngju Jang **Grade 11** **Town Holbrook**

Kent Kent School Jesse Klingebiel
6072 PS 1 Exoskeleton Hand Based on MMG Signals for Partially Paralyzed Patients
Student(s) Siyi Lu **Grade 10** **Town Kent**

Manchester Manchester High School Wendy Turek
3072 LS 1 The Effect of Dissolved Flavonoid Supplements on the Chelation of Iron in a Solution
Student(s) Paige Gagnon **Grade 12** **Town Manchester**

Manchester Manchester High School Wendy Turek
3032 LS 2 The Effects of Bacillus and Trichoderma Inoculant and Lepidium Sativum on
Student(s) Alexandra Hamza **Grade 11** **Town Manchester**

Manchester Manchester High School Wendy Turek
6033 PS 3 Lego Prosthetic Arm
Student(s) Hina Naem **Grade 12** **Town Manchester**

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Manchester Manchester High School Wendy Turek

3066 LS 3 Tracking Changes in the Mycobiota of Human Feet Over the Course of Seven Months
Student(s) Shannon Nesta Grade 12 Town Manchester

Manchester Manchester High School Ms. Turek

3021 LS 2 The Cognitive Abilities of Bearded Dragons
Student(s) Giuliana Squatrito Grade 12 Town Manchester

Middlebury Westover School Sarah Michaelson

3074 LS 2 Discussing possible side effects of non-small cell lung cancer drugs based on active ingredients and their inhibitory impacts in relation to other pathways and similar structures.
Student(s) Sarah Adams Grade 11 Town Sandy Hook

Milford Jonathan Law High School Christine Bouchard

3030 LS 3 Studies on the ecological effects of COVID-19 and its future implications on the emergence of disease, repercussions on habitats, and presence of wildlife
Student(s) Meghana Cheela Grade 12 Town Milford

Milford Jonathan Law High School Christine Bouchard

3059 LS 3 Studies on the effects and trends of genes and their association to diseases and how certain environmental factors may play a significant role
Student(s) Sreeya Gudlavalleti Grade 12 Town Milford

Milford Jonathan Law High School Christine Bouchard

3095 LS 3 Studies on the progression of vaccine development trends through different pandemics and their comparisons to the COVID-19 vaccine
Student(s) Srivارش Gudlavalleti Grade 9 Town MILFORD

Milford Jonathan Law High School Christine Bouchard

3003 LS 3 Exploring Pandemics
Student(s) Moulika Sivalenka Grade 9 Town Milford

Milford Jonathan Law High School Christine Bouchard

3042 LS 3 What do seasonal Multiple Sclerosis development patterns indicate about the disease, and how can we use this information to reduce the influence of environmental factors?
Student(s) Rachna Vipparla Grade 12 Town Milford

Milford Lauralton Hall Dr. Susan Cavar

3103 LS 2 Analysis of the Identity of the Genotype 4 Eurasian Avian-like H1N1 Virus and an Epidemiological Study of Possible Human Transmission Leading to a Pandemic
Student(s) Anika Thite Grade 11 Town Milford

New Haven Engineering & Science University Magnet School Roger Rushworth

6032 PS 2 Gravity-Assisted Energy Conversion: Improving the Feasibility of Mechanically Powered Electricity Generators
Student(s) Aiman-Imran Anuar Grade 11 Town West Haven

New Haven Engineering & Science University Magnet School Roger Rushworth

6066 PS 3 Natural Function Restrictions, Identities, and Properties to Determine Finite Cardinalities of Solutions for Real-Valued Functions Projected onto Natural Space
Student(s) Praneeth Chitirala Grade 10 Town Milford

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New Haven Engineering & Science University Magnet School Roger Rushworth
5501 P8 1 Implementation of Metal-Oxide-Induced Agglomeration and Electromagnetic Filtration for Removal of Microplastics
Student(s) Snigtha Mohanraj **Grade 8** **Town** Ansonia

New Haven Engineering & Science University Magnet School Roger Rushworth
3069 LS 3 EVALUATION OF A MODEL FOR URBAN VEGETATION BARRIERS' EFFECTS ON AIR POLLUTION
Student(s) Ray Nassar **Grade 10** **Town** Milford

New Haven Hopkins School Nathaniel Peters
6076 PS 1 Developing Tetherless Motion Tracking System for Wandering Insects Using an Omni-directional Servosphere Robot
Student(s) Nicholas Lee **Grade 10** **Town** Trumbull

New Haven Hopkins School Dr. Phillip Stewart
6092 PS 2 The Core of Neptune: Discovery of the First Sub-Neptune Planet with a Stripped Envelope
Student(s) David Zhou **Grade 12** **Town** WESTPORT

New Haven Sound School Chuck Mulligan
3029 LS 3 Comparison of Potential for Coastal Marine Macroalgae to Absorb Excess Nitrate in Runoff
Student(s) Luke DeCola **Grade 9** **Town** North Branford

New Haven Sound School Charles Mulligan
3008 LS 3 Potential Use of Marine Microalgae to Absorb Excess Salt Road Runoff
Student(s) Zachary Succow **Grade 9** **Town** Seymour

New London New London High School David Brown
6059 PS 3 The Effect of CPU Core Count on PC Performance
Student(s) Krishveer Grewal **Grade 10** **Town** Waterford

New London New London High School Pourmoghadam Mercedeh
3091 LS 3 Active Aeration of Hydroponic Systems.
Student(s) Andrew McLaughlin **Grade 11** **Town** New London

Norwich Norwich Technical High School Aleatha Pelloni
3518 LST 3 Purifying protein in C. Elegans to match the human protein
Student(s) Kyle Caswell **Grade 11** **Town** Gales ferry
madison tweedy **Grade 11** **Town** Gales ferry

Norwich Norwich Technical High School Aleatha Pelloni
3505 LST 2 The Effects of Sugar Diets in Drosophila melanogaster
Student(s) Ava Johnson **Grade 11** **Town** oakdale
Elkin Garcia **Grade 11** **Town** newlondon

Norwich Norwich Technical High School Aleatha Pelloni
6503 PST 2 Sucrose vs Drosophila Melanogaster Hyperactivity
Student(s) Janessa Reels **Grade 11** **Town** Taftville
CaityInne Howard **Grade 11** **Town** Oakdale

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Norwich Norwich Technical High School Aleatha Pelloni

3509 LST 3 Converting Natural Byproducts Into Soil Compost For Crops Using The Bokashi Method

Student(s) Luis Salazar **Grade** 11 **Town** Willimantic
Nina Mendez **Grade** 11 **Town** Sterling
Gabiella Fedus **Grade** 11 **Town** Oakdale

Norwich Norwich Technical High School Aleatha Pelloni

3519 LST 3 Testing GMO Crops for Continued RNAi Ampicillin-Resistant.

Student(s) Richard Savoie **Grade** 11 **Town** Colchester
Ryan Riley **Grade** 11 **Town** Lisbon

Norwich Norwich Technical High School Aleatha Pelloni

3508 LST 2 The antimicrobial effects of copper on antibiotic resistant strains of bacteria.

Student(s) Nola Smith **Grade** 11 **Town** Salem
Georgia Fowler **Grade** 11 **Town** Scotland

Orange Southern CT Hebrew Academy Theresa Pearce

2518 L8 3 Let's Get Scrubbing!

Student(s) Chaya'le Wilhelm **Grade** 8 **Town** Milford

Pawcatuck St. Michael School Anna-Helene Grossomanides

2505 L8 2 Farmer's Market vs. Supermarket Vegetables: Who has Higher Nutrient Content?

Student(s) Emerson Baltrukonis **Grade** 8 **Town** Pawcatuck

Pawcatuck St. Michael School Anna-Helene Grossomanides

5008 P7 1 Remote Learning on a Budget

Student(s) Joseph Benin **Grade** 7 **Town** Pawcatuck

Pawcatuck St. Michael School Anna-Helene Grossomanides

5001 P7 1 Oxidation Proclamation

Student(s) John Bennett **Grade** 7 **Town** Stonington

Pawcatuck St. Michael School Anna Grossomanides

5509 P8 1 Are All Masks Equal?

Student(s) Katelyn Cadmus **Grade** 8 **Town** Pawcatuck

Pawcatuck St. Michael School Anna Grossomanides

5505 P8 3 How much water can a Solar-powered water desalination unit produce?

Student(s) Cameron Cornelius **Grade** 8 **Town** Bradford

Pawcatuck St. Michael School Mrs. Anna Grossomanides

2016 L7 2 Do You Get More Bees With Honey?

Student(s) Jason Spiers **Grade** 7 **Town** North Stonington

Redding CT-STEM Catherine Piscitelli

3031 LS 2 The Effect of Different Types of Media on Empathetic Behavior

Student(s) Shreya Hebbar **Grade** 10 **Town** Woodbridge

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Redding CT-STEM Catherine Piscitelli
3071 LS 2 The Role of Gene Expression in Non-Homologous End Joining Pathways in the Progression of Ovarian Cancer
Student(s) Ethan Lavi **Grade** 12 **Town** Woodbridge

Redding CT-STEM Catherine Piscitelli
3106 LS 3 The Effect of Organic Duckweed versus Chemical Fertilizer on the Growth of Lactuca sativa and Ortho-Phosphate Runoff
Student(s) Maggie Liu **Grade** 11 **Town** Woodbridge

Redding CT-STEM Catherine Piscitelli
3504 LST 1 Development of a WatchOS Application that uses HRV and Vibrational Pulses to Reduce Stress
Student(s) Sheehan Munim **Grade** 10 **Town** Orange
Allen Liu **Grade** 10 **Town** Woodbridge

Redding CT-STEM Catherine Piscitelli
6061 PS 2 Creating an Algorithm that Automatically Scores Tissue Images Like a Pathologist
Student(s) Iris Yan **Grade** 9 **Town** Woodbridge

Redding Joel Barlow High School Paul Testa
6048 PS 3 The Effect of Various Ammonium Nitrate Concentrations on Rates of Transpiration in Phaseolus lunatus to Ameliorate Drought Tolerance
Student(s) Reed Cooper **Grade** 11 **Town** Easton

Redding Joel Barlow High School Paul Testa
3004 LS 1 The Use of Pleurotus Ostreatus As Mycoremediation for Poly-Lactic Acid Plastic In Landfills.
Student(s) Alexis Ogrinz **Grade** 11 **Town** Easton

Ridgefield Ridgefield High School Patrick Hughes
6015 PS 3 Downsizing Nuclear Fusion Devices to a More Manageable Size
Student(s) Jake Amara **Grade** 12 **Town** RIDGEFIELD

Ridgefield Ridgefield High School Mr. Gleason
3520 LST 2 The Socio-economic Implications of COVID-19 on the Ridgefield, Connecticut Community
Student(s) Caroline Clifford **Grade** 12 **Town** Ridgefield
Julia Grey **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason
3501 LST 3 The Effect of Age and Duration of Routine Exercise on the Development and Risk of Dementia
Student(s) Emma Daugherty **Grade** 12 **Town** Ridgefield
Ainsley Brady **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason
6511 PST 1 Analyzing the Ability of the SCiO Spectrometer to Detect the Presence of Nutrients in Soil
Student(s) Megan Dunphy **Grade** 12 **Town** Ridgefield
Kelsi Wilkenloh **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Patrick Hughes
3510 LST 1 A Simple Model of guideRNA for CRISPR-Cas9
Student(s) Claire Griffin **Grade** 12 **Town** Ridgefield
Isabel Voellmicke **Grade** 12 **Town** Ridgefield

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Ridgefield Ridgefield High School Ryan Gleason
3060 LS 3 Studying the Behavior of Dogs in Relation to COVID-19
Student(s) Isabel Griffith **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason
3012 LS 1 Analysis of regenerated mouse digit tips following modulation of Amphiregulin expression
Student(s) Luke Hisiger **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason
6083 PS 2 Comparing the Efficiency of Autonomous and Regular Vehicles With New Requests
Student(s) Danlin Luo **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Mr. Gleason
6002 PS 1 Comparing wood/plastic composite & hemp/PLA composite to natural materials to determine the best moisture resistant bioplastic
Student(s) Samantha McLemore **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason
3058 LS 3 Effects of Climate Change and Environmental Variability on High Altitude Aspen Degradation
Student(s) Ethan Mills **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason
3002 LS 1 Exploring p53 Mutation Status and Clinical Outcome in Ovarian Cancer
Student(s) Devansi Sinha **Grade** 12 **Town** Ridgefield

Riverside Eastern Middle School Ms. Iannacone
2519 L8 1 Can trust kill? Covid-19 and Social Capital
Student(s) Zara Haque **Grade** 8 **Town** Riverside

Sandy Hook Newtown High School Timothy DeJulio
3015 LS 2 Bacterial decomposition and consumption of PET plastics as a sole metabolic energy source
Student(s) Aidan Hall **Grade** 12 **Town** Sandy Hook

Sandy Hook Newtown High School Timothy DeJulio
6004 PS 2 Bird Identification Using Python and Keras CNN
Student(s) Lucca Lapierre **Grade** 11 **Town** Newtown

Sandy Hook Newtown High School Timothy DeJulio
6050 PS 2 System for Underwater Passive Identification of Acoustic Signatures of the Delphinapterus leucas
Student(s) Isha Mendiratta **Grade** 11 **Town** Newtown

Sandy Hook Newtown High School Timothy DeJulio
6012 PS 2 Modular Robotic System for Multipurpose Robots
Student(s) Benjamin Ochs **Grade** 11 **Town** Sandy Hook

Sandy Hook Newtown High School Timothy DeJulio
6005 PS 2 Accessible program and system to accurately align a star tracking mount using a DSLR camera.
Student(s) Sam Staubly **Grade** 11 **Town** Newtown

Sandy Hook Newtown High School Tim DeJulio
6093 PS 2 Python Cybersecurity Tool
Student(s) Sanjana Vakacherla **Grade** 12 **Town** Newtown

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Simsbury Westminster School Susie Bailey
6085 PS 3 Hazel, an olfactory mood enhancer, alarm clock, and safety monitor
Student(s) Jiwoong Park **Grade** 12 **Town** Brooklyn

Stamford Bi-Cultural Hebrew Academy Christopher Graseck
1005 LT 3 Droughts Effect on Plants
Student(s) Hannah Cohen **Grade** 7 **Town** Stamford
Rebecca Forti **Grade** 7 **Town** Woodbridge

Stamford Bi-Cultural Hebrew Academy Christopher Graseck
1006 LT 1 Studying Four Climate Change Factors that Impact Plant Growth
Student(s) David Isaacs **Grade** 7 **Town** Stamford
Gabriel Haron **Grade** 7 **Town** Stamford

Stamford King School Victoria Schulman
3034 LS 2 Mispositioned Myonuclei Likely Contribute to Muscle Fatigue
Student(s) Giovanna Armetta **Grade** 11 **Town** stamford

Stamford King School Victoria Schulman
3084 LS 1 Non-Canonical Base Pairing in Self-Assembling DNA Crystals
Student(s) William Bernfeld **Grade** 11 **Town** Stamford

Stamford King School Victoria Schulman
3007 LS 3 Genes Dysregulated in Obesity Increase the Likelihood of Breast Cancer Development
Student(s) Jacob Boyar **Grade** 12 **Town** Ridgefield

Stamford King School Victoria Schulman
6073 PS 2 The Electrochemical Oxidation of Methane in a Fuel Cell Utilizing Carbon Sequestration
Student(s) Samuel Hillenmeyer **Grade** 12 **Town** Stamford

Stamford King School Victoria Schulman
3026 LS 3 Deep venous intervention surgeries for lower extremities in out-patient offices do not create additional complications compared to hospital setting
Student(s) Nadia Kucher **Grade** 12 **Town** Stamford

Stamford King School Victoria Schulman
6043 PS 3 Using an Automated Drone and Camera System to Improve the Safety of Schools and Other Populated Areas in a Cost Effective Manner
Student(s) Alexander Lim **Grade** 12 **Town** Old Greenwich

Stamford King School Victoria Schulman
6028 PS 2 Thermoelectric heating and cooling of an electric vehicle using phase change material.
Student(s) Adam Nomani **Grade** 11 **Town** Stamford

Stamford King School Victoria Schulman
3088 LS 1 Feraheme ® works synergistically with several ROS-inducing drugs for the treatment of pancreatic adenocarcinoma
Student(s) Wafa Nomani **Grade** 12 **Town** STAMFORD

Stamford King School Victoria Schulman
6053 PS 3 Clustering of TiMnOx XAFS Data
Student(s) John Russell **Grade** 11 **Town** Riverside

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Stamford King School Victoria Schulman
3057 LS 2 Escherichia coli Utilizes the Fe³⁺ ion for Protection Against LL-37
Student(s) Joseph Winterlich **Grade** 12 **Town** Stamford

Stamford Bi-Cultural Hebrew Academy Christopher Graseck
1003 LT 2 The Effect of Pollutants on Brine Shrimp [Artemia salina] Hatching
Student(s) Asher Marcus **Grade** 7 **Town** Westport
Eddie Janush **Grade** 7 **Town** Stamford

Suffield Suffield High School Melanie Brown
3513 LST 3 Creating Energy with Household Food Waste
Student(s) John-Henry Burke **Grade** 11 **Town** Suffield
Isabella Hinkle **Grade** 11 **Town** Suffield

Suffield Suffield High School Melanie Brown
6062 PS 3 MetaProgramming: Code That Creates Code
Student(s) Joseph Colangelo **Grade** 9 **Town** Suffield

Suffield Suffield High School Melanie Brown
6029 PS 3 Strength of Environmentally Friendly Aggregates in Concrete
Student(s) Peter Danise **Grade** 11 **Town** Suffield

Suffield Suffield High School Melanie Brown
3099 LS 2 The Study of Demodex Folliculorum and Demodex Brevis Mite Population and Bacteria Growth in Relation to Wearing a Face Mask
Student(s) Ana-Lois Davis **Grade** 9 **Town** Broad Brook

Suffield Suffield High School Melanie Brown
3047 LS 2 Extensive Look Into the Rising Maternal Morality of African American Women and the Factors Behind It
Student(s) Laila Lawson **Grade** 12 **Town** West Suffield

Suffield Suffield High School Melanie Brown
3092 LS 3 Improving diets of astronauts and decreasing the amount of space taken up in long duration spaceflight
Student(s) Sarah Michael **Grade** 9 **Town** West Suffield

Suffield Suffield High School Melanie Brown
6507 PST 3 Possibilities for Artificial Gravity.
Student(s) Jack Shanks **Grade** 11 **Town** Suffield
Wyatt Cashman **Grade** 11 **Town** Suffield

Suffield Suffield High School Melanie Brown
3507 LST 1 The Effects of Extra Exposure to Blue Light, due to Distance Learning, on Different Age Groups
Student(s) Noor Sharaf **Grade** 11 **Town** Suffield
Emma Conway **Grade** 9 **Town** Suffield

Suffield Suffield High School Melanie Brown
6007 PS 3 Utilization of Self- Sanitizing Hydraulic Arm for Reduction of Illness Transmission
Student(s) Haley Young **Grade** 12 **Town** West Suffield

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Suffield Suffield High School Melanie Brown
3094 LS 3 Heating oceans and their threats to marine life.
Student(s) Shannon Young Grade 9 Town West Suffield

Thomaston Thomaston High School Bryan Holmes
3098 LS 3 Advances In Water Quality
Student(s) Hannah Lawlor Grade 11 Town Thomaston

Thomaston Thomaston High School Bryan Holmes
6054 PS 3 The Effect of Limb Darkening on the Sun During Solar Flares and Coronal Mass Ejections
Student(s) Julia Pupriqi Grade 11 Town Thomaston

Thomaston Thomaston High School Mr. Holmes
6031 PS 3 Absorbent/Refrigerant Pairs used for Heat Pumps and Heat Rejection Technology on Spacecraft.
Student(s) Connor Riley Grade 11 Town Thomaston

Thomaston Thomaston High School Bryan Holmes
6045 PS 2 Investigation of Unexplained Intermediate Freeze Point Characteristics as Tested by a Newly Developed Multispectral Optical Biojet Fuel Freeze Point Analyzer.
Student(s) Zachary Stevenson Grade 11 Town Thomaston

Thomaston Thomaston High School Mr. Bryan Holmes
6074 PS 2 Measuring Masses of Stars
Student(s) Dylan Walmsley Grade 11 Town Thomaston

Trumbull Christian Heritage School Dr. Dan Cote
3108 LS 2 Using Virtual Screening to Identify Drug Candidates to Target SARS-CoV-2
Student(s) Luke Audie Grade 11 Town Cheshire

Trumbull Christian Heritage School Dan Cote
6060 PS 1 Building a Machine to Test Whether Certain Facemasks Are Protective or Not
Student(s) Maxwell Barbagallo Grade 11 Town Sandy Hook

Trumbull Christian Heritage School Dan Cote
5503 P8 2 Determination of the optimum stoichiometric ratio of H₂O₂/KI reaction for the production of gas volume
Student(s) Max Kim Grade 8 Town Westport

Trumbull Christian Heritage School Daniel Cote
6014 PS 3 Renewable Energy: Converting Vibrational Motion
Student(s) Natania Muriel Grade 11 Town Shelton

Trumbull Christian Heritage School Dan Cote
6020 PS 2 Design and Fabrication of a Thermoelectric Generator to Charge a Phone Using Simple Fuels for Remote Areas
Student(s) Nathan Nagel Grade 11 Town Caucasian/White

Uncasville Saint Bernard School Nicole Nelson
6087 PS 2 The Hat and the Mouse: A Practical Hands-Free Method to Control a Personal Computer
Student(s) Payton Noe Grade 10 Town East Lyme

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Wallingford Choate Rosemary Hall Kyle Di Tieri
6063 PS 2 Development of an autonomously driving robot which can remotely scan body temperature to screen for COVID-19
Student(s) Ryan Kim **Grade** 10 **Town** Wallingford

Wallingford Choate Rosemary Hall Jan Cook
3014 LS 2 Combatting Nitrogen Pollution and Eutrophication Using Denitrifying Bioreactors
Student(s) Jessica Wu **Grade** 11 **Town** Wilton

Westport Greens Farms Academy Dr. Mathieu Freeman
3096 LS 2 The Impact of Essential Oils on Food Preservation Throughout the Fast Food Industry
Student(s) Zoe Koskinas **Grade** 12 **Town** Fairfield

Westport Greens Farms Academy Dr. Mathieu Freeman
6096 PS 2 Exploring the Rate of Photodegradation of Different Microplastics
Student(s) Hannah MacDonald **Grade** 12 **Town** Stamford

Westport Greens Farms Academy Mathieu Freeman
6026 PS 2 The Effect of pH on Chlorophyll-a Concentration and the Net Primary Productivity of Phytoplankton
Student(s) Lucy Nelson **Grade** 12 **Town** Westport

Westport Greens Farms Academy Mathieu Freeman
6021 PS 2 The Fabrication of a Cost-Effective Paper LIB with Increased Voltage and Longevity
Student(s) Jackson Rassias **Grade** 12 **Town** Fairfield

Windsor Academy of Aerospace and Engineering Dr. Lili Aramli
3112 LS 2 Optimal Light Conditions for the Growth of Biofuel Algae
Student(s) Isabel Edelstein **Grade** 12 **Town** Plantsville

Windsor Academy of Aerospace and Engineering Lili Aramli
3512 LST 3 Planaria Regeneration
Student(s) Shreya Kulkarni **Grade** 11 **Town** Middletown
Calah Williams **Grade** 11 **Town** West Hartford

Windsor Academy of Aerospace and Engineering Dr. Aramli
3053 LS 3 The Effect of Artificial and Natural Lighting on Dinoflagellate Growth and Bioluminescence
Student(s) Samary Nieves **Grade** 11 **Town** Hartford

Windsor Academy of Aerospace and Engineering Lili Aramli
3521 LST 3 Effects of Microplastics on the Regeneration of Organisms
Student(s) Ashley Rinaldi **Grade** 12 **Town** Enfield
Kalia Brown **Grade** 12 **Town** Windsor

Windsor Madina Academy Mr. Timothy Coleman
4005 PT 1 Self-Sustaining Indoor Garden
Student(s) Noora Khaled **Grade** 7 **Town** Suffield
Bayan Abed **Grade** 7 **Town** Rocky Hill
Zainah Khaliq **Grade** 7 **Town** Windsor

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Preliminary Judging Results

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[Proj#] [FCat] [Honors] [Project Title]

Windsor Madina Academy Mr. Tim Coleman
4006 PT 1 The Better Solar Panel

Student(s) Hamza Mhaidat **Grade 7** **Town** Windsor Locks
Shah Sheikh **Grade 7** **Town** West Hartford
Adam Afolabi **Grade 7** **Town** Windsor

Windsor Madina Academy Mr. Timothy Coleman
2515 L8 3 Building and Testing a Simple Portable Constructed Wetland to Purify Greywater

Student(s) Tasneem Zoghol **Grade 8** **Town** Enfield

Windsor The Loomis Chaffee School Mark LeBlanc
3005 LS 1 Probing Wolbachia Genomes with Machine Learning Algorithms

Student(s) Sean Lee **Grade 11** **Town** Los Altos

Windsor The Loomis Chaffee School Koby Osei-Mensah
6022 PS 3 Incorporating Pre-Game Rankings to Colley, Massey, and Elo

Student(s) Jiayin Liu **Grade 12** **Town** Waterloo

Windsor The Loomis Chaffee School Koby Osei-Mensah
6069 PS 2 Comparing Algorithms to Solve the Exact Cover Problem with Sudoku

Student(s) Aresh Pourkavoos **Grade 12** **Town** Avon

Windsor The Loomis Chaffee School Mr. Osei-Mensah
6013 PS 2 Identifying the host galaxies of 2175 A quasar absorbers.

Student(s) Benson Wang **Grade 10** **Town** San Ramon

Windsor The Loomis Chaffee School Mark LeBlanc
6091 PS 3 Comparison of Machine Learning Models for Short-Term Forecasting of Solar Power Generation Output:
A Case Study

Student(s) Derek Yuan **Grade 11** **Town** Branchburg

Woodbridge Amity Regional High School Catherine Piscitelli
6057 PS 1 Designing a Ground Collision Avoidance System to Inhibit Controlled Flight Into Terrain Accidents For
Single Engine Aircraft

Student(s) Mason Beaudette **Grade 11** **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
6024 PS 2 Development of a Low-Cost, Expandable Boot Aimed to Adjust to Multiple Sizes and Last Multiple Years.

Student(s) Aditi Chalasani **Grade 11** **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
6518 PST 2 Removal of Phenol from Drinking Water utilizing Food-Derived Activated Carbon (AC) Combined with
Nickel (II) Oxide

Student(s) Eugene Chang **Grade 12** **Town** Orange
Jacob Silbert **Grade 12** **Town** Bethany

Woodbridge Amity Regional High School Catherine Piscitelli
6506 PST 3 Determining the Trend of Nitrogen Deposition Over Time Near Lake Erie and Its Influence on Lake
Eutrophication

Student(s) Caroline Chen **Grade 12** **Town** Orange
Christian Chen **Grade 12** **Town** Orange

Conn. Science & Engineering Fair

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Woodbridge Amity Regional High School Catherine Piscitelli

3109 LS 3 The Effect of Genotype of DOT1L On Cell Division

Student(s) Srilekha Kadimi **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

6052 PS 3 Creating a DDoS attack mitigation system using SYN cookies to ensure access to critical election information

Student(s) Jade Krukar **Grade** 11 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

6513 PST 1 Creating an Optical Fiber Daylighting System for Hydroponics With Raspberry Pi Active Dual Axis Solar Tracking

Student(s) Philip London **Grade** 12 **Town** Orange

Adarsh Kongani **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

6025 PS 2 The Manufacture and Performance Evaluation of a Locking Container to Eliminate the Distraction of Phones While Driving

Student(s) Scott Lowder **Grade** 11 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

6039 PS 1 Creating a Smaller and More Portable Vertical Axis Wind Turbine to Increase Accessibility and Usage of Wind Energy Harvesting Devices

Student(s) Brodey Lu **Grade** 11 **Town** Orange

Woodbridge Amity Regional High School Mrs. Catherine Piscitelli

3083 LS 2 Analyzing the Relationship Between Acceptance of Virtual Communications Mediums and Depression Proneness, FOMO, and Social Anxiety

Student(s) Kevin Lu **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

3516 LST 2 The Extent of Universal Grammar Theory in Assisting English Grammar Acquisition for Post-Puberty Second Language Learners

Student(s) Arnav Paliwal **Grade** 12 **Town** Woodbridge

Andrew Kim **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

6510 PST 2 Creating a Platform Capable of Conveying News Article Bias

Student(s) Peter Scully **Grade** 12 **Town** Bethany

Joshua Feuerstein **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

6082 PS 2 Comparison of Chemical Exposure from Face Mask Materials Before and After Washing Treatments

Student(s) Allison Su **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

3028 LS 2 The Biofilm Promoting Nature of Bacteriophages in In-Vitro Escherichia coli (E. coli) Biofilms

Student(s) Aiden Tischer **Grade** 11 **Town** Bethany

Woodbridge Amity Regional High School Catherine Piscitelli

6037 PS 2 Designing a Novel Social Distancing Device

Student(s) Shyam Viswanathan **Grade** 12 **Town** Woodbridge

Conn. Science & Engineering Fair

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Woodbridge Amity Regional High School Catherine Piscitelli

6009	PS	3	Algorithm for Object Detection and Avoidance for Drone Swarming
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Student(s) William Wei

Grade 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

3078	LS	1	Using Deep Learning to Efficiently Quantify the Impact of Road Salt Runoff on the Swim Performance of Wood Frog Tadpoles
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Student(s) Mason Zhang

Grade 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

3023	LS	3	Analyzing the Role of Sonic Hedgehog Signaling in Germinal Center B-cell Differentiation by Single-Cell RNA Sequencing
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Student(s) Wendy Zhang

Grade 12 **Town** Woodbridge