



Connecticut Science & Engineering Fair

Quinnipiac University

March 4 - 16, 2024

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]	Student(s)	Grade	Town
Avon	Avon High School	John Salerni	3508	LST	2	Defining the Significance of Inflammation in Atherosclerosis by Examining Cross-Cohort Transcriptomics Using R and Deep Learning Programs	Phydena Liu Lauren Zhang	10 11	Avon Darien
Avon	Talcott Mountain Academy	John Pellino	5009	P7	1	The Aura Project: Landing Rockets at a Model Scale	Kwabena Addai - Boateng	8	East Hartford
Avon	Talcott Mountain Academy	Brigette Zacharczenko	2515	L8	3	Sea Life: Looking Into the Future	Maqueda Green	8	Bloomfield
Avon	Talcott Mountain Academy	Brigette Zacharczenko	2502	L8	1	Reducing the Waste of Polyethylene Plastic by Galleria mellonella	Yveson Hsiao	8	Farmington
Avon	Talcott Mountain Academy	John Pellino	2520	L8	1	The Boreabrush	Oliver Lind	8	Harwinton
Avon	Talcott Mountain Academy	Brigette Zacharczenko	2509	L8	1	Will Roaches Direct Other Roaches to Food?	Talia McKeen	8	West Granby
Avon	Talcott Mountain Academy	John Pellino	5003	P7	3	GER - Green Energy Reminder	Arya Samat	7	Avon
Bethel	Bethel High School	Raymond Turek	3001	LS	2	The Effect of Red Light and Aloe Ferox Concentrations on Planarian Regeneration in the Presence of Fresh Spring Water	Nushreth Bhuiyan	12	Bethel
Bethel	Bethel High School	Raymond Turek	3087	LS	3	How does pesticides affect a plants growth?	Alessandra Campolo	12	Bethel
Bethel	Bethel High School	Raymond Turek	3116	LS	2	The Effect of Disinfecting UVC Light Exposure on Bacteria Content, Transparency and Flexibility of Soft Contact Lens vs. the use of Standard Multi-Purpose Cleansing Solution.	Zoe Demo	12	Bethel

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Bethel Bethel High School Raymond Turek
3067 LS 3 Developing a Machine-Learning Based Algorithm regarding Genetic Analysis to Analyze the Genes That Initiate the Thymus Involution.

Student(s) Srirama Desiraju **Grade** 10 **Town** Bethel

Bethel Bethel High School Raymond Turek
6095 PS 2 Using Convolutional Neural Networks to Classify Mars Imagery taken by the HiRISE Camera

Student(s) Aarush Doshi **Grade** 11 **Town** Bethel

Bethel Bethel High School Raymond Turek
6007 PS 2 The Most Efficient Material To Use For A 3D Printed Shoe.

Student(s) Jack Ginin **Grade** 11 **Town** Bethel

Bethel Bethel High School Raymond Turek
3092 LS 2 Optimizing Establishment and Germination of Glycine Max (Soybean) Seedlings Using Biochar and Bacillus Megaterium Seed Coating

Student(s) Juliana Habshey **Grade** 12 **Town** Bethel

Bethel Bethel High School Raymond Turek
3028 LS 2 How the Size of Holes Within a Rubber Mesh Affects the Ability of Emerald Ash Borer Beetles to Penetrate Ash Tree's Bark.

Student(s) Seamus Knauff **Grade** 10 **Town** Woodbury

Bethel Bethel High School Raymond Turek
6056 PS 2 Properties of Ferrofluids

Student(s) Preethika Shenoy **Grade** 10 **Town** Bethel

Bethel Bethel High School Raymond Turek
3047 LS 2 Measuring the Correlation between Air Quality and Respiratory Diseases

Student(s) Jackson Sorbello **Grade** 11 **Town** Bethel

Bethel Bethel High School Raymond Turek
3058 LS 2 Determining How Different Factors Correlate To Amount Of Sleep

Student(s) Niamh Spellman **Grade** 12 **Town** Bethel

Bethel Bethel High School Raymond Turek
6090 PS 1 Investigating the Usage of Computer Microstructure Generation Techniques in the Synthesis of Novel Scale Independent Structures

Student(s) Christopher Zuraw **Grade** 11 **Town** Bethel

Bozrah Fields Memorial School Josh Fish
5513 P8 2 How will temperature affect the mass that a helium balloon can lift?

Student(s) Kallie Bitgood **Grade** 8 **Town** Bozrah

Bozrah Fields Memorial School Josh Fish
1018 LT 2 What Types of Locations Produce the Highest Bacterial Colony Counts at our Local Elementary School?

Student(s) Hannah East **Grade** 7 **Town** Bozrah

Serena BunkerCai **Grade** 7 **Town** Bozrah

Bozrah Fields Memorial School Joshua Fish
4013 PT 1 Oxidation rates of different metals in various liquids and temperatures.

Student(s) Elise Kobelski **Grade** 7 **Town** Bozrah

Benjamin Savoie **Grade** 7 **Town** Bozrah

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Bozrah Fields Memorial School Joshua Fish

5002	P7	2	How do variables affect the enzyme activity and production of gas in elephant toothpaste?
Student(s) Luisyariel Mercado			Grade 7 Town Bozrah

Bridgeport Bassick High School Patricia Pappas

6022	PS	2	Making Clothes Fire-Retardant
Student(s) Darla Viguilla			Grade 11 Town Bridgeport

Bridgeport Blackham School Nancy Hovanec

4002	PT	2	Hovercraft The New Transportation
Student(s) Sebastian Suarez			Grade 7 Town Bridgeport
Student(s) Jayden Perez			Grade 7 Town Bridgeport

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

3015	LS	1	Non-Thermal Induction of Heat Shock Protein 90 to Mitigate Early Oncogenesis With Preserved HSR
Student(s) Chloe Atkins			Grade 12 Town Stratford

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

3123	LS	2	Development of a Unique Carrageenan Based Matrix to Mitigate Hemorrhagic Trauma
Student(s) Camila Borjas			Grade 12 Town Bridgeport

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6046	PS	2	The Analysis of Different Methods on Biochar's Compacity to Pick up Heavy Metals
Student(s) Sophia Clark			Grade 12 Town Monroe

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

3027	LS	1	Using an Experimental Algorithm to Detect Stress in Homarus americanus in Aquaculture
Student(s) Eden Cunningham			Grade 12 Town Southport

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6080	PS	3	Using Ozone-Based Oxidation for Pesticide Detoxification in Aquatic Environments
Student(s) Aiden Deutsch			Grade 12 Town Fairfield

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6060	PS	2	Magnetohydrodynamic (MHD) Salt Water Generator: Harnessing energy from flowing salt water without moving parts
Student(s) Samuel DiVasto			Grade 12 Town Trumbull

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6030	PS	1	Using Sodium Alginate Derived Porous Carbon Material to Increase Capacitance of a Cellulose Matrix
Student(s) Isabella E Silva			Grade 12 Town Bridgeport

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6070	PS	2	Synthesis of Conductive Optical Lenses with Variable Refractive Indices: The Kerr Effect
Student(s) Cole Galla			Grade 12 Town Trumbull

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle

6065	PS	2	Ferric Modified Bamboo Biochar as a Passive Lead (Pb) Remediation Tool in Contaminated Coastal Wetland Sediment
Student(s) Keller Hall			Grade 12 Town Monroe

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle
3110 LS 2 An Analysis of Flavonoids as a Relative Preventative Measure for Basal and Squamous Cell Carcinomas
Student(s) **Eliana Howard** Grade 12 Town Trumbull

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle
3077 LS 1 Utilizing Fucus distichus alginates to develop an enhanced aerosol treatment for Cystic Fibrosis
Student(s) **Mia Nierenberg** Grade 12 Town Stratford

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle
6075 PS 2 Identifying Bias in the American Psyche
Student(s) **Dylan Padua** Grade 12 Town Stratford

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle
3102 LS 1 Engineering of a Soybean oil-based natural clothing dye
Student(s) **Alana Reyes** Grade 12 Town Trumbull

Bridgeport Bridgeport Regional Aquaculture Center Kirk Shadle
3134 LS 2 Acoustic Noise Pollution Affecting Reproduction, Communication, and Behavior of Brine Shrimp
Student(s) **Anne Taylor** Grade 12 Town Fairfield

Bridgeport Fairchild Wheeler Aerospace / Hydrospace Paul Bergquist
3063 LS 3 Clean The Waters
Student(s) **Even Gebretinsae** Grade 10 Town Bridgeport

Bridgeport Fairchild Wheeler Biotechnology Kirk Shadle
3514 LST 2 The Mozart Effect
Student(s) **Nicole Guzman** Grade 10 Town Bridgeport
Ashley Cajilima Grade 10 Town Bridgeport

Bridgeport Fairchild Wheeler Biotechnology Lucien Bouffard
3075 LS 2 Light Levels of Dinoflagellates Due to Climate Change
Student(s) **Kathleen Parkin** Grade 9 Town redding

Bridgeport Fairchild Wheeler Biotechnology Cynthia Crudale
3069 LS 2 Shoots vs. Roots: The Effect of Hormone Treated Media on Lettuce Growth
Student(s) **Naomi Rosen** Grade 12 Town Fairfield

Bridgeport Fairchild Wheeler Biotechnology Marilyn Carolina
3520 LST 2 Testing the Efficacy of Biochar Source Materials in Filtering Heavy Metal Pollution from the Housatonic River in CT
Student(s) **Angeline Tran** Grade 12 Town Shelton
Phi Uanino Grade 12 Town Shelton

Bridgeport Fairchild Wheeler Information Tech and Software Ricki Chiem
3515 LST 2 The Great Rooftop Garden Experiment
Student(s) **Jessica Laguerre** Grade 9 Town Ansonia
Marlie Lackran Grade 9 Town Stratford
Thor Atkins Grade 9 Town Seymour

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Bridgeport Geraldine Johnson School Kelly Mulligan

1009	LT	3	Can you detect Artificial Intelligent generated Text from Human Generated Text?
Student(s)			
			Angelica Philogene Grade 8 Town bridgeport
			Kee'maja Lilley Grade 8 Town Bridgeport

Bridgeport Jettie S. Tisdale Kathryn Cunningham

1024	LT	2	Brain Timing
Student(s)			
			Juliette Medina-Calderon Grade 7 Town Bridgeport
			DaHanne Gilmore Grade 7 Town Bridgeport
			Ma'Shirah Profit Grade 7 Town Bridgeport

Bridgeport Jettie S. Tisdale Frances Morra

4018	PT	3	Which Will It Be?
Student(s)			
			Kayla Noel Grade 8 Town Bridgeport
			Jelah Williams Grade 8 Town Bridgeport

Bridgeport John Winthrop Srilakshmi Kongani

4003	PT	3	The Pinwheel Problem
Student(s)			
			Fernando Marin Grade 8 Town Bridgeport, CT
			Pandora Nguyen Grade 8 Town Bridgeport, CT

Bridgeport Waltersville School John Cunningham

1012	LT	2	Do Plants Absorb Acidic Precipitation?
Student(s)			
			Samuel Borjas Grade 8 Town Bridgeport
			Isaiah Mendenhall Grade 8 Town Bridgeport

Bridgeport Waltersville School John Cunningham

4008	PT	2	Does Municipal/Household Infrastructure Affect the Quality of Drinking Water in Bridgeport, CT?
Student(s)			
			Andrea Villatoro Grade 7 Town Bridgeport
			Genesis Reilly Grade 7 Town Bridgeport

Bristol St. Matthew School Danielle Persichetti

5004	P7	2	Which Drink Has the Most Electrolytes?
Student(s)			
			Lily Chou Grade 7 Town Bristol

Bristol St. Matthew School Danielle Persichetti

2002	L7	1	Which Moisturizer is Best?
Student(s)			
			Lauren Gillis Grade 7 Town Bristol

Brookfield Brookfield High School Jonathan Neuhausel

3088	LS	2	Genex: A Novel Computational Tool for Optimizing Transcription Factor Combinations for Increased Efficiency and Specificity in Cellular Conversion
Student(s)			
			Diya Girish Kumar Grade 12 Town Brookfield

Brookfield Brookfield High School Jonathan Neuhausel

6048	PS	2	Single Cell Multi-omics Analysis of Glioblastoma: Identification of Differently Expressed Genes and Diagnosis of Isocitrate Dehydrogenase Mutants
Student(s)			
			Shriya Jonnalagadda Grade 12 Town Brookfield

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Brookfield Brookfield High School JonathanNeuhausel
6077 PS 3 GeoCool: A Novel Approach to Sustainable Residential Cooling Using Underground Soil Temperatures
Student(s) Arjun Parimi **Grade** 11 **Town** Brookfield

Cheshire Cheshire High School Julie Barker
6104 PS 3 Patient Appointment Preparation Tool
Student(s) Lekhan Nair **Grade** 9 **Town** Cheshire

Cheshire Cheshire High School Julie Barker
6045 PS 2 A Torticollis Tilt Alerting Device using MPU6050 Sensor, Vibration motor, and iOS and Android App Built Using Flutter
Student(s) Suchita Srinivasan **Grade** 10 **Town** Cheshire

Cheshire Dodd Middle School Katie Kearney
5509 P8 3 The Irrigator- a sustainable solution for gardening
Student(s) Olivia Dixon **Grade** 8 **Town** Cheshire

Danbury Saint Gregory the Great School Christine Fahey
2519 L8 3 Magic Mushrooms... from an Environmental Perspective
Student(s) Claire Calomeni **Grade** 8 **Town** Danbury

Danbury Saint Gregory the Great School Christine Fahey
2508 L8 3 Can AI Learn to Solve a Maze?
Student(s) Ethan Lambert **Grade** 8 **Town** Danbury

Danbury Saint Gregory the Great School Christine Fahey
1003 LT 2 Terra-fic Battery
Student(s) Liam Layog **Grade** 7 **Town** Danbury
Gabriel Santos **Grade** 7 **Town** Danbury

Danbury Saint Gregory the Great School Christine Fahey
5019 P7 1 The Fastest Way to Solve a Rubik's Cube
Student(s) Leonardo Lazzara **Grade** 7 **Town** Brookfield

Danbury Saint Gregory the Great School Christine Fahey
5011 P7 3 Battery Marathon
Student(s) Eden Virtudes **Grade** 7 **Town** danbury

Danbury Westside Middle School Academy Nancy Barlow
1008 LT 1 Air Purifier that Effectively Removes Air Toxins - PM 2.5 and Formaldehyde
Student(s) Arlis Arias-Paulino **Grade** 8 **Town** Danbury
Sivayazhini Sivasundar **Grade** 8 **Town** Danbury
Kuhutan Roy **Grade** 8 **Town** Danbury

Danbury Westside Middle School Academy Nancy Barlow
1025 LT 1 The Effect of Different Types of Grass on Soil Erosion
Student(s) Sayam Dand **Grade** 8 **Town** Danbury
Kylie Capone **Grade** 8 **Town** Danbury
Ayme Calero **Grade** 8 **Town** danbury

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Danbury Westside Middle School Academy Nancy Barlow

2518 L8 2 The Effect of Different Substrates on the Growth of Mycelium

Student(s) Milana Lenz **Grade 8** **Town** Danbury

Danbury Westside Middle School Academy Nancy Barlow

4007 PT 1 The Effectiveness of Different Distillation Methods for Desalination

Student(s) Siddanth Ramakrishnan **Grade 7** **Town** Danbury

Patrick Madden **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Nancy Barlow

4012 PT 2 Building a Versatile Air Sensor That Can Detect PM10 & PM2.5 in the Air

Student(s) Sarvesh Ram Sankarnarayan **Grade 8** **Town** Danbury

Gabrielle Anderson **Grade 8** **Town** Danbury

Eleftherios Amperidis **Grade 8** **Town** Danbury, Ct

Danbury Westside Middle School Academy Nancy Barlow

1013 LT 3 Homemade Fertilizer's Affect on Plant Growth

Student(s) Ishita Shiralkar **Grade 7** **Town** Danbury

Ava Zaloski **Grade 7** **Town** Danbury

Izel Diaz **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Nancy Barlow

1019 LT 2 The Effects of Different Water Plants on Nitrate Water Levels

Student(s) Samantha Suda **Grade 8** **Town** danbury

Sarah Pacheco **Grade 8** **Town** Danbury

Chelsea Dodoo **Grade 8** **Town** danbury

Danbury Westside Middle School Academy Nancy Barlow

1004 LT 2 How Does Temperature Affect How Bright Bioluminescent Plankton Glow?

Student(s) Montana Urban **Grade 7** **Town** Danbury

Sebastian Madera-Guridy **Grade 7** **Town** Danbury

Erin George **Grade 7** **Town** Danbury

Danbury Westside Middle School Academy Nancy Barlow

4023 PT 2 How do Different Strength Magnets Affect a Phone's Charging Speed

Student(s) Kylie Wilson **Grade 8** **Town** Danbury

Caleb Lopes **Grade 8** **Town** Danbury

Carmelo McCollough **Grade 8** **Town** Danbury

Danbury Wooster Brian Sullivan

6094 PS 2 Building an app to diagnosis Lung Cancer through the use of introducing an nth-linearity term in a Weight Dimensionality Reduction Neural Network with Random Forest Classification.

Student(s) Alejandro Mayorga **Grade 9** **Town** Danbury

Darien Darien High School Hunter King

6101 PS 2 Mechanistic Analysis of the Driving Factors for Ventilation Dynamics within Macrotermes Michaelseni Termite Nests

Student(s) Lucas Meier **Grade 12** **Town** Darien

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Darien Darien High School David Lewis

3108	LS	2	The Economic Efficacy of Various Algae Strains for Biofuel Production
------	----	---	---

Student(s) Steven Olvany **Grade** 12 **Town** Darien

Darien Darien High School Christine Leventhal

6082	PS	1	Simulating CMB temperature signal to analyze the effects of noise
------	----	---	---

Student(s) Bo-Jun Qin **Grade** 12 **Town** Darien

Darien Darien High School Guy Pratt

6064	PS	3	An Investigation of Stone Reusual Construction Techniques Used in the Anasazi Community From 800 -1200 AD In Southwestern United States Based on Stone Length-Width Ratios
------	----	---	--

Student(s) Evelyn Trudel **Grade** 12 **Town** Darien

East Lyme East Lyme High School Cecilia Prytko

6514	PST	2	Job, Internship and Program Opportunities App
------	-----	---	---

Student(s) Jessica Joe **Grade** 10 **Town** East Lyme
Sophia Joe **Grade** 10 **Town** East Lyme

Ellington Ellington High School David Gerlach

6074	PS	2	Developing an Adaptable Metal Casting Mold Using Soft Robotics
------	----	---	--

Student(s) Thomas Gerlach **Grade** 9 **Town** Ellington

Enfield Chiaravalle Academy Tim Coleman

1016	LT	3	To see how much bread mold grows on different types of bread and how long it will take.
------	----	---	---

Student(s) Andrew Banker **Grade** 7 **Town** Wilbraham
Grant Kelly **Grade** 7 **Town** Enfield
Tristan Mroz **Grade** 7 **Town** broad brook

Enfield Chiaravalle Academy Tim Coleman

1011	LT	2	Do Energy Drinks Affect the Growth of Microbes?
------	----	---	---

Student(s) Delanie Bernier **Grade** 7 **Town** Chicopee
Lia Vidal **Grade** 7 **Town** Enfield
Waverly Goodman **Grade** 7 **Town** Suffield

Enfield Chiaravalle Academy Tim Coleman

1021	LT	3	Bamboos growth in varying soils and water levels.
------	----	---	---

Student(s) Mason Cerkanowicz **Grade** 8 **Town** Suffield, CT
Shiv Patel **Grade** 8 **Town** Longmeadow Mass

Enfield Chiaravalle Academy Tim Coleman

4022	PT	2	Using Solar to Generate Electricity.
------	----	---	--------------------------------------

Student(s) Keenan Cieslak **Grade** 8 **Town** Monson
Beau Dugas **Grade** 8 **Town** Enfield
Michael Bielanski **Grade** 8 **Town** Enfield

Enfield Chiaravalle Academy Timothy Coleman

4005	PT	3	The effects of 5g on yeast cells.
------	----	---	-----------------------------------

Student(s) Jayden Eldridge **Grade** 8 **Town** Somers
Alana Tucker **Grade** 8 **Town** Somers

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Enfield Chiaravalle Academy Timothy Coleman
4010 PT 2 What type of salt is best used to melt ice?

Student(s) Misha LaCroix Grade 8 Town Enfield
Kayla Cupillo Grade 8 Town Suffield
Noah Bohonowicz Grade 8 Town Somers

Enfield Chiaravalle Academy Tim Coleman
1006 LT 2 Plants vs. Wildfires

Student(s) Megan Quinby Grade 7 Town Windsor
Arianna Plaz Grade 7 Town Suffield
Antonina Borodii Grade 7 Town Enfield

Enfield Chiaravalle Academy Timothy Coleman
1026 LT 1 How Does Different Types of Food Affect A Chicks' Growth and Learning Ability?

Student(s) Zoha Shamsi Grade 7 Town Suffield
Leah Caswell Grade 7 Town Enfield
Marin Czerwicz Grade 7 Town Agawam

Enfield Chiaravalle Academy Tim Coleman
1002 LT 2 Essential Oil's

Student(s) Noah Wyse Grade 8 Town Broad Brook
Caden Young Grade 7 Town Suffield

Fairfield Fairfield Ludlowe High School Rekha Pappalavenkatramana
6024 PS 2 Harnessing Renewable Wind Energy Induced by Trains by Developing a Quadrant Wind Tunnel with Miniature Rotors to Decrease Consumption of Fossil Fuels

Student(s) Samhitha Kunichetty Grade 11 Town Fairfield

Fairfield Fairfield Warde High School Ryan Gleason
3518 LST 2 The Effects of Golf Course Runoff on Rooster River

Student(s) Calista Gleason Grade 9 Town Fairfield
Emma Speicher Grade 9 Town Fairfield

Fairfield Fairfield Woods Middle School Michael Sgoutas
4021 PT 1 Automotive CO2 Emissions Bio-Filtration System

Student(s) Alexander Majewski Grade 7 Town Fairfield
Parshwa Shah Grade 7 Town Fairfield

Farmington Farmington High School Alexandra Raymunt
6054 PS 1 Steeping Towards Safety: Addressing Mycotoxin Risks in Coffee and Tea

Student(s) Rhea Doshi Grade 9 Town Farmington

Farmington Farmington High School Alexandra Raymunt
3511 LST 2 The impact of different levels of spf on the pigmentation of one's skin

Student(s) Lauren Jeong Grade 11 Town Farmington
Lydia Kim Grade 11 Town Farmington

Farmington Farmington High School Alexandra Raymunt
3091 LS 2 Identifying a novel biomarker for liver cancer through an extensive search of open sources and existing articles. I plan to verify its viability with an expert.

Student(s) Rohith Lanka Grade 11 Town Unionville

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Farmington Farmington High School Alexandra Raymunt

6068 PS 1 Origami-Inspired Paper-Based Multiplex Device for Water Contamination Monitoring

Student(s) Jiayi Liu

Grade 11 Town Farmington

Farmington Farmington High School Alexandra Raymunt

3532 LST 2 The Efficiency of Electrolytes in Athletic Performance

Student(s) Kashvi Madhwani

Grade 11 Town Farmington

Alison Rodriguez

Grade 11 Town Farmington

Farmington Farmington High School Xiaodi Wang

3100 LS 1 Optimizing the LSTM Deep Learning Model for Arctic Sea Ice Melting Prediction

Student(s) Victoria Pegkou Christofi

Grade 12 Town Unionville

Farmington Farmington High School Alexandra Raymunt

3528 LST 2 Human Recognition of Chat GPT's AI Generated Text

Student(s) Selina Shi

Grade 11 Town Farmington

John Zhang

Grade 11 Town Farmington

Farmington Farmington High School Alexandra Raymunt

3521 LST 3 Enhancing Enzyme Activity: Exploring the Impact of Natural Inhibitors

Student(s) Gabriella Tycz

Grade 11 Town Unionville

alexandra urbanowicz

Grade 11 Town farmington

Farmington Miss Porter's School Christine Scanlon

3529 LST 2 Variation of classroom temperature settings in relation to student's reaction time

Student(s) June Liu

Grade 11 Town New York City

Tingjia Shi

Grade 10 Town Farmington

Farmington Miss Porter's School Christine Scanlon

3105 LS 1 Testing Prevalence of Bacteria Resistant to Tetracycline, Sulfamethoxazole, and Chloramphenicol Antibiotics in Hotspot Connecticut Environments

Student(s) Sophia Pidvysotski

Grade 12 Town Hartford

Farmington Miss Porter's School Christine Scanlon

6059 PS 2 How to modify starch-based bioplastic to reduce its ecotoxicity?

Student(s) Anqi Shi

Grade 12 Town New Canaan

Glastonbury Glastonbury High School Diane Pintavalle

6023 PS 2 ROLE OF GRAVITY IN OXYGEN GAS REMOVAL IN POLYMER ELECTROLYTE MEMBRANE WATER ELECTROLYZERS

Student(s) James Hall

Grade 11 Town Glastonbury

Glastonbury Glastonbury High School Diane Pintavalle

3073 LS 2 HOW DO PHLOEM-FEEDING HERBIVORES SUPPRESS THE PARASITISM OF CATERPILLARS ON Quercus alba?

Student(s) Anna Hilary

Grade 12 Town Glastonbury

Glastonbury Glastonbury High School Stephen Falcigno

3086 LS 2 Prediction of Non-B DNA Structure using PacBio Sequencing Interpulse Durations

Student(s) Naavya Jain

Grade 11 Town Glastonbury

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Glastonbury Glastonbury High School Diane Pintavalle

3005 LS 2 PREDICTING DNA METHYLATION BASED ON NANOPORE TRANSLOCATION TIME
Student(s) **Aarav Mehta** Grade 11 Town Glastonbury

Glastonbury Glastonbury High School Diane Pintavalle

6069 PS 2 THE SUB-DIURNAL FLUCTUATIONS IN THE ISOTOPIC COMPOSITION OF XYLEM WATER IN DECIDUOUS TREES
Student(s) **Kiernan Tierney** Grade 12 Town Glastonbury

Glastonbury Glastonbury High School Diane Pintavalle

3066 LS 1 Proteomic Analysis of Autism-Associated Variants in Human ASPM Gene
Student(s) **Presthika Vijaykumar** Grade 11 Town Glastonbury

Greenwich Brunswick School Dana Montanez

6015 PS 2 Inertial Navigation Control System: Use of Reaction Wheels as an in-flight Steering Mechanism for Rockets
Student(s) **Thomas Armstrong** Grade 11 Town Greenwich

Greenwich Brunswick School Dana Montanez

6522 PST 1 The Efficiency of Toroidal Propellers on Plane Engines and Boat Propellers
Student(s) **Thomas Carney** Grade 10 Town New Canaan
Pierce Crosby Grade 10 Town Greenwich

Greenwich Brunswick School Dana Montanez

6073 PS 3 Repurposing Agave Waste through the Creation of a Biodegradable Polymer
Student(s) **Jackson Cunningham** Grade 10 Town Greenwich

Greenwich Brunswick School Dana Montanez

6003 PS 2 Removal of Aquatic Micro Pollutants Using Functionalized Nanoparticles of Iron-Oxide
Student(s) **Jack Degl** Grade 11 Town Mahopac

Greenwich Brunswick School Dana Montanez

3507 LST 2 Using Mineral Packed Liposomes to Increase Plant Growth in Arid Environments
Student(s) **Henry Johnson** Grade 11 Town Riverside
Tucker Spiess Grade 11 Town Old Greenwich

Greenwich Brunswick School Dana Montanez

3531 LST 3 Isolation and Recombination of Woodylide Compounds from the Sea Sponge Plakortis Simplex For Use as an Organic Antifungal Agent
Student(s) **George Kapp** Grade 10 Town Greenwich
Neel Behringer Grade 10 Town Greenwich

Greenwich Brunswick School Dana Montanez

3519 LST 2 Selective Weed Extermination using a Conductive Device
Student(s) **Nikolai Krause** Grade 10 Town Greenwich
Henry Mayerfield Grade 10 Town Scarsdale

Greenwich Brunswick School Dana Montanez

3085 LS 1 Chlorophyll's Reflection of Infrared Light as a Method to Determine Overall Health of Phaseolus vulgaris and Solanum lycopersicum
Student(s) **Max Lanson** Grade 10 Town New Canaan

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Greenwich Brunswick School Dana Montanez
 3513 LST 2 The Impact of Ocean Acidification on Photosynthetic Rates of Rhodomonas salina and Amphidinium
Student(s) Eric Lorenz **Grade** 11 **Town** Greenwich
 Ryan Ahn **Grade** 11 **Town** White Plains

Greenwich Brunswick School Dana Montanez
 6510 PST 2 Biodegradable Mylar: A Materials Investigation to Reduce Marine Life Fatalities.
Student(s) Sean Mensi **Grade** 9 **Town** Katonah
 Lincoln O'Donohue **Grade** 10 **Town** Old Greenwich

Greenwich Brunswick School Dana Montanez
 3525 LST 2 Utilizing Beneficial Microorganisms to Prevent Coral Bleaching and Enhance Coral Recovery
Student(s) William Nook **Grade** 11 **Town** Greenwich
 Grayson O'Hara **Grade** 11 **Town** Rye
 Jack Sieg **Grade** 11 **Town** Greenwich

Greenwich Brunswick School Dana Montanez
 6516 PST 2 Water Testing with Ease: Creation of a handheld device for Water Analysis in Recently Flooded Areas.
Student(s) William Pallone **Grade** 10 **Town** Rye
 Townsend Bancroft **Grade** 10 **Town** Greenwich

Greenwich Brunswick School Dana Montanez
 3501 LST 1 Developing an Organic Microbial Solution for the Plastic Accumulation Problem in Water Sources
Student(s) Gabriel Trahanas **Grade** 11 **Town** Riverside
 Oliver Velasco **Grade** 11 **Town** Greenwich

Greenwich Central Middle School Andrew Bramante
 5514 P8 1 The Synergistic Improvement of Indoor Air HEPA-Filtration using Concurrent Dehumidification
Student(s) Mikah Kaalund **Grade** 8 **Town** Greenwich

Greenwich Central Middle School Andrew Bramante
 2507 L8 2 Modeling of Fairfield County Fresh-water and Estuary Waterways, to Highlight Contamination of their Ecosystems/Environments
Student(s) Briar Lissauer **Grade** 8 **Town** Greenwich

Greenwich Central Middle School Andrew Bramante
 2516 L8 1 Development of a Simple Salivary Rapid Diagnostic for the Detection of Iodine Deficiencies
Student(s) Tyler Malkin **Grade** 8 **Town** Greenwich

Greenwich Central Middle School Andrew Bramante
 5504 P8 1 Simple Filtration of Fertilizer-ion Water Contaminants via Implementation of Phosphate and Nitrate Absorbency Pads
Student(s) Caroline Stowe **Grade** 8 **Town** Greenwich

Greenwich Eastern Middle School Andrew Bramante
 2501 L8 1 Design of a Smart-Bandage to provide lasting Itch-Relief and Healing for an Insect Bite.
Student(s) Lily Bittman **Grade** 8 **Town** Greenwich

Greenwich Eastern Middle School Andrew Bramante
 2506 L8 2 Natural remedies research for seasonal allergies by Machine Learning of Crowd Information
Student(s) Arthur Lai **Grade** 8 **Town** Greenwich

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Greenwich Eastern Middle School Andrew Bramante

2512 L8 1 Emotionless Negotiator Droid

Student(s) Louw Otto

Grade 8 Town Riverside

Greenwich Eastern Middle School Andrew Bramante

5502 P8 2 Shedding Light on the Prevalence of Harmful Butylated Hydroxytoluene Preservative in Artificially Formulated Dog Foods.

Student(s) Mackensey Wilson

Grade 8 Town Old Greenwich

Greenwich Greenwich Country Day School Nathan Haag

3104 LS 3 Effects of Mindfulness Meditation on Sports Performance

Student(s) John Berbano

Grade 12 Town Yonkers

Greenwich Greenwich Country Day School Nathan Haag

3024 LS 1 Effects of Temperature on the Growth Rate, Survival Rate, and Breeding Rate of Multiple Generations of Neocaradina davidi, Cherry Shrimp

Student(s) Michael Capek

Grade 12 Town Rye

Greenwich Greenwich Country Day School Nathan Haag

3043 LS 3 Plant Microbial Fuel Utilization in Harvesting Photosynthetic Energy from Local Invasive Plant Species

Student(s) Djeneba Dembele

Grade 11 Town Greenwich

Greenwich Greenwich Country Day School Nathan Haag

6067 PS 3 Researching the Effectiveness of Engine Oil After Combined With Cooking Oils

Student(s) Bailey Gendason

Grade 12 Town Stamford

Greenwich Greenwich Country Day School Nathan Haag

3016 LS 2 Antidepressant-response biomarkers in adolescents: a confirmational study using EEG

Student(s) Solomon Hochman

Grade 12 Town Riverside

Greenwich Greenwich Country Day School Nathan Haag

3089 LS 2 Trickle-Bed Bioreactor for the Environmental Remediation of PFOS-Contaminated Water

Student(s) Charlie Meyer

Grade 12 Town Mamaroneck

Greenwich Greenwich Country Day School Nathan Haag

6042 PS 3 Exploring Gravitational Forces in Comparison with Acceleration on different elements of a Model Roller Coaster

Student(s) Natalie Simpson

Grade 11 Town Mount Kisco

Greenwich Greenwich Country Day School Nathan Haag

3131 LS 2 PlanetProtect

Student(s) Daniel St-Louis

Grade 12 Town Stamford

Greenwich Greenwich Country Day School Nathan Haag

6085 PS 3 Cichlid Fry Growth based on High vs Low protein diets

Student(s) Tucker Winham

Grade 12 Town Greenwich

Greenwich Greenwich High School Andrew Bramante

6053 PS 2 Reduced Carbon Dioxide Emission and Increased Energy Efficiency Via a Newly-Designed Superconductive Cryogenic Brushless DC Motor

Student(s) Ishan Ambastha

Grade 11 Town Riverside

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

Greenwich Greenwich High School Andrew Bramante
 3113 LS 2 Implementation of a Multi-Objective Genetic Algorithm to Optimize Resource Allocation in Disease Prevention
Student(s) Isaac Bell **Grade** 10 **Town** Riverside

Greenwich Greenwich High School Andrew Bramante
 3025 LS 2 Sonic Repulsion of Purple Sea Urchins to Reduce Degradation of Nascent Nereocystis luetkeana Forests
Student(s) Owen Benison **Grade** 11 **Town** riverside

Greenwich Greenwich High School Andrew Bramante
 6081 PS 2 Genetic Engineering of Cryobacterium to Increase Silica Content and Enhance the Glacial Albedo of Black Arctic Oceans
Student(s) Justin Bernstein **Grade** 11 **Town** Greenwich

Greenwich Greenwich High School Andrew Bramante
 3099 LS 2 Simple and Rapid Removal of Onychomycosis using Electromagnetic Microwave Radiation
Student(s) Sam Bier **Grade** 11 **Town** Greenwich

Greenwich Greenwich High School Andrew Bramante
 3142 LS 2 Development of Non-Invasive Diagnostic Tool for Lipedema Using Colorimetric Analysis of Skin Reflectance
Student(s) Hannah Dcruz **Grade** 9 **Town** Riverside

Greenwich Greenwich High School Andrew Bramante
 6071 PS 2 Reduction of Polyethylene and Polypropylene Waste Footprints via their Scalable Conversions into Useful Surfactants
Student(s) Zara Haque **Grade** 11 **Town** Riverside

Greenwich Greenwich High School Andrew Bramante
 3122 LS 2 Rapid Detection of Pulmonary Fibrosis via Eu(TTA)₃ Phen, and Rhodamine-6G-Cinnamaldehyde, Dual-Sensor Luminescent Diagnostic
Student(s) Lauren Huang **Grade** 11 **Town** Old Greenwich

Greenwich Greenwich High School Andrew Bramante
 3071 LS 1 Fabrication of a Europium-based Magnetic Nanosensor for the Detection of D-Serine in Early-onset Alzheimers
Student(s) Ava Jackson **Grade** 11 **Town** Old Greenwich

Greenwich Greenwich High School Andrew Bramante
 6058 PS 1 Detection of Nanoplastics within Complex Environmental and Food Resource Matrices via Machine Learning
Student(s) Henry Jin **Grade** 10 **Town** Greenwich

Greenwich Greenwich High School Andrew Bramante
 6039 PS 3 Inexpensive, Autonomous Drone Image Recognition of Cornfields, for Realtime Detection of Crop Fungal and Pesticidal Disease
Student(s) Avery Ku **Grade** 10 **Town** Greenwich

Greenwich Greenwich High School Andrew Bramante
 3055 LS 1 Development and In vitro Verification of a Polymersome for Blood-Brain Barrier Transport Through a Novel Machine Learning Model
Student(s) Ashley Malkin **Grade** 11 **Town** Greenwich

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Greenwich Greenwich High School Andrew Bramante
3003 LS 2 Iron-Fortified Cornhusk Biochar Flocculation of Pondwater Phosphates, to Reduce Invasive Macrophyte Growth
Student(s) Neil Pendkar **Grade 9** **Town** Old Greenwich

Greenwich Greenwich High School Andrew Bramante
3130 LS 2 Coagulation Cascade Suppression and Enhanced Bioavailability via Biodegradable Polymeric Quercetin
Student(s) Frank Skibo **Grade 12** **Town** Greenwich

Greenwich Greenwich High School Andrew Bramante
3009 LS 1 Rapid Detection of Stress Biomarker Cortisol via a Molecularly Imprinted Polypyrrole Sensor
Student(s) Ryan Wadhwa **Grade 10** **Town** Riverside

Greenwich Greenwich High School Andrew Bramante
3020 LS 1 Oral Delivery of Anticoagulant Dabigatran via a Mg-Micromotor Encapsulant Within a Gastric-Resistant Tablet for Ischemic Stroke Treatment
Student(s) Lula Wang **Grade 9** **Town** Old Greenwich

Greenwich Greenwich High School Andrew Bramante
6019 PS 3 Reinforcement Learning Optimization of Placement of Public Vehicle Charging Stations using a Novel Parking Demand Model
Student(s) Marley Wies **Grade 10** **Town** Old Greenwich

Greenwich Greenwich High School Andrew Bramante
3045 LS 2 Implementation of Wearable, Bluetooth Gyroscopic Sensing for Smartphone Remote Monitoring of Patient Mobility
Student(s) Alexander Zhao **Grade 11** **Town** Greenwich

Guilford Guilford High School Penghua Wang
3522 LST 3 Flaviviruses Manipulate Host Skin Microbiota to Attract Mosquitoes and Promote Transmission by Disrupting Vitamin A Metabolism
Student(s) Catherine Zhou **Grade 11** **Town** GUILFORD
Devin Lu **Grade 11** **Town** GUILFORD

Hamden Hamden Hall Country Day School Paulomi Aldo
2510 L8 2 Comparing dog and human saliva as first line of defense in wound healing
Student(s) Anna Aslan **Grade 8** **Town** Hamden

Hamden Hamden Hall Country Day School Daniel Cuneo
3096 LS 2 Edhelper: The Application of Artificial Intelligence in the Aid of Neurodivergent Children
Student(s) Andrei Balas **Grade 10** **Town** Cheshire

Hamden Hamden Hall Country Day School Daniel Cuneo
6512 PST 2 Using Quantum-assisted Machine Learning in Maize Yield Prediction through Environmental Patterns.
Student(s) Helena Chaine **Grade 11** **Town** Orange
Yue Zhuo **Grade 12** **Town** Hamden
Linda Chen **Grade 10** **Town** Woodbridge

Hamden Hamden Hall Country Day School Gina D'Angelo
6025 PS 1 Deep learning based drug response prediction algorithm about synergistic and antagonistic responses of cell lines and drug combos.
Student(s) Jiahui Chen **Grade 11** **Town** New Haven

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Hamden Hamden Hall Country Day School Gina D'Angelo
3021 LS 2 The Effect of Increasing Soil Concentrations of Polyethylene on the Growth (Average Height in Centimeters) of Phaseolus vulgaris
Student(s) Penelope Dwyer **Grade 9** **Town** Madison

Hamden Hamden Hall Country Day School Sarrah Gavin
3061 LS 3 The effect of deforestation on soil erosion at Sleeping Giant Park
Student(s) Kaleb Fiore **Grade 10** **Town** Southington, CT

Hamden Hamden Hall Country Day School Paulomi Aldo
2008 L7 1 How Does Temperature Effect Nitrogen Fixation Pods in Legumes
Student(s) Kinan Harb **Grade 7** **Town** Milford

Hamden Hamden Hall Country Day School Michael Gustin
6518 PST 2 Using Predictive Modeling to Find the Most Influential Variables in Basketball Games
Student(s) Eric Huang **Grade 11** **Town** Guilford
Leon Jiang **Grade 10** **Town** New Haven
Jiahe Jin **Grade 10** **Town** Guilford

Hamden Hamden Hall Country Day School Jacob Marchesi
6076 PS 2 iAAA+ (impact Absorbing and Alerting Plus) band
Student(s) Ravindu Karunaratne **Grade 10** **Town** Hamden

Hamden Hamden Hall Country Day School Michael Gustin
6093 PS 2 A Machine Learning Approach to Predicting Economic Recessions.
Student(s) Andrea Lim **Grade 10** **Town** Cheshire

Hamden Hamden Hall Country Day School Robert Link
3011 LS 2 Using an AI algorithm to minimize the number of punctures attempted during blood draw or IV insertion.
Student(s) Neev Makin **Grade 10** **Town** Hamden

Hamden Hamden Hall Country Day School Paulomi Aldo
5013 P7 2 How visual impairmeny can affect perception
Student(s) Stanley Shen **Grade 7** **Town** Milford

Hamden Hamden Hall Country Day School Gina D'Angelo
3527 LST 2 The effect of varying lengths of UV ray exposures on the regeneration rate of Planaria
Student(s) Alessandra Sticca **Grade 9** **Town** Milford
Frida Ramirez-Moreno **Grade 9** **Town** Meriden

Hamden Hamden Hall Country Day School Frank Gasparro
3017 LS 1 Effect of Hydroxyapatite Encapsulation on the Transdermal Diffusion and Photodegradation of Avobenzone and Octinoxate to Enhance Sunscreen Safety
Student(s) Sophia Vash **Grade 10** **Town** Fairfield CT

Hamden Hamden Hall Country Day School Paulomi Aldo
2505 L8 2 The effect of feeding intervals on pulsation rate of Lumbriculus variegatus after starvation
Student(s) Audrey Wang **Grade 8** **Town** Cheshire

Hamden Hamden Hall Country Day School Patrick Fitzgerald
3082 LS 3 The Power of the Mind: Understanding and Harnessing the Placebo Effect
Student(s) Andrew Yang **Grade 10** **Town** southbury

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Hamden Hamden Hall Country Day School Patrick Fitzgerald

3135 LS 2 The Effect of Growth Media Composition on [PSI+] Propagation in *S. Cerevisiae* and *S. Pastorianus*.

Student(s) Alexander Yi

Grade 11 **Town** Hamden

Hamden Sacred Heart Academy Elizabeth Christophy

3506 LST 3 Commercial vs. Edible Plastic Wrap: Determining the Superior Film for Food Storage

Student(s) Kiera Barney

Grade 10 **Town** Hamden

Chiara Troiano

Grade 10 **Town** Hamden

Hamden Sacred Heart Academy Sibani Sengupta

3117 LS 2 The Effect of Sound Pollution on the Physical Behavior of *Armadillidium Vulgare*

Student(s) Danyella Lanche-Flores

Grade 12 **Town** West Haven

Hamden Sacred Heart Academy Wendy Decter

3026 LS 2 Will a Chemical Repellant or a Natural Oil Work Better to Repel Pill Bugs?

Student(s) Jacqueline Ouellette

Grade 9 **Town** Meriden

Hamden Sacred Heart Academy Wendy Decter

3057 LS 2 The Effectiveness of Toxic vs Non-Toxic Disinfectants

Student(s) Elizabeth Rogers

Grade 9 **Town** Madison

Hamden Sacred Heart Academy Elizabeth Christophy

6006 PS 3 A Novel Method of Hair Dye Detection: Using Beer's Law in a Forensic Situation

Student(s) Giana Tolomeo

Grade 10 **Town** North Haven

Kent Kent School Jesse Klingebiel

6018 PS 2 Potential design of a multi-role UAV

Student(s) Jianming (Jeremy) Chen

Grade 11 **Town** Johns Creek

Kent Kent School Jesse Klingebiel

6083 PS 3 An interactive manipulator with anti-falling mechanism

Student(s) Alvin Hao

Grade 10 **Town** Diamond Bar

Kent Kent School Jesse Klingebiel

6032 PS 1 CardioXNet: Representation Learning for Accurate Cardiovascular Disease Diagnosis from X-ray Images

Student(s) Jiwon Hwang

Grade 10 **Town** Kent

Kent Kent School Jesse Klingebiel

3111 LS 2 The Use of CRISPR-Cas9 in Different Lepidoptera Species Reveals the Major Genes that Control Wing Patterning and Coloration

Student(s) Kaitlyn Shen

Grade 11 **Town** Great Neck

Manchester Manchester High School Wendy Turek-Hernandez

3046 LS 3 The Analysis of Decaying Saliva: Impacts of Lapse of Time on DNA Deterioration

Student(s) Carolina Mancini

Grade 12 **Town** Manchester

Manchester Manchester High School Wendy Turek-Hernandez

3138 LS 2 Determining the incidence of Beech Leaf Disease symptom severity based on overwintering nematode abundance in *Fagus grandifolia* buds

Student(s) Dina Watson

Grade 12 **Town** Manchester

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Manchester Saint James School Ellen Oei

5017	P7	1	Crusty n' Rusty
Student(s) Brendan Abbamonte			Grade 7 Town Vernon

Manchester Saint James School Ellen Oei

4016	PT	2	Soccer Ball Inflation
Student(s) Nicholas Rataic			Grade 7 Town Vernon
John Curtin			Grade 7 Town Manchester

Manchester Saint James School Ellen Oei

5007	P7	2	Affect of Color on Heat Absorption
Student(s) Saanvi Sethi			Grade 7 Town Manchester

Mansfield Edwin O Smith High School Cheryl Granger

6005	PS	2	Why Does My Neighborhood Have Less Trees Than Yours? Geospatial Modeling of Urban Tree Cover Inequalities in Connecticut Cities
Student(s) Hiruni Witharana			Grade 10 Town Storrs

Milford Platt Technical High School Lori Grace

6505	PST	3	Natural Skincare
Student(s) Jeferson Encranacion			Grade 12 Town bridgeport
Julia Pressley			Grade 12 Town West Haven

Milford Platt Technical High School Lori Grace

6523	PST	3	Sonic Converter
Student(s) Orville Ferguson			Grade 10 Town Bridgeport
Eddie Love			Grade 10 Town Bridgeport

Milford Platt Technical High School Lori Grace

3502	LST	2	NatureCare Project
Student(s) Diogo Gaudencio			Grade 12 Town bridgeport
Yossias Muluaem			Grade 12 Town ansonia
Maritza Portillo			Grade 12 Town west haven

Milford Platt Technical High School Lori Grace

6517	PST	3	Eco-Filter
Student(s) Nabila Kandawala			Grade 11 Town Bridgeport
Nariah Joyner			Grade 11 Town West Haven
Daniela de Oliveira			Grade 11 Town Stratford

Milford Platt Technical High School Lori Grace

6096	PS	3	Carbon • Aid
Student(s) Jayden Quaynor			Grade 11 Town Derby

Montville Saint Bernard School Alexandros Mathioudakis

6011	PS	2	Making Football Safer With The Smart Helmet
Student(s) Palmer Noe			Grade 10 Town East Lyme

Conn. Science & Engineering Fair

Preliminary Judging Results

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

New Haven Engineering and Science University Magnet School Alyssa Anderson
3078 LS 2 Investigating the Relationship Between the Size of Blood Clots, Blood Flow Rate, and Anticoagulants in the Cardiovascular System for the Implementation in Ischemic Stroke Patients
Student(s) **Temiladeoluwa Adeniran** **Grade 11** **Town** Seymour

New Haven Engineering and Science University Magnet School Alyssa Anderson
3034 LS 2 Investigating the Concentration of Glucose in Fruits Before and After Adding Invertase to Determine the Optimal Fruit for Consumption for a Diabetic Patient with Hypoglycemia
Student(s) **Titiladeoluwa Adeniran** **Grade 9** **Town** Seymour

New Haven Engineering and Science University Magnet School Roger Rushworth
3118 LS 2 Implementing the Usage of Nontoxic Sand and Bacterial Filtration in the Enhanced Degradation of Emerging Contaminants in Aqueous Solutions
Student(s) **Sahithi Aliminate** **Grade 9** **Town** Milford

New Haven Engineering and Science University Magnet School Roger Rushworth
3126 LS 1 Advanced Hybrid Water Treatment Systems: A Comparative Study of Membrane Filtration, Adsorption, and Photocatalysis for Comprehensive Contaminant Removal
Student(s) **Saket Aliminate** **Grade 10** **Town** Milford

New Haven Engineering and Science University Magnet School Roger Rushworth
6036 PS 1 Evaluating Hyperparameter Tuned Machine Learning Classifiers for Pancreatic Cancer Detection via Urinary Biomarkers
Student(s) **Nivriith Ananth Iyer** **Grade 10** **Town** West Haven

New Haven Engineering and Science University Magnet School Roger Rushworth
3050 LS 2 Implementation of a Computationally Efficient Machine-Learning-Based System to Diagnose Cervical Cancer via Numerical Feature Extraction and Multivariate Regression
Student(s) **Ethan Joseph** **Grade 9** **Town** West Haven

New Haven Engineering and Science University Magnet School Alyssa Anderson
6052 PS 1 Synthesis of Porous Polymer Sponge Matrix using Modified Sodium Alginate Clay Compound for Adsorptive Removal of Microplastics and Oil from Contaminated Water
Student(s) **Snigtha Mohanraj** **Grade 11** **Town** Ansonia

New Haven Hopkins School Phillip Stewart
6055 PS 3 Profit from stock pricing
Student(s) **Christina Cao** **Grade 11** **Town** Trumbull

New Haven Sound School Charles Mulligan
6511 PST 2 Potential Impact of Watershed Runoff and Tidal Inundation on the Hydrologic Profile of a Coastal March
Student(s) **Cora FitzGerald** **Grade 11** **Town** Guilford
Tamzin Maines **Grade 11** **Town** Old Saybrook

New Haven Worthington Hooker School Douglas Jones
1020 LT 1 Biodegradable Hydrogels: Improving our Agriculture's Sustainability
Student(s) **Sofia Janiga** **Grade 8** **Town** New Haven
Azalea Deener **Grade 8** **Town** New Haven

New Haven Worthington Hooker School Douglas Jones
4014 PT 3 Do Homemade Water Filters Work?
Student(s) **Nora Peaper** **Grade 7** **Town** New Haven
Sophia Korn **Grade 7** **Town** New Haven

Conn. Science & Engineering Fair

Preliminary Judging Results

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

New Haven Worthington Hooker School Douglas Jones

2503	L8	1	The Influence of Various Factors on Yeast Fermentation
Student(s) Roko Skarica			Grade 8 Town New Haven

New Haven Worthington Hooker School Douglas Jones

1023	LT	2	How Does Different Liquids Affect Brine Shrimp?
Student(s) Miniya Turner			Grade 7 Town New Haven
Student(s) Cassidy Scott			Grade 7 Town New Haven

Newtown Newtown High School Mathieu Freeman

3012	LS	2	Hepatic Stellate Cells in Liver Regeneration
Student(s) Kaylin Brissette			Grade 10 Town Sandy Hook

Newtown Newtown High School Kevin Epley

6092	PS	3	Autonomous Ping Pong Robot Object Detection and Prediction
Student(s) Aiden Burbank			Grade 12 Town Sandy hook

Newtown Newtown High School Timothy DeJulio

3125	LS	2	Inhibition of Prion Protein Propagation
Student(s) Beatrice Cardamone			Grade 11 Town Sandy Hook

Newtown Newtown High School Timothy DeJulio

3083	LS	2	Using Sunscreen as a way to distribute Beneficial Microorganisms for Corals (BMCs)
Student(s) Lydia Cox			Grade 11 Town newtown

Newtown Newtown High School Timothy DeJulio

6062	PS	3	AI Based Skin Cancer Detection System
Student(s) Aadit Jerfy			Grade 11 Town Newtown

Newtown Newtown High School Timothy DeJulio

6088	PS	3	The Effect of Road Usage Frequency on the Quality of Soil
Student(s) Nathan Twitchell			Grade 11 Town Newtown

Norwich Norwich Free Academy Jason Croteau

3106	LS	2	Resisting the resistance: Examining the value of mushrooms in an increasingly antibiotic resistant world.
Student(s) Areanna lovene			Grade 12 Town Baltic

Norwich Norwich Technical High School Aleatha Pelloni

3129	LS	2	The Application of Amygdalin as an Early Stage Medicinal Cancer Therapy to act as an Accessible Option on a National Scale
Student(s) Emerson Alexy			Grade 12 Town Old Saybrook

Norwich Norwich Technical High School Aleatha Pelloni

3526	LST	2	Cultivating Green Growth: Harnessing Electroculture for Sustainable Gardening Practices
Student(s) Sophia Caballero			Grade 11 Town Norwich
Student(s) Alejandra Cardona			Grade 11 Town New London

Norwich Norwich Technical High School Aleatha Pelloni

3509	LST	1	Renewable fuel using anaerobic digestion
Student(s) Jasmine Coulombe			Grade 11 Town Chaplin
Student(s) Tessa Lambert			Grade 11 Town Scotland

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Norwich Norwich Technical High School Suzanne Edwards

6066 PS 3 A Mathematical Analysis of the Variables Impacting the Performance of Wind Turbines as the Energy Converts from Kinetic to Mechanical to Electrical

Student(s) Leah Kozerefski **Grade** 9 **Town** Gilman

Norwich Norwich Technical High School Aleatha Pelloni

3141 LS 3 Using Evolutionary Adaptation of Bacteria with Artificial Pressures from UV Radiation to Create Antibiotic Activity

Student(s) Elijah Smith **Grade** 12 **Town** Norwich

Pomfret Pomfret School Josh Lake

3068 LS 3 A Multi-Task Learning Model Integrating Fractal Analysis and Homomorphic Encryption for Secure and Efficient ECG Interpretation

Student(s) Bennett Cho **Grade** 10 **Town** Seoul, South Korea

Pomfret Pomfret School Seongi Hong

6029 PS 2 Development of a novel machine learning algorithm for identifying and analyzing dark matter through weak gravitational lensing effect

Student(s) Yuna Cho **Grade** 11 **Town** Pomfret

Redding CT STEM Fair Joyce Reed

3052 LS 1 Determining the Ability of Different Mosses and Plants to Remove Algae Causing Phosphates and Nitrates From Water

Student(s) Emma Cannon **Grade** 11 **Town** New Canaan

Redding CT STEM Fair Catherine Piscitelli

6508 PST 3 Designing a More Human-Like Non-Player-Character to Enhance Player Experience in Video Games

Student(s) Adam Liu **Grade** 12 **Town** Woodbridge
Alesandro Gopal **Grade** 12 **Town** Woodbridge

Redding CT STEM Fair Catherine Piscitelli

3060 LS 1 Determining Trail Making Test B Accuracy in Predicting Driving Preparedness in Pre-Driving-Age Adolescents

Student(s) Mila Mejnartowicz **Grade** 10 **Town** Woodbridge

Redding CT STEM Fair Catherine Piscitelli

3019 LS 2 Investigating If There Is a Correlation Between Maternal Age At Time Of Pregnancy Loss And The Number Of Trophoblast Inclusions In The Placenta

Student(s) Charlotte Stannard **Grade** 10 **Town** Bethany

Redding CT STEM Fair Catherine Piscitelli

6017 PS 2 Creating a Novel Decision Tree-Based Change Point Detection Machine Learning Algorithm Employing Unsupervised Learning for Real-Time Earthquake Detection

Student(s) Iris Yan **Grade** 12 **Town** Woodbridge

Ridgefield Ridgefield High School Ryan Gleason

3042 LS 3 The Effect of Morning Versus Night Exercise on Sleep Length and Quality

Student(s) Bella Greco **Grade** 11 **Town** Ridgefield

Ridgefield Ridgefield High School Christopher Tait

3140 LS 3 Caffeinated Energy Drinks Effects on Athletic Performance

Student(s) Cate Hicks **Grade** 12 **Town** Ridgefield

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Ridgefield Ridgefield High School Euan Hunter

3505 LST 3 Quantifying Microplastics in Marine Organisms Using Potassium Hydroxide and Nile Red Dye

Student(s) Martha Huitron **Grade** 12 **Town** Ridgefield

Ashwika Krishnan **Grade** 10 **Town** Ridgefield

Ridgefield Ridgefield High School Patrick Hughes

6021 PS 2 Preventing Catastrophic Forgetting in Continual Learning by Controlling Nodewise Gradients

Student(s) Michael Tsai **Grade** 12 **Town** Ridgefield

Ridgefield Ridgefield High School Ryan Gleason

3120 LS 2 The Effect of Plant Based Proteins vs Animal Based Proteins on Sleep Quantity (Soy vs. Beef)

Student(s) Emily Yee **Grade** 12 **Town** Ridgefield

Rocky Hill Rocky Hill High School Sharon Parker

6519 PST 3 Investigating the Influence of Annealing Zinc Oxide and Aluminum Nitride on the Electrical and Mechanical Properties of Piezoelectric Transducers

Student(s) Ved Bathula **Grade** 12 **Town** Rocky Hill

Kristian Odobashi **Grade** 12 **Town** Rocky Hill

Daniel DiTunno **Grade** 11 **Town** Rocky Hill

Salisbury The Hotchkiss School David Butler

3114 LS 3 Comparison of intrabody-mediated degradation of mHTT through ubiquitin independent vs. dependent pathways

Student(s) Jerry Fan **Grade** 9 **Town** Watervliet

Salisbury The Hotchkiss School Jungah Song

3081 LS 1 Antioxidative Effects of Sargassum horneri on Alleviating Neurodegeneration Induced by Sustained Alcohol Exposure on Caenorhabditis elegans Model

Student(s) Remy Lee **Grade** 10 **Town** Lakeville

Salisbury The Hotchkiss School Sid Yenugu

6103 PS 2 A Resilient & Cost-Effective Prosthetic Device Tailored for the Accelerated Growth of Children

Student(s) Sia Reddy **Grade** 10 **Town** Avon

Shelton Shelton Intermediate School Erica McNeil

4009 PT 3 Does the Temperature of a tennis ball effect how high it bounces ?

Student(s) Ryan Goncalves **Grade** 7 **Town** Shelton

Aiden Teixeira **Grade** 7 **Town** Shelton

Shelton Shelton Intermediate School Erica McNeil

5001 P7 2 Shot Power

Student(s) Brooke Plain **Grade** 7 **Town** Shelton

Shelton Shelton Intermediate School Erica McNeil

5018 P7 3 What kinds of cereals get soggier in milk?

Student(s) Sneha Shah **Grade** 7 **Town** Shelton

Simsbury Westminster School Suzanne Bailey

6043 PS 1 Dual-Degree-of-Freedom Pneumatic Shoulder Rehabilitation Device Based on Flexible Materials

Student(s) Meiyin Ren **Grade** 11 **Town** Simsbury

Conn. Science & Engineering Fair

Preliminary Judging Results

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

South Windsor South Windsor High School Danel Eitel
6501 PST 1 The Use of Piezoelectric Technology for a more Efficient and Cost-Effective Approach to Electronics Cooling

Student(s) Adithya Anand **Grade** 11 **Town** South Windsor
Jason Thokchom **Grade** 11 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
3524 LST 1 MushBox: In Situ Biodegradation of Municipal Solid Waste through Mycoremediation via Mycelium and Cellulosic Waste Integration

Student(s) Samarth Basanth **Grade** 10 **Town** South Windsor
Tejbir Litt **Grade** 10 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
6520 PST 3 Acid Rain? Such A Pain!

Student(s) Eliza Blanchfield **Grade** 10 **Town** South Windsor
Raina Shukla **Grade** 10 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
3517 LST 2 Saving the Scraps

Student(s) Sofia Holovatska **Grade** 10 **Town** south windsor
Grace Zeng **Grade** 10 **Town** south windsor
Aarya Nair **Grade** 10 **Town** south windsor

South Windsor South Windsor High School Joshua Kraus
6035 PS 3 A novel approach to a biomimetic undersea generator aided by triboelectric nanogenerators to harness natural ocean currents

Student(s) Pranay Kakkar **Grade** 11 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
3534 LST 2 Elements of Ecology, the Institution for Innovation and Environmentally Beneficial Invasive Plant Removal Projects

Student(s) Srinidhi Karthik **Grade** 10 **Town** South Windsor
Nishigandha Bhambure **Grade** 10 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
3504 LST 2 Reducing Plastic Waste A Little At A Time

Student(s) Ali Omer **Grade** 10 **Town** South Windsor
Alex Rho **Grade** 10 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
3510 LST 2 A novel approach to preventing the PrPsc induced neurotoxicity which characterizes Creutzfeldt-Jakob disease through the inhibition of Glypican-1

Student(s) Smriti Rajan **Grade** 11 **Town** South Windsor
Sanjay Rajan **Grade** 9 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
6527 PST 2 Railgun Launcher

Student(s) Rithika Rajasekaran **Grade** 10 **Town** South Windsor
Sienna Michaelson **Grade** 10 **Town** South Windsor
Lily Hamilton **Grade** 10 **Town** South Windsor

Conn. Science & Engineering Fair

Preliminary Judging Results

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

South Windsor South Windsor High School Danel Eitel
6513 PST 3 Mitigation of Pharmaceutical Pollution through Advanced Water Treatment Techniques: A Study on Reverse Osmosis and Successful Filtration Methods

Student(s) Arushi Sharma **Grade** 10 **Town** South Windsor
Ananya Rajan **Grade** 10 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
6507 PST 1 Optimized Magneto-Inertial Fusion for Practical Use

Student(s) Jeremy Shiju **Grade** 11 **Town** South Windsor High School
Akshaj Nadimpalli **Grade** 11 **Town** South Windsor
Daniel Stoyanov **Grade** 11 **Town** South Windsor

South Windsor South Windsor High School Danel Eitel
6061 PS 3 How does less electricity usage impact the surrounding temperature?

Student(s) Isha Verma **Grade** 10 **Town** South Windsor

South Windsor South Windsor High School Kevin Snyder
6013 PS 1 Scientific understanding of solar physics with image based neural networks

Student(s) Pragyan Yadav **Grade** 12 **Town** South Windsor

Southbury Pomperaug High School Coleen Merritt
3139 LS 3 Nano-Coatings for Tooth Remineralization and Tooth Protection.

Student(s) Kamyia Keerthivasan **Grade** 11 **Town** Middlebury

Southbury Pomperaug High School Anna Natenzon
3516 LST 3 A Comprehensive Exploration of the COVID-19 Pandemic's Long Lasting Mental Toll on Hospital Nurses

Student(s) Parsh Verma **Grade** 11 **Town** Southbury
Somya Nog **Grade** 11 **Town** Southbury

Southington Joseph A. Depaolo Middle School Halime Agirman
2514 L8 2 Global Warming Management through Utilization of naturally occurring resources such as Eggshell-Derived Calcium Carbonate in Global Warming Reduction

Student(s) Esra Agirman **Grade** 8 **Town** Southington

Stamford Academy of Information Technology and Joshua Bogard
3035 LS 1 A Novel Machine Learning Model for Estrous Cycle Classification in Mice

Student(s) Saachi Goyal **Grade** 11 **Town** Stamford

Stamford Bi-Cultural Hebrew Academy Chris Graseck
1005 LT 2 Growing Radishes with Different pH Solutions

Student(s) Liv Haron **Grade** 7 **Town** Stamford
Ella Notik **Grade** 7 **Town** Stamford

Stamford Bi-Cultural Hebrew Academy Chris Graseck
2004 L7 1 Growing algae in different salinities

Student(s) Aaron Palker **Grade** 7 **Town** Stamford

Stamford Bi-Cultural Hebrew Academy Chris Graseck
1010 LT 2 What Salt Is Best for Hatching Brine Shrimp?

Student(s) Daniella Raich **Grade** 7 **Town** Stamford
Stella Pachter **Grade** 7 **Town** Stamford

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Stamford King School Victoria Schulman
3048 LS 2 Assessing the presence of Gluten
Student(s) Thomas Cline **Grade 11** **Town** Greenwich

Stamford King School Victoria Schulman
6072 PS 1 Clonal Evolution of Non-Small Cell Lung Cancer Reveals TP53/EGFR Maintenance and SETD2 Selection in Metastases
Student(s) Parker Hayashi **Grade 11** **Town** Riverside

Stamford King School Victoria Schulman
6097 PS 1 DETICKT IT: A Machine Learning-Based Application for Real-Time Tick Identification and Spatiotemporal Disease Risk Assessment
Student(s) Antonia Kolb **Grade 12** **Town** New Canaan

Stamford King School Yiliu Li
6034 PS 3 Two-Dimensional Semiconductors: Characteristics and Usages of Graphene and Transition-Metal Monolayers
Student(s) Zachary Louizos **Grade 11** **Town** Stamford

Stamford King School Victoria Schulman
3037 LS 3 Assessing the Public's Willingness to Accept Cancer Vaccines
Student(s) Madeline Scanlon **Grade 11** **Town** New Canaan

Stamford King School Victoria Schulman
3044 LS 1 Gender-Related Differences in a Murine PCSK9 and HFD Model of Atherosclerosis
Student(s) Layla Shah **Grade 12** **Town** Wilton

Stamford King School Erik Rutyna
6078 PS 3 Utilizing Ground and Space-Based Sensors to Track Trajectories of Vehicles/Dangerous Objects and Monitor Climate Change/Environmental Issues
Student(s) Ryan Wempen **Grade 12** **Town** Stamford

Stonington St. Michael School Anna Grossomanides
5516 P8 3 Waste in the Water
Student(s) Connor Anderson **Grade 8** **Town** Pawcatuck

Stonington St. Michael School Anna-Helene Grossomanides
5501 P8 2 Determining the Impact of pH on Seashell Dissolution
Student(s) Addison Cadmus **Grade 8** **Town** Pawcatuck

Stonington St. Michael School Anna-Helene Grossomanides
5512 P8 2 Dairy-Free Delights
Student(s) Gwendolyn Fratoni-Jaskiewicz **Grade 8** **Town** Pawcatuck

Stonington St. Michael School Anna-Helene Grossomanides
5012 P7 2 The Charcoal Affect (Physical Science)
Student(s) Josephine Hawkins **Grade 7** **Town** Westerly, RI

Stonington St. Michael School Anna-Helene Grossomanides
5008 P7 3 Expensive Fails or, Long Lasting Nails
Student(s) Maeve Nicholas **Grade 7** **Town** Stonington

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Stonington St. Michael School Anna-Helene Grossomanides

5506	P8	2	From Ocean to Tap
Student(s) Sarah Previty			Grade 8 Town Stonington

Stratford St. Mark School Alexander Kennedy

4006	PT	2	Self Inflating Balloon
Student(s) Sara Gnoza			Grade 8 Town Stratford
Student(s) Angelina Pino			Grade 8 Town Bridgeport

Stratford St. Mark School Alexander Kennedy

2513	L8	2	Implicit Gender Bias
Student(s) Julianne Gonzalez			Grade 8 Town Stratford

Stratford St. Mark School Alexander Kennedy

5015	P7	3	The Strength of Electromagnets
Student(s) Tyler Markland			Grade 7 Town Stratford

Stratford St. Mark School Alexander Kennedy

4020	PT	3	Does Color Affect the Way taste is perceived?
Student(s) Maeve McCloskey			Grade 7 Town Stratford
Student(s) Stella Testo			Grade 7 Town Stratford

Suffield Suffield Academy Seungoh Seo

3031	LS	3	Predicting drug repurposing capabilities, utilizing off-Target effects, through chemoinformatics and bioinformatics-based machine learning models
Student(s) Ansel Choi			Grade 10 Town Seocho-gu

Suffield Suffield Academy Michael Zappala

3002	LS	1	Dental Nutrients' Delivery Through the Intraoral Cavity with a Toothpaste Using Penetration Enhancers
Student(s) MJ Choi			Grade 10 Town Brookline

Thomaston Thomaston High School James Newton

6033	PS	2	Power Generation by Different Wastewater Types in Single-Chambered Microbial Fuel Cells
Student(s) Velia Russman			Grade 12 Town Thomaston

Trumbull Christian Heritage School Daniel Cote

6050	PS	3	Development of Biodegradable Plastic
Student(s) Colby Burke			Grade 11 Town Shelton

Trumbull Christian Heritage School Nicole Camacho

5515	P8	1	How does the pH of a liquid affect its spherification?
Student(s) Gaia Cioppa			Grade 8 Town Greenwich

Trumbull Christian Heritage School Daniel Cote

6102	PS	3	Vision Through AI: Assisting the Visually Impaired By Building AI Smart Glasses
Student(s) Daylin Jerome			Grade 11 Town Bridgeport

Trumbull Christian Heritage School Nicole Camacho

5505	P8	3	How do different substances affect how light is bent
Student(s) Joshua Joseph			Grade 8 Town Milford

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Trumbull Christian Heritage School Nicole Camacho

2517 L8 2 Do Storm drains keep trash out of water ways?

Student(s) Juliette Schwartz **Grade** 8 **Town** Shelton

Trumbull Christian Heritage School Daniel Cote

6037 PS 3 Text to Speech and Speech to Text App for the Hearing Impaired

Student(s) Noah Scrofani **Grade** 11 **Town** Trumbull

Trumbull Trumbull High School Steffanie Elkins

3132 LS 2 The Impact of pH on the Rate at which Organic Matter Decomposes in Compost

Student(s) Anthony Deras **Grade** 12 **Town** Bridgeport

Trumbull Trumbull High School Steffanie Elkins

3080 LS 3 Neurological Density of Fish Affects the Ability to Train

Student(s) Grace Schober **Grade** 12 **Town** Trumbull

Trumbull Trumbull High School Steffanie Elkins

3023 LS 2 Utilizing Bacillus Subtilis for the Accelerated Biodegradation of Polyethylene Terephthalate

Student(s) Kylie Totten **Grade** 12 **Town** Trumbull

Wallingford Choate Rosemary Hall Sungook Kim

3079 LS 2 Effect of calcifying microorganisms with carboned rice hulls on removing ultrafine dust

Student(s) Seokhyun Chin **Grade** 11 **Town** Wallingford

Wallingford Choate Rosemary Hall Min Gyeong Kim

3074 LS 2 Investigation of lung cancer biomarkers through in vitro cell-free DNA

Student(s) Stanley Cho **Grade** 11 **Town** Wallingford

Wallingford Choate Rosemary Hall Tim Yun

3097 LS 2 Heterogenous Association between Mortality and Environmental Factors

Student(s) Andrew Ju **Grade** 11 **Town** Wallingford

Wallingford Choate Rosemary Hall Jan Cook

6051 PS 2 Properties of Certain Quadrilaterals of Triangle Centers

Student(s) Kay Yeon Lee **Grade** 11 **Town** Wallingford

Wallingford Choate Rosemary Hall Selena Gell

6502 PST 2 Construction of a Low-cost, Accurate Liquid Handling Device with 3D Printing for Polymerase Chain Reaction

Student(s) Calvin Moon **Grade** 12 **Town** Wallingford

Jeffrey Moon **Grade** 11 **Town** Wallingford

Wallingford Choate Rosemary Hall Yingxin Gao

3121 LS 2 Identifying the Patterns in the Progression of Alzheimer's Disease

Student(s) Ann Song **Grade** 11 **Town** Farmington

Wallingford Choate Rosemary Hall Chenglin Miao

3006 LS 1 Spatial Learning and Memory: Finding and Investigating Place Cells in the Hippocampus

Student(s) Yumeng Wang **Grade** 10 **Town** Wallingford

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Wallingford Choate Rosemary Hall Andrew Murgio

6525 PST 1 AgriBotanical: An Intelligent Continuum-Maneuver Robot for Monitoring and Managing Arboreal Wild Bee Colonies

Student(s) Jingyuan Zhang **Grade** 11 **Town** Wallingford
Xiyin Yang **Grade** 11 **Town** Wallingford

Waterbury ACES at Chase Lisa Debany

1007 LT 2 Creating Safe Sunscreens For Coral Reefs With The Best U.V. Protection.

Student(s) Emily Ambrosini **Grade** 7 **Town** Watertown
Taylor Boscarino **Grade** 7 **Town** Thomaston

Waterbury ACES at Chase Natalie Huey

1001 LT 2 Does Water Temperature Affect Seed Germination?

Student(s) Joel Brooks **Grade** 8 **Town** Naugatuck
Pierce Knowlton **Grade** 8 **Town** Thomaston
Eric Callender **Grade** 8 **Town** Waterbury

Waterbury ACES at Chase Natalie Huey

5507 P8 3 Effective and Safe Removal of Stickers

Student(s) Lilly Carew **Grade** 8 **Town** Watertown

Waterbury ACES at Chase Sandra Solimene

5511 P8 1 Creating Cost- Effective Eco-Friendly Insulation

Student(s) Andrew Daukas **Grade** 8 **Town** Middlebury

Waterbury ACES at Chase Sandra Solimene

5503 P8 1 The Bag that Saved the Homeless

Student(s) Evaleise Diaz **Grade** 8 **Town** Meriden

Waterbury ACES at Chase Kelly Horan

5005 P7 3 What Design of Mesh Water Filtration Device Most Effectively Removes Microplastics?

Student(s) Jacob Godfrey **Grade** 7 **Town** Waterbury

Waterbury ACES at Chase Lisa Debany

1015 LT 2 Can Ultra Violet Light Be Used To Detect Ticks On Human Bodies?

Student(s) Ehtan Johnson **Grade** 7 **Town** Waterbury
Piper Sullivan **Grade** 7 **Town** Waterbury

Waterbury ACES at Chase Waterbury

2511 L8 3 Leaf Light Chlorophyll light bulb

Student(s) Toren Lott **Grade** 8 **Town** Waterbury

Waterbury ACES at Chase Lisa Debany

4015 PT 2 Mycelium Trash Bags vs Plastic Trash Bags

Student(s) Greyson Sauer **Grade** 7 **Town** Prospect
Mason Mantz **Grade** 7 **Town** Waterbury

Waterbury ACES at Chase Lisa Debany

2005 L7 1 Reducing Lycorma delicatula, Lantern Fly, Infestation: Using Essential Oils to Address Crop Damage and Food Shortages.

Student(s) Besjana Veliu **Grade** 7 **Town** Waterbury

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Westport Greens Farms Academy Mathieu Freeman
3007 LS 3 Methylphenidate Treatment of Parkinson's Disease in Drosophila Melanogaster
Student(s) Liam Glynn Grade 12 Town New Canaan

Westport Greens Farms Academy Juli Gerdes
3101 LS 1 The Effect of Resveratrol on ALS Positive Flies Locomotor Dysfunction
Student(s) Lilly Hogan Grade 12 Town Westport

Westport Greens Farms Academy Mathieu Freeman
5014 P7 1 Novel Radiation Shielding for Radiation Therapy and Arabidopsis on Mars
Student(s) Dylan Karpf Grade 7 Town Westport

Westport Greens Farms Academy Mathieu Freeman
6086 PS 2 Exploring the Efficiency of Mealworm Consumption of Plastic Using FTIR Spectroscopy
Student(s) Zoe Monschein Grade 12 Town Norwalk

Westport Greens Farms Academy Matthew Freeman
3013 LS 1 Role of Protein Expression in Diatom Chain Formation
Student(s) Charlotte Wagner Grade 12 Town Southport

Westport Greens Farms Academy Mathieu Freeman
3029 LS 3 Effects of Culverts on Salt Marsh Tidal Choking, Biodiversity, and Soil Respiration
Student(s) Jakob Zapanta Grade 12 Town Bridgeport

Westport Staples High School Amy Parent
3098 LS 1 The Effect of Diet Composition on the Growth and Development of Colorectal Cancer Tumors in the Drosophila Midgut
Student(s) William Boberski Grade 11 Town Westport

Westport Staples High School Amy Parent
3136 LS 2 Impact of organic fertilizers on soil microbial activity and carbon sequestration in baby lettuce
Student(s) Tessa Cassell Grade 12 Town Westport

Westport Staples High School Amy Parent
3064 LS 2 The Effect of Diacetyl on Long-term Thermotolerance of Thermally Acclimated Breviolum minutum
Student(s) Kendra Cheng Grade 11 Town Westport

Westport Staples High School Amy Parent
3128 LS 1 The Effect of Activating ATR-Kinase on Zygotic Stress, Survival, and DNA Damage
Student(s) Sara De Pinho Grade 11 Town Westport

Westport Staples High School Julie Cantatore-Francis
3036 LS 2 The Evaluation of Muscle Function in C. elegans with DMD with Varying Concentrations of Vitamin D Supplementation
Student(s) Nolan Francis Grade 10 Town westport

Westport Staples High School Srividya Gorre
6063 PS 2 Early Detection of Parkinson's Disease using a Computer Vision Model
Student(s) Shreyas Gorre Grade 11 Town Westport

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Westport Staples High School Amy Parent
3103 LS 2 Assessing the Impact of Artificial Sweeteners on Escherichia Coli: Effects on Growth, Biofilm Formation, Membrane Integrity & Cell Morphology, and Oxidative Stress
Student(s) Annam Olasewere **Grade** 11 **Town** Westport

Wilton Middlebrook School Paige Randall
5016 P7 1 FINDING ENERGY CONTENT IN FOOD BY USING CALORIMETER
Student(s) Kanira Baskar **Grade** 7 **Town** WILTON

Wilton Middlebrook School Nancy Wakeham
5010 P7 3 Wireless Power Transfer - Future of Energy
Student(s) Ishan Chugh **Grade** 7 **Town** Wilton

Wilton Middlebrook School Allison Norful
1014 LT 1 Growing Pleustrus Ostreatus Mycelium with Full Synthetic Engine Lubricant to Create Biodegradable Alternatives to Supersede Environmentally-Harmful Substances
Student(s) Arav Gupta **Grade** 8 **Town** Wilton
Gopika Kaimal **Grade** 8 **Town** Wilton

Wilton Middlebrook School Paige Randall
5006 P7 3 The Science Behind Lie detectors - How A Lie Detector works and How It Affects Our World Today
Student(s) Muskaan Kalra **Grade** 7 **Town** Wilton

Wilton Middlebrook School Debbie Mallozzi
2504 L8 2 "Leveraging Zea Sheaths to Prolong Food Freshness: A Strategy for Mitigating Bacterial Growth and Reducing Food Spoilage"
Student(s) Nadia Khan **Grade** 8 **Town** Wilton

Wilton Middlebrook School Janica Bagosy
5510 P8 1 Burnt: A web-based application to help adolescents self-assess and seek help for stress and poor mental health
Student(s) Jackson Norful **Grade** 8 **Town** Wilton

Wilton Middlebrook School Paige Randall
1022 LT 2 Green Grind - Can used coffee be used as an organic fertilizer rather than a chemical fertilizer?
Student(s) Vidit Prabhu **Grade** 7 **Town** Wilton
Mateo Arizu **Grade** 7 **Town** Wilton

Wilton Middlebrook School William Desroches
1017 LT 1 Beat The Peat - Rice Husk, The Sustainable And Eco-Friendly Alternative to Peat Moss
Student(s) Kabir Rokkam **Grade** 7 **Town** Wilton
Shushruth Balaji **Grade** 7 **Town** Wilton

Wilton Wilton High School Nikolas D'Agnese
6008 PS 1 Fiscatch: A Phishing Detection Website
Student(s) Rohil Jain **Grade** 12 **Town** Wilton

Wilton Wilton High School Matthew Hoyt
3059 LS 1 A Novel AI-Driven Approach for Tracking and Managing Invasive Plant Species
Student(s) Shriya Natarajan **Grade** 10 **Town** Wilton

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Wilton Wilton High School Matthew Hoyt
3065 LS 2 The Influence of Natural and Man-Made Substrata on Intertidal Community Structure
Student(s) Nandan Raman **Grade** 11 **Town** Wilton

Wilton Wilton High School Sandra Tallman
6506 PST 2 Mathematically Modeling the Efficiency of a Hydraulic RAM Pump for Optimal Utilization in a Pump Storage Power Plant
Student(s) Aiden Sharp **Grade** 11 **Town** Wilton
Caleb Sharp **Grade** 11 **Town** Wilton

Windsor Academy of Aerospace and Engineering Michelle Bellinger
6524 PST 2 The Effect of Spatial Orientation of Panels in a Three-Dimensional Solar Tower
Student(s) Jair Andrew **Grade** 10 **Town** Ellington
Sriram Sundararaman **Grade** 10 **Town** Newington

Windsor Academy of Aerospace and Engineering Michelle Bellinger
6028 PS 3 Investigations into the Link Between the Water Quality and Social Inequity.
Student(s) Constanza Barria Lopez **Grade** 10 **Town** Hartford

Windsor Academy of Aerospace and Engineering Michelle Bellinger
6009 PS 1 Reinforcing the Cybersecurity of Medical Data via Software Countermeasures against Malware in Heart Monitoring Technology
Student(s) Sujay Chava **Grade** 11 **Town** Ellington

Windsor Academy of Aerospace and Engineering Michelle Bellinger
6002 PS 1 Integrating Piezoelectric Sensors and Photovoltaic Material in an Artificial Energy-Harvesting Model Tree
Student(s) Laasya Chintapalli **Grade** 11 **Town** Farmington

Windsor Academy of Aerospace and Engineering Michelle Bellinger
2003 L7 1 The Study Of Novel Toothbrush Cleaning Methods To Decrease Bacterial Surface Growth Using Ultraviolet (UV) Germicidal Light And Mouthwash
Student(s) Ana-Marlene Davis **Grade** 7 **Town** Broad Brook

Windsor Academy of Aerospace and Engineering Michelle Bellinger
4019 PT 1 Using Vortex Hydropower Turbines to Harvest Electrical Energy
Student(s) Marcus Davis **Grade** 8 **Town** Broad Brook
Dylan Gao **Grade** 7 **Town** Coventry

Windsor Academy of Aerospace and Engineering Michelle Bellinger
3004 LS 1 Therapeutic Potential of Antibody Drug Conjugates Targeting The Expression of Trophoblast Cell-Surface Antigen 2 (TROP-2) On High Grade Serous Epithelial Ovarian Carcinoma
Student(s) Ana-Lois Davis **Grade** 12 **Town** Broad Brook

Windsor Academy of Aerospace and Engineering Michelle Bellinger
6515 PST 1 The Effect of Surface Texture on the Efficiency of a Spoiler (airfoil) in Formula 1 Race Cars.
Student(s) Willard Davis **Grade** 10 **Town** Broad Brook
Peter Davis **Grade** 10 **Town** Broad Brook

Windsor Academy of Aerospace and Engineering Michelle Bellinger
3054 LS 1 Optimizing Laterite Soil Microbial Fuel Cells for Community-Centric Electricity Generation in Tropical Underdeveloped Regions
Student(s) Namyanzi Edwards **Grade** 11 **Town** New Britain

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Windsor Academy of Aerospace and Engineering Michelle Bellinger
6079 PS 2 Using Biomimicry to Harvest Energy from the Sinusoidal Motion of an Eel
Student(s) Vikram Haran **Grade** 11 **Town** Ellington

Windsor Academy of Aerospace and Engineering Michelle Bellinger
4011 PT 2 Using Piezoelectric Sensors to Harvest Energy from Automobile Tires and the Road Surface
Student(s) Palaniappan Manikandan **Grade** 8 **Town** Ellington
Duke Clotney **Grade** 8 **Town** Hartford

Windsor Academy of Aerospace and Engineering Michelle Bellinger
4004 PT 2 Integrating Pelton Turbines Into Industrial Pipes to Harvest Energy
Student(s) Aaditya Sadhvani **Grade** 8 **Town** Ellington
Roshan Kumar **Grade** 8 **Town** Ellington

Windsor Academy of Aerospace and Engineering Michelle Bellinger
4001 PT 1 Combining Optical Wireless Communications (OWC) and Neuromorphic Architecture for Large-Scale Computations
Student(s) Rithvik Suren **Grade** 8 **Town** Ellington
Aarav Chevva **Grade** 8 **Town** Ellington

Windsor The Loomis Chaffee School Koby Osei-Mensah
6044 PS 1 A Deep Semi-Supervised Domain Generalization Approach for Epileptic Seizure Prediction using Electro Encephalo Graphy (EEG)
Student(s) Sunwoo An **Grade** 9 **Town** Seoul

Windsor The Loomis Chaffee School Koby Osei-Mensah
6089 PS 2 Synthesis of Novel Calixarenes for Detection of Ions.
Student(s) Guo Chen **Grade** 11 **Town** Windsor

Windsor The Loomis Chaffee School Koby-Mensah Osei
3018 LS 1 Addressing Data Imbalance in Plant Disease Recognition through Contrastive Learning
Student(s) Bryan Chung **Grade** 11 **Town** Middlebury

Windsor The Loomis Chaffee School Koby Osei-Mensah
3051 LS 1 Influence and implications of different strains and growth media on the chemical properties, water absorption, and morphology of mycelia bio-scaffolds
Student(s) Eli Krasnoff **Grade** 11 **Town** Mill Valley

Windsor The Loomis Chaffee School Koby Osei-Mensah
6027 PS 2 Analog Neuron Circuit with Oscillatory Firing
Student(s) Kenneth Lee **Grade** 11 **Town** Windsor

Windsor The Loomis Chaffee School Koby Osei-Mensah
3084 LS 1 Novel Synthesis and Comprehensive Study of Tough Hydrogel for Bioadhesive Applications
Student(s) Jessica Luo **Grade** 12 **Town** Newark

Windsor The Loomis Chaffee School Koby Osei-Mensah
6049 PS 2 Talent vs. Luck: Success in a Capitalistic Society
Student(s) Kai Masujima **Grade** 9 **Town** Windsor

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

Windsor The Loomis Chaffee School Koby Osei-Mensah
3090 LS 2 Enhanced Therapeutic Recovery Gloves Designed for Spondylosis Rehabilitation
Student(s) Gracie Shen **Grade** 10 **Town** West Hartford

Windsor The Loomis Chaffee School Koby Osei-Mensah
6012 PS 2 Machine Learning Approach for Estimating Razor Kinematic Variables MR and Rsq in Supersymmetric Proton Collision Searches
Student(s) Idil Türkmen **Grade** 11 **Town** Mersin

Windsor The Loomis Chaffee School Koby Osei-Mensah
3094 LS 3 The Efficacy of Vitamin D on prevention and treatment of Covid-19
Student(s) Zhao Yang Calvin Weng **Grade** 9 **Town** New York City

Woodbridge Amity Regional High School Catherine Piscitelli
3053 LS 3 Effects of Changes in Atmospheric Behavior and Oceanic Currents on the Stability and Formation of Antarctic Sea Ice (ASI) over the Next Century
Student(s) Vishwa Balamurugan **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
6010 PS 1 Creation of an Environment-Adaptive Reaction Algorithm Implemented on a Novel Smart Fluidic Servo Actuator to Provide a Sense of Pseudo-Exproprioception and Exteroception
Student(s) Aditi Bhattamishra **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
6041 PS 2 Analysis of Green Solvent Mixtures to Determine Their Use in Nucleopeptide Solid Phase Peptide Synthesis
Student(s) Mia Bierowski **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
6091 PS 2 Determining Printed Circuit Board Surface Finish Effect on Signal Loss at High Frequency (5g/6g) Application
Student(s) Luke Chang **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
3040 LS 1 Optimizing Bone Regeneration: A Novel Atsttrin-Releasing Injectable Hydrogel for Enhanced Osteogenesis in Critical-Sized Bone Defects
Student(s) Haseeb Chaudhry **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli
3049 LS 2 Examining the Effects of Urbanization on the Health of Forests
Student(s) Gregory Hofstatter **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli
6020 PS 2 Developing and Testing a Laminar Airfoil Utilizing Computational Fluid Dynamics to Implement Into General Aviation
Student(s) Alejandro Huber **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli
3070 LS 3 Determining The Effect of ASD-Associated Gene GBX2 Deficiency on Thalamic Differentiation in Human Organoid Models
Student(s) Youlmin Lee **Grade** 11 **Town** Woodbridge

Conn. Science & Engineering Fair

Preliminary Judging Results

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

Woodbridge Amity Regional High School Catherine Piscitelli

3137 LS 2 Testing the Efficacy of an Applied Low-Voltage Textile Knit on Mosquito Blood-Feeding Prevention

Student(s) Randy Liu **Grade** 12 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

6503 PST 3 Development of a Novel Spray Mechanism Using Real-Time Bee Auditory Data to Trigger an Entomopathogenic Fungal Miticide in Beehives to Control Varroa Destructor Infestations

Student(s) Sophia Messina **Grade** 11 **Town** Woodbridge
Nikhil Petrov **Grade** 11 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

3133 LS 1 Determining the Effects of Moisture Content in Artificial Diet on the Survival, Growth, Development, and Pupation of Anoplophora glabripennis

Student(s) Sabrina Osowiecki **Grade** 11 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

6001 PS 2 Developing an NLP-based Web Application to Evaluate Environmental Social Governance (ESG) from Social Networks for More Sustainable Company Practices

Student(s) Aarav Patel **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

3127 LS 2 Determining the Location and Effect of Epigenetic Changes Leading to Mutations in the DNA Sequence of a Lung Cancer Tumor in Mice Model

Student(s) Dariush Raissi **Grade** 11 **Town** Woodbridge

Woodbridge Amity Regional High School Catherine Piscitelli

6098 PS 1 Modeling Interactions Between the Neocortex and the Basal Ganglia During Temporal Sequential Learning Using a Hierarchical Temporal Memory Artificial Neural Network

Student(s) Annika Yun **Grade** 12 **Town** Orange

Woodbridge Amity Regional High School Catherine Piscitelli

3115 LS 2 Analyzing mutations of the Spike protein of COVID omicron subvariants XBB and EG from their origin in order to identify correlations with their prevalence in the United States

Student(s) Jasir Zafar **Grade** 11 **Town** Orange