



# Connecticut Science Fair

## Quinnipiac University

### March 15 - 19, 2011

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

## Final Judging Results

### Alexion Biotechnology

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

**Award Legend**  
Trophy Winners = 1, 2, ...  
Medalists = m  
Winners = w

### 7th Grade

**Norwalk** The Montessori Middle School David Lavallee

2026 L7 Would A Spill Damage The Glow

Award 1 Student(s) Thomas Rosiello Grade 7 Town Weston

**Orange** Southern Connecticut Hebrew Academy Mrs. Karen Howell

4005 PT Analysis of non-heme iron's rate of cell absorption, and effect of iron's enhancers and inhibitors on cell absorption.

Award 2 Student(s) Rivka Kantor Grade 7 Town Westport  
Bracha E. Hecht Grade 7 Town Orange

**Guilford** E.C. Adams Middle School Lynn Arnold

2023 L7 Using Daphnia To Model The Effects Of Common Household Cleaning Agents On Lifespan And Reproduction.

Award 3 Student(s) Matthew J. Shorten Grade 7 Town Guilford

**Middlebury** Memorial Middle School Mrs. Sachs

2011 L7 The Relationship Between Different Methods of Thawing and Bacterial Growth on Chicken.

Award 4 Student(s) Walter J. Manuel Grade 7 Town Southbury

**Woodstock** Woodstock Middle School Mrs. Carter

5046 P7 What are the effects of pH and temperature on the efficiency of ethanol production from biomass?

Award 5 Student(s) Deanna L. Guilani Grade 7 Town Woodstock Valley

**Avon** Talcott Mountain Academy Mr. Pellino

2001 L7 How Humidity Affects Fungal Growth

Award m Student(s) Gwynne T. Domashinski Grade 7 Town Suffield

**Pawcatuck** St. Michael School Michael DeNoia

1005 LT What's the Deal With Organic Food? Examining Herbicides in Chickpeas.

Award m Student(s) Victoria L. Johnson Grade 7 Town Pawcatuck  
Adeline S. Visscher Grade 7 Town Mystic

### 8th Grade

**Newtown** St. Rose of Lima School Marde Dimon

2514 L8 Improved Process for Bioremediation of Oil Contaminated Seawater

Award 1 Student(s) Haley M. Ryan Grade 8 Town Newtown

**Danbury** St. Joseph School Mrs. Jennifer Page

2519 L8 Outbreak! Predicting the modes and transmission rates of a human viral epidemic

Award 2 Student(s) Janine A. Kerr Grade 8 Town Danbury

**Orange** Southern Connecticut Hebrew Academy Mrs. Karen Howell

2521 L8 Quantitative Analysis of Hypoxia and Its' Causes in Long Island Sound's Estuary

Award 3 Student(s) Boruch S. Hecht Grade 8 Town Norwalk

**Orange** Southern Connecticut Hebrew Academy Mrs. Karen Howell

5550 P8 Quantitative Analysis of Bisphenol A, Effect on Simulated Cell and Skin Absorption, and Effect of Chelator

Award 4 Student(s) Menachem T. Meltzer Grade 8 Town New Haven



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Award Legend
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Winners = w

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

**Windsor** Madina Academy Aisha Seyal  
1014 LT Effects of composting leaves, coffee grounds, vegetables, or fruits compared to store-bought fertilizer and regular soil on the growth & appearance of plants and on soil nutrient levels.  
Award 5 Student(s) Rayyan Ashraf Grade 8 Town Windsor  
Shakeel A. Choudhury Grade 8 Town Bloomfield

**Orange** Southern Connecticut Hebrew Academy Mrs. Howell  
2509 L8 Effect of Bioremediation Nutrient Cultures on Degradation of Oil Spills, and Effect on Sand and Marsh Grass.  
Award m Student(s) Chaim M. I. Hodakov Grade 8 Town New Haven

**Orange** Southern Connecticut Hebrew Academy Mrs. Karen Howell  
5518 P8 The Buffering Capacity of Various Types of Soils and Grasses on Acid Rain  
Award m Student(s) Moshe Y. Piekarski Grade 8 Town Hamden

**Westport** Coleytown Middle School Jodi Rieman  
2526 L8 Association of Polymorphisms in Rheumatoid Arthritis and Juvenile Rheumatoid Arthritis Susceptibility Genes  
Award m Student(s) Malin S. Hovstadius Grade 8 Town Westport

### High School

**Danbury** Danbury High School Marsha Turek  
3024 LS Biological Control of Ticks to Prevent Lyme Disease Using Entomopathogenic Nematodes  
Award 1 Student(s) Ryan D. Kerr Grade 10 Town Danbury

**Glastonbury** Glastonbury High School Diane Pintavalle  
3013 LS Anticancer property of major goat milk fatty acids and delineating their mechanisms of action  
Award 2 Student(s) Amoolya V. Narayanan Grade 12 Town Glastonbury

**Hamden** Sacred Heart Academy Mrs. Frances Saukas  
3079 LS A Comparative Study of Herbs Grown Using an Aquaponic vs. a Hydroponic Growing System  
Award 3 Student(s) Olivia N. Kelly Grade 9 Town Shelton

**Hamden** Hamden High School Mr. Farley  
3086 LS Investigations of Novel Therapies For Lupus  
Award 4 Student(s) Alaric J. Gee Grade 12 Town Hamden

**New Milford** New Milford High School Ms. Reed  
3050 LS Methicillin-Resistant Staphylococcus Aureus (MRSA) in New Milford High School  
Award 5 Student(s) Toni Viola Grade 11 Town New Milford

**Danbury** Danbury High School Mrs. Sinha  
3089 LS Can Freshwater Plants Break Down Pesticides in Water?  
Award m Student(s) Krista Nicholson Grade 9 Town Danbury

**Danbury** Immaculate High School Mr. Hoyt  
3510 LST The antibiotic effects of antioxidant-rich cruciferous vegetables  
Award m Student(s) Adriana M. DeNardis Grade 10 Town Danbury  
Merna Haddad Grade 10 Town Danbury



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## Alexion Biotechnology

Award Legend
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Winners = w

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

**Putnam** Putnam Science Academy Coskun Candan

3503 LST Measuring the Effects of Microwave Radiation on Plant Growth and Germination via experiments on Phaseolus Lunatus

<b>Award</b> m	<b>Student(s)</b> Selman F. Avci	<b>Grade</b> 9	<b>Town</b> Putnam
	Almas Myrzatay	<b>Grade</b> 9	<b>Town</b> Putnam
	Samil Y. Isik	<b>Grade</b> 9	<b>Town</b> Putnam

**Putnam** Putnam Science Academy Ahmet Hakan Duman

3513 LST Utilizing Autumn Foliage as an Alternative Energy Source and as an Absorbing Agent for Oil Spills

<b>Award</b> m	<b>Student(s)</b> Ozkan Cil	<b>Grade</b> 12	<b>Town</b> Putnam
	Selahaddin S. Ozkan	<b>Grade</b> 11	<b>Town</b> Putnam
	Fehmi E. Agaoglu	<b>Grade</b> 11	<b>Town</b> Putnam

**Rye, NY** Rye Country Day School Dr. Mary Krasovec

3003 LS Development and Characterization of a Novel Listeria-Caspase-3 DNA Vaccine to Eradicate Metastatic Breast Cancer

<b>Award</b> m	<b>Student(s)</b> Swathi Krishnan	<b>Grade</b> 12	<b>Town</b> Stamford
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### March 15 - 19, 2011

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## Final Judging Results

### Mathematics

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

#### Award Legend

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

### Middle School

**Avon** Talcott Mountain Academy Mary Bauer

5539 P8 Using a Multiple Regression Model to Predict Success of Major League Baseball Teams

Award 1 Student(s) David P. Marchena Grade 8 Town New Hartford

**Bozrah** Fields Memorial School Ev Brown

2018 L7 Cracking Codes And Solving Ciphers

Award 2 Student(s) Connor S. Provost Grade 7 Town Bozrah

**Danbury** St. Joseph School Mrs. Jennifer Page

2519 L8 Outbreak! Predicting the modes and transmission rates of a human viral epidemic

Award 3 Student(s) Janine A. Kerr Grade 8 Town Danbury

**Avon** Talcott Mountain Academy Mary Bauer

5517 P8 Langton's Ant Farm

Award m Student(s) Peter P. Baczyk Grade 8 Town Avon

**Manchester** St. Bridget School Ms. Kim Maysonet

5023 P7 The Effect Of Temperature On The Viscosity Of Motor Oil

Award m Student(s) Nicole Robitaille Grade 7 Town Manchester

### High School

**Glastonbury** Glastonbury High School Diane Pintavalle

6027 PS A Surprising Geometric Transformation

Award 1 Student(s) Chung Su Hong Grade 12 Town Glastonbury

**Putnam** Putnam Science Academy Fatih Cekic

6014 PS Improving the Efficiency of Robotic Arm Movement through Advanced Geometric Calculations

Award 2 Student(s) Serik Tukupov Grade 10 Town Putnam

**Westport** Staples High School Dr. Nick Morgan

6074 PS Modeling an Optimal Receiver for a Binary Quantum Channel Using Information Theory

Award 3 Student(s) Yuri D. Lenskiy Grade 12 Town Westport

**Branford** Branford High School Mrs. Elperina

6065 PS Microprocessor square root algorithms

Award m Student(s) Brede E. Doerner Grade 11 Town Branford



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## Final Judging Results

### Environmental Sciences

**Award Legend**  
 Trophy Winners = 1, 2, ...  
 Medalists = m  
 Winners = w

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

### Middle School

**Windsor** Madina Academy Aisha Seyal  
 5041 P7 A novel water filtration and disinfection system designed using a salad spinner, dynamo and high intensity light emitting diodes (LED) for use in developing countries.

Award 1 Student(s) Sithy A. Mahamoon Grade 7 Town Windsor

**Bozrah** Fields Memorial School Evelyn Brown  
 2508 L8 Fanwort: Friend or Foe?

Award 2 Student(s) Marissa A. Digby Grade 8 Town Bozrah

**Madison** Our Lady of Mercy School Rosalie Zonder  
 1018 LT Will They Survive...

Award 3 Student(s) Kevin O'Brien Grade 8 Town Guilford  
 Liam Lynders Grade 8 Town Guilford

**Orange** Southern Connecticut Hebrew Academy Mrs. Karen Howell  
 5518 P8 The Buffering Capacity of Various Types of Soils and Grasses on Acid Rain

Award m Student(s) Moshe Y. Piekarski Grade 8 Town Hamden

**Stratford** Harry B. Flood Middle School Mr. Gorski  
 1019 LT How to Counteract the Effects of Acid Rain on Plant Life

Award m Student(s) Lily A. Mudre Grade 8 Town Stratford  
 Rachel M. Mudre Grade 8 Town Stratford

**Windsor** Madina Academy Aisha Seyal  
 1014 LT Effects of composting leaves, coffee grounds, vegetables, or fruits compared to store-bought fertilizer and regular soil on the growth & appearance of plants and on soil nutrient levels.

Award m Student(s) Rayyan Ashraf Grade 8 Town Windsor  
 Shakeel A. Choudhury Grade 8 Town Bloomfield

**Windsor** Madina Academy Mehwish Amin  
 2002 L7 A Novel Approach to Oil Spill Cleanup: Wood Chips

Award m Student(s) Sofija Gjonbalaj Grade 7 Town Manchester

### High School

**Greenwich** Greenwich High School Andrew Bramante  
 6040 PS Electrified Nanoscale Architecture in Mixed Matrix Membranes as a Means of Rapid Throughput Water Sterilization

Award 1 Student(s) Will B. Hallisey Grade 11 Town Greenwich

**Greens Farms** Greens Farms Academy Sara Campolettano  
 3001 LS The Investigation of the Biological Health of the New Creek Salt Marsh through Water Quality Testing and Species Identification of Benthic Invertebrates

Award 2 Student(s) Allison C. Kruk Grade 12 Town Easton

**Wallingford** Choate Rosemary Hall Lawrence Stowe  
 3066 LS Biodegradation of Polylactide Nanoweb Electrospun for Freshwater Harmful Algal Bloom Removal

Award 3 Student(s) Joshua S. Kim Grade 11 Town Wallingford



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## Environmental Sciences

**Award Legend**  
Trophy Winners = 1, 2, ...  
Medalists = m  
Winners = w

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

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<b>Bethel</b>	Bethel High School	Mr. Raymond Turek			
3043	LS	Super Weed: Allelopathic Inhibition of Garlic Mustard ( <i>Alliaria Petiolata</i> ) on Germination and Growth of Native Zinnia Seeds			
<b>Award</b>	m	<b>Student(s)</b>	Julie M. Zeller	<b>Grade</b>	11
		<b>Town</b>	Bethel		
<hr/>					
<b>Darien</b>	Darien High School	Mr. David Lewis			
3041	LS	A Study of Egg Fertility Rate in Leatherback Sea Turtle Clutches Over the Nesting Season (March-June) at the Pacuare Reserve, Costa Rica			
<b>Award</b>	m	<b>Student(s)</b>	Dana E. Howe	<b>Grade</b>	12
		<b>Town</b>	Darien		
<hr/>					
<b>Greenwich</b>	Greenwich High School	Andrew Bramante			
3025	LS	Subsistence of <i>Escherichia Coli</i> on Artificial Turf Surfaces			
<b>Award</b>	m	<b>Student(s)</b>	Charlotte D'Acierno	<b>Grade</b>	11
		<b>Town</b>	Old Greenwich		
<hr/>					
<b>Hamden</b>	Sacred Heart Academy	Mrs. Frances Saukas			
3079	LS	A Comparative Study of Herbs Grown Using an Aquaponic vs. a Hydroponic Growing System			
<b>Award</b>	m	<b>Student(s)</b>	Olivia N. Kelly	<b>Grade</b>	9
		<b>Town</b>	Shelton		
<hr/>					
<b>Oxford</b>	Oxford High School	Mrs. Doherty			
6048	PS	Design and Testing of Two-step Arsenic - remediating water filtration system (year two)			
<b>Award</b>	m	<b>Student(s)</b>	Joseph A. Bonavita Jr	<b>Grade</b>	12
		<b>Town</b>	Oxford		
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## Final Judging Results

### Applied Technology

**Award Legend**  
 Trophy Winners = 1, 2, ...  
 Medalists = m  
 Winners = w

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

### Middle School

<b>Windsor</b>	Madina Academy	Aisha Seyal	5041	P7	A novel water filtration and disinfection system designed using a salad spinner, dynamo and high intensity light emitting diodes (LED) for use in developing countries.	Award	1	Student(s)	Sithy A. Mahamoon	Grade	7	Town	Windsor
<b>Greenwich/Riverside</b>	Eastern Middle School	Brian Carstens	5009	P7	A Cost-Effective, Eco-Friendly Weather Monitoring UAV.	Award	2	Student(s)	Paul J. Hansel	Grade	7	Town	Old Greenwich
<b>Norwalk</b>	The Montessori Middle School	David Lavallee	5554	P8	Airlift Water Pumping	Award	3	Student(s)	Eric Smith	Grade	8	Town	Norwalk
<b>Hebron</b>	Oei Homeschool	Ellen McHugh	5030	P7	Prototype Design of an Electricity Generating Shoe Utilizing a Pumped Air Turbine.	Award	m	Student(s)	Maura C. Oei	Grade	7	Town	Hebron
<b>Stafford Springs</b>	St. Edward School	Mrs. Milnes	5559	P8	Ion Engines: A Superior Deep Space Propulsion Method	Award	m	Student(s)	Benjamin S. Teerlinck	Grade	8	Town	Monson
<b>Windsor</b>	Madina Academy	Mehwish Amin	2002	L7	A Novel Approach to Oil Spill Cleanup: Wood Chips	Award	m	Student(s)	Sofija Gjonbalaj	Grade	7	Town	Manchester

### High School

<b>Greenwich</b>	Greenwich High School	Andrew Bramante	6069	PS	Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor	Award	1	Student(s)	Ryota Ishizuka	Grade	11	Town	Cos Cob
<b>Manchester</b>	East Catholic High School	Ms. Noble	6072	PS	Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine	Award	2	Student(s)	Bridget M. Oei	Grade	9	Town	Hebron
<b>Manchester</b>	East Catholic High School	Ms. Holly Noble	6050	PS	Development of a Composite Clay Polymer Sponge for Remediation of Oil Contaminated Water.	Award	3	Student(s)	Theresa A. Oei	Grade	12	Town	Hebron
<b>New Milford</b>	New Milford High School	Mr. Felten	6060	PS	What are the most desirable sources of mud for a microbial fuel cell?	Award	m	Student(s)	Tara E. Larkin	Grade	11	Town	New Milford
<b>Putnam</b>	Putnam Science Academy	Fatih Cekic	6014	PS	Improving the Efficiency of Robotic Arm Movement through Advanced Geometric Calculations	Award	m	Student(s)	Serik Tukupov	Grade	10	Town	Putnam





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## Applied Technology

**Award Legend**  
Trophy Winners = 1, 2, ...  
Medalists = m  
Winners = w

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

**Redding** Joel Barlow High School Dr. Katherine Nuzzo

3008 LS Efficacy of Solar Disinfection Using Artificial Sunlight Versus a Composite of Infrared, Ultraviolet, and Visible Light

**Award** m **Student(s)** Caroline Caglioni **Grade** 12 **Town** Redding

**Westport** Staples High School Dr. Nicholas Morgan

6064 PS Evaluation of Venting-to-Coolant in Sodium-Cooled Fast Neutron Reactors

**Award** m **Student(s)** Tessa D. Green **Grade** 12 **Town** Westport





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## Final Judging Results

### Conn. Academy of Science & Engineering

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

#### Award Legend

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

## High School

**Rye, NY** Rye Country Day School Dr. Mary Krasovec

3003 LS Development and Characterization of a Novel Listeria-Caspase-3 DNA Vaccine to Eradicate Metastatic Breast Cancer

**Award**

**Student(s)** Swathi Krishnan

**Grade 12 Town** Stamford

**Greenwich** Greenwich High School Andrew Bramante

6069 PS Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor

**Award**

**Student(s)** Ryota Ishizuka

**Grade 11 Town** Cos Cob



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### Final Judging Results

## CSTA Marty Tafel Award

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

#### Award Legend

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

### Middle School

**Newtown** St. Rose of Lima School Marde Dimon

2514 L8 Improved Process for Bioremediation of Oil Contaminated Seawater

**Award** Student(s) Haley M. Ryan **Grade 8** **Town** Newtown

**West Hartford** St. Timothy Middle School Mrs. Christine Simao-Breen

5538 P8 Aerodynamics: A Study in the Improvement of Auto Body Aerodynamic Efficiency

**Award** Student(s) Sean Oleasz **Grade 8** **Town** West Simsbury



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## Final Judging Results

### Computer Science

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

**Award Legend**  
Trophy Winners = 1, 2, ...  
Medalists = m  
Winners = w

### Middle School

<b>Avon</b>	Talcott Mountain Academy	Mrs. Bauer	5513	P8	The Mathematics of Card Counting	Award	1	Student(s)	Brendan Forbes	Grade	8	Town	Granby
<b>Bozrah</b>	Fields Memorial School	Ev Brown	2018	L7	Cracking Codes And Solving Ciphers	Award	2	Student(s)	Connor S. Provost	Grade	7	Town	Bozrah
<b>Danbury</b>	St. Peter/Sacred Heart School	Mr. Greg Capone	5034	P7	A-MAZE-ing Robots: Data structures, Algorithms, and Modern Robotics	Award	3	Student(s)	Gabriel A. Correa	Grade	7	Town	Danbury
<b>Greenwich/Riverside</b>	Eastern Middle School	Brian Carstens	5009	P7	A Cost-Effective, Eco-Friendly Weather Monitoring UAV.	Award	m	Student(s)	Paul J. Hansel	Grade	7	Town	Old Greenwich

### High School

<b>Branford</b>	Branford High School	Mrs. Elperina	6065	PS	Microprocessor square root algorithms	Award	1	Student(s)	Brede E. Doerner	Grade	11	Town	Branford
<b>Norwich</b>	Norwich Free Academy	Robert Johnson	6518	PST	Programming a LEGO NXT Robot to Work as a Search and Rescue Robot	Award	2	Student(s)	Miranda R. Cirrito Remington J. Carle	Grade	9 10	Town	Bozrah Norwich
<b>Westport</b>	Staples High School	Dr. Nick Morgan	6074	PS	Modeling an Optimal Receiver for a Binary Quantum Channel Using Information Theory	Award	3	Student(s)	Yuri D. Lenskiy	Grade	12	Town	Westport
<b>Fairfield</b>	Fairfield College Preparatory School	Mrs. O'Reilly	6093	PS	Autonomous Kite Wind Generator to Capture Troposphere Winds	Award	m	Student(s)	Kyle T. Ryan	Grade	10	Town	Trumbull
<b>Greenwich</b>	Greenwich High School	Andrew Bramante	6090	PS	Statistical machine translation with syntactic weighting of target-language translation probabilities	Award	m	Student(s)	Connor M. Harris	Grade	11	Town	Riverside
<b>Watertown</b>	The Taft School	William Kron	6092	PS	Design and Construction of a Linear Particle Accelerator	Award	m	Student(s)	Matthew A. Petroff	Grade	12	Town	Cheshire



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### Final Judging Results

## Future Sustainability

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

#### Award Legend

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

### High School

**Manchester** East Catholic High School Ms. Holly Noble

6050 PS Development of a Composite Clay Polymer Sponge for Remediation of Oil Contaminated Water.

Award 1 Student(s) Theresa A. Oei Grade 12 Town Hebron

**Manchester** East Catholic High School Ms. Noble

6072 PS Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine

Award 2 Student(s) Bridget M. Oei Grade 9 Town Hebron

**Fairfield** Fairfield College Preparatory School Mrs. O'Reilly

6093 PS Autonomous Kite Wind Generator to Capture Troposphere Winds

Award 3 Student(s) Kyle T. Ryan Grade 10 Town Trumbull

**Brewster** Brewster High School Mr. Schmidt

6075 PS Biomimetic Insulation: Inspired by the eastern tent caterpillar and white-tailed deer

Award m Student(s) Madeleine L. Skaller Grade 12 Town Brewster

**Greenwich** Greenwich High School Andrew Bramante

6020 PS Solid State Thermoelectric Power Generation Using Strategic Household Placement

Award m Student(s) Carl O. Akerman Grade 11 Town Greenwich

**Greenwich** Greenwich High School Andrew Bramante

6069 PS Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor

Award m Student(s) Ryota Ishizuka Grade 11 Town Cos Cob

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

6066 PS Synthesis of Hot Electron Carrier Lead Selenide Nanocrystals and Thin Film Layers using a Novel Vitamic C Reduction

Award m Student(s) Victoria R. Leto Grade 11 Town Greenwich

**Greenwich** Greenwich High School Andrew Bramante

6071 PS Improved Spectral Response of Dye Sensitized Solar Cells through Red-Shift Fluorescence Resonance Energy Transfer (FRET)

Award m Student(s) Thomas C. Newberry Grade 11 Town Riverside

**New Milford** New Milford High School Mr. Felten

6060 PS What are the most desirable sources of mud for a microbial fuel cell?

Award m Student(s) Tara E. Larkin Grade 11 Town New Milford

**Norwich** Norwich Free Academy Mr. Robert V Johnson

6029 PS Impact of Turbine Design on Renewable Energy Storage System Efficiency

Award m Student(s) Ian D. Dakers Grade 11 Town Bozrah



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## Final Judging Results

### Goodrich Engineering Excellence Award

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

**Award Legend**  
Trophy Winners = 1, 2, ...  
Medalists = m  
Winners = w

### Middle School

<b>Newtown</b>	St. Rose of Lima School	Marde Dimon	2514	L8	Improved Process for Bioremediation of Oil Contaminated Seawater	Award	1	Student(s)	Haley M. Ryan	Grade	8	Town	Newtown
<b>Newtown</b>	St. Rose of Lima School	Marde Dimon	5020	P7	Truss-t In Your Bridge	Award	2	Student(s)	Dominic C. Pagliaro	Grade	7	Town	Sandy Hook
<b>Danbury</b>	Broadview Middle School	D. Rovnak	4014	PT	Earthquake	Award	3	Student(s)	Evan L. Coco Tyler Amaral	Grade	8	Town	Danbury
<b>Bozrah</b>	Fields Memorial School	Mrs. Brown	5016	P7	Baseball Bat Comparison	Award	m	Student(s)	Coogan E. Pellerin	Grade	7	Town	Bozrah
<b>Bozrah</b>	Fields Memorial School	Mrs. Brown	5008	P7	Rocket Science	Award	m	Student(s)	Jack A. Santo	Grade	7	Town	Bozrah
<b>Danbury</b>	St. Peter/Sacred Heart School	Mr. Greg Capone	5034	P7	A-MAZE-ing Robots: Data structures, Algorithms, and Modern Robotics	Award	m	Student(s)	Gabriel A. Correa	Grade	7	Town	Danbury
<b>Greenwich/Riverside</b>	Eastern Middle School	Brian Carstens	5009	P7	A Cost-Effective, Eco-Friendly Weather Monitoring UAV.	Award	m	Student(s)	Paul J. Hansel	Grade	7	Town	Old Greenwich
<b>Hebron</b>	Oei Homeschool	Ellen McHugh	5030	P7	Prototype Design of an Electricity Generating Shoe Utilizing a Pumped Air Turbine.	Award	m	Student(s)	Maura C. Oei	Grade	7	Town	Hebron
<b>Norwalk</b>	Ponus Ridge School	Joe Buellesbach	5514	P8	A New Angle on Green Energy	Award	m	Student(s)	Elle Buellesbach	Grade	8	Town	Norwalk
<b>Norwalk</b>	The Montessori Middle School	David Lavallee	5554	P8	Airlift Water Pumping	Award	m	Student(s)	Eric Smith	Grade	8	Town	Norwalk
<b>West Hartford</b>	St. Timothy Middle School	Mrs. Christine Simao-Breen	5538	P8	Aerodynamics: A Study in the Improvement of Auto Body Aerodynamic Efficiency	Award	m	Student(s)	Sean Oleasz	Grade	8	Town	West Simsbury



# Connecticut Science Fair

## Quinnipiac University

### March 15 - 19, 2011

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## Final Judging Results

### Goodrich Engineering Excellence Award

**Award Legend**  
 Trophy Winners = 1, 2, ...  
 Medalists = m  
 Winners = w

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

**Windsor** Madina Academy Aisha Seyal  
 5041 P7 A novel water filtration and disinfection system designed using a salad spinner, dynamo and high intensity light emitting diodes (LED) for use in developing countries.  
**Award** m **Student(s)** Sithy A. Mahamoon **Grade** 7 **Town** Windsor

### High School

**Manchester** East Catholic High School Ms. Holly Noble  
 6050 PS Development of a Composite Clay Polymer Sponge for Remediation of Oil Contaminated Water.  
**Award** 1 **Student(s)** Theresa A. Oei **Grade** 12 **Town** Hebron

**Manchester** East Catholic High School Ms. Noble  
 6072 PS Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine  
**Award** 2 **Student(s)** Bridget M. Oei **Grade** 9 **Town** Hebron

**Greenwich** Greenwich High School Andrew Bramante  
 6040 PS Electrified Nanoscale Architecture in Mixed Matrix Membranes as a Means of Rapid Throughput Water Sterilization  
**Award** 3 **Student(s)** Will B. Hallisey **Grade** 11 **Town** Greenwich

**Fairfield** Fairfield College Preparatory School Mrs. O'Reilly  
 6093 PS Autonomous Kite Wind Generator to Capture Troposphere Winds  
**Award** m **Student(s)** Kyle T. Ryan **Grade** 10 **Town** Trumbull

**Greenwich** Greenwich High School Andrew Bramante  
 6071 PS Improved Spectral Response of Dye Sensitized Solar Cells through Red-Shift Fluorescence Resonance Energy Transfer (FRET)  
**Award** m **Student(s)** Thomas C. Newberry **Grade** 11 **Town** Riverside

**Greenwich** Greenwich High School Mr. Andrew Bramante  
 6054 PS Visible Illumination of Ferroelectric BiFeO3 Thin Films to Produce a Polarization-Dependent Bulk Photovoltaic Effect  
**Award** m **Student(s)** James P. O'Sullivan **Grade** 11 **Town** Old Greenwich

**Norwich** Norwich Free Academy Mr. Robert V Johnson  
 6029 PS Impact of Turbine Design on Renewable Energy Storage System Efficiency  
**Award** m **Student(s)** Ian D. Dakers **Grade** 11 **Town** Bozrah

**Oxford** Oxford High School Mrs. Doherty  
 6022 PS A Kinesiology approach to evaluate the biomechanics of the typical long distance runner's gait and its relation to repetitive stress injury  
**Award** m **Student(s)** Skyler A. Werner **Grade** 11 **Town** Oxford

**Shelton** Shelton High School Ausif Mahmood  
 6001 PS Renewable Energy For Mobile Devices  
**Award** m **Student(s)** Rigel Mahmood **Grade** 9 **Town** Shelton

**Wallingford** Choate Rosemary Hall Lawrence Stowe  
 3066 LS Biodegradation of Polylactide Nanoweb Electrospun for Freshwater Harmful Algal Bloom Removal  
**Award** m **Student(s)** Joshua S. Kim **Grade** 11 **Town** Wallingford



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

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

**Westport** Staples High School Dr. Nick Morgan

6074 PS Modeling an Optimal Receiver for a Binary Quantum Channel Using Information Theory

**Award** m **Student(s)** Yuri D. Lenskiy

**Grade** 12 **Town** Westport





# Connecticut Science Fair

## Quinnipiac University

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## Final Judging Results

### CT Clean Energy Award

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

**Award Legend**  
Trophy Winners = 1, 2, ...  
Medalists = m  
Winners = w

### Middle School

**Woodstock** Woodstock Middle School Mrs. Carter

5046 P7 What are the effects of pH and temperature on the efficiency of ethanol production from biomass?

Award 1 Student(s) Deanna L. Guilani Grade 7 Town Woodstock Valley

**Newtown** St. Rose of Lima School Marde Dimon

2514 L8 Improved Process for Bioremediation of Oil Contaminated Seawater

Award 2 Student(s) Haley M. Ryan Grade 8 Town Newtown

**Hebron** Oei Homeschool Ellen McHugh

5030 P7 Prototype Design of an Electricity Generating Shoe Utilizing a Pumped Air Turbine.

Award 3 Student(s) Maura C. Oei Grade 7 Town Hebron

**Manchester** St. Bridget School Ms. Kim Maysonet

5023 P7 The Effect Of Temperature On The Viscosity Of Motor Oil

Award m Student(s) Nicole Robitaille Grade 7 Town Manchester

**Middlefield** Independent Day School Charlotte Stutz

5512 P8 Fuel Cells, Are they the Future?

Award m Student(s) Danielle M. Shubat Grade 8 Town East Haddam

**Pawcatuck** St. Michael School Mr. DeNoia

5516 P8 The Effect of Blade Design on The Electrical Output of a Vertical Axis Wind Turbine

Award m Student(s) Catherine E. Montalto Grade 8 Town Westerly

**Westbrook** Westbrook Middle School Mrs. Shafer

5508 P8 Do Different Light Sources Effect the Performance of a Solar Cell

Award m Student(s) Kaitlyn M. Luft Grade 8 Town Westbrook

### High School

**Manchester** East Catholic High School Ms. Noble

6072 PS Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine

Award 1 Student(s) Bridget M. Oei Grade 9 Town Hebron

**Greenwich** Greenwich High School Andrew Bramante

6069 PS Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor

Award 2 Student(s) Ryota Ishizuka Grade 11 Town Cos Cob

**Greenwich** Greenwich High School Andrew Bramante

6071 PS Improved Spectral Response of Dye Sensitized Solar Cells through Red-Shift Fluorescence Resonance Energy Transfer (FRET)

Award 3 Student(s) Thomas C. Newberry Grade 11 Town Riverside

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

6066 PS Synthesis of Hot Electron Carrier Lead Selenide Nanocrystals and Thin Film Layers using a Novel Vitamic C Reduction

Award m Student(s) Victoria R. Leto Grade 11 Town Greenwich



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### Final Judging Results

## CT Clean Energy Award

#### Award Legend

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

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

**Greenwich** Greenwich High School Andy Bramante

6051 PS Purification of Biofuel Syngas via Methanation of CO<sub>2</sub> with a Raney Nickel-Aluminum Alloy

**Award** m **Student(s)** Nicholas M. Ornitz **Grade** 11 **Town** Old Greenwich

**Oxford** Oxford High School Mrs. Granucci

6002 PS Using Refinery Produced CO<sub>2</sub> Emissions to Form Limestone Aggregate Industrial Grade Cement, Calcium Carbonate, When Combined With Calcium.

**Award** m **Student(s)** Jared A. Schulman **Grade** 11 **Town** Oxford

**Putnam** Putnam Science Academy Ahmet Hakan Duman

3513 LST Utilizing Autumn Foliage as an Alternative Energy Source and as an Absorbing Agent for Oil Spills

**Award** m **Student(s)** Ozkan Cil **Grade** 12 **Town** Putnam  
Selahaddin S. Ozkan **Grade** 11 **Town** Putnam  
Fehmi E. Agaoglu **Grade** 11 **Town** Putnam



# Connecticut Science Fair

## Quinnipiac University

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## Final Judging Results

### e-smarts Sustainable Resources & Practices

**Award Legend**  
 Trophy Winners = 1, 2, ...  
 Medalists = m  
 Winners = w

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

### Middle School

**Woodstock** Woodstock Middle School Mrs. Carter

5046 P7 What are the effects of pH and temperature on the efficiency of ethanol production from biomass?

Award 1 Student(s) Deanna L. Guilani Grade 7 Town Woodstock Valley

**Norwalk** The Montessori Middle School David Lavallee

5554 P8 Airlift Water Pumping

Award 2 Student(s) Eric Smith Grade 8 Town Norwalk

**Hebron** Oei Homeschool Ellen McHugh

5030 P7 Prototype Design of an Electricity Generating Shoe Utilizing a Pumped Air Turbine.

Award 3 Student(s) Maura C. Oei Grade 7 Town Hebron

**Danbury** St. Joseph School Mrs. Page

5530 P8 Will the Use of Lenses Effect the Efficiency of Solar Panels?

Award m Student(s) Sophia DiCarlo Grade 8 Town Danbury

**Middlefield** Independent Day School Charlotte Stutz

5512 P8 Fuel Cells, Are they the Future?

Award m Student(s) Danielle M. Shubat Grade 8 Town East Haddam

**Norwalk** Ponus Ridge School Joe Buellesbach

5514 P8 A New Angle on Green Energy

Award m Student(s) Elle Buellesbach Grade 8 Town Norwalk

**Pawcatuck** St. Michael School Mr. DeNoia

5516 P8 The Effect of Blade Design on The Electrical Output of a Vertical Axis Wind Turbine

Award m Student(s) Catherine E. Montalto Grade 8 Town Westerly

**Windsor** Madina Academy Mehwish Amin

2501 L8 The Effect of pH on the Electrical Output of a Microbial Fuel Cell

Award m Student(s) Aasiya M. Ahmed Grade 8 Town Tolland

**Windsor** St. Gabriel School Margaret Rosa

4018 PT Solar Flower Power

Award m Student(s) Kirsten E. Mossberg Grade 7 Town Windsor

Alaina J. Mueller Grade 7 Town Windsor



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### Final Judging Results

## Quinnipiac University

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

#### Award Legend

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

## Middle School

**East Haven** East Haven Academy Mrs. Staires

5006 P7 When I Change The Type of Antacid, How Many Milliliters of Stomach Acid Will Be Neutralized?

**Award** Student(s) Sarah E. Harkins **Grade 7** **Town** East Haven

## High School

**Greenwich** Greenwich High School Andrew Bramante

3025 LS Subsistence of Escherichia Coli on Artificial Turf Sufaces

**Award** Student(s) Charlotte D'Acierno **Grade 11** **Town** Old Greenwich



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### Final Judging Results

## United Technologies

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

#### Award Legend

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

### Middle School

**Windsor** Madina Academy Mehwish Amin

2501 L8 The Effect of pH on the Electrical Output of a Microbial Fuel Cell

**Award** Student(s) **Aasiya M. Ahmed** Grade 8 Town Tolland

**Danbury** Broadview Middle School D. Rovnak

4014 PT Earthquake

**Award** Student(s) **Evan L. Coco** Grade 8 Town Danbury  
**Tyler Amaral** Grade 8 Town Danbury

**West Hartford** St. Timothy Middle School Mrs. Christine Simao-Breen

5538 P8 Aerodynamics: A Study in the Improvement of Auto Body Aerodynamic Efficiency

**Award** Student(s) **Sean Oleasz** Grade 8 Town West Simsbury

### High School

**Shelton** Shelton High School Ms. Hayes

3508 LST The True Green Fuel Of the Future: Algae

**Award** Student(s) **Adam P. Zhitomi** Grade 10 Town Shelton  
**Samanth E. Dimas** Grade 10 Town Shelton

**Glastonbury** Glastonbury High School Diane Pintavalle

6027 PS A Surprising Geometric Transformation

**Award** Student(s) **Chung Su Hong** Grade 12 Town Glastonbury

**Norwich** Norwich Free Academy Mr. Robert V Johnson

6029 PS Impact of Turbine Design on Renewable Energy Storage System Efficiency

**Award** Student(s) **Ian D. Dakers** Grade 11 Town Bozrah

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

6054 PS Visible Illumination of Ferroelectric BiFeO<sub>3</sub> Thin Films to Produce a Polarization-Dependent Bulk Photovoltaic Effect

**Award** Student(s) **James P. O'Sullivan** Grade 11 Town Old Greenwich

**Greenwich** Greenwich High School Andrew Bramante

6069 PS Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor

**Award** Student(s) **Ryota Ishizuka** Grade 11 Town Cos Cob