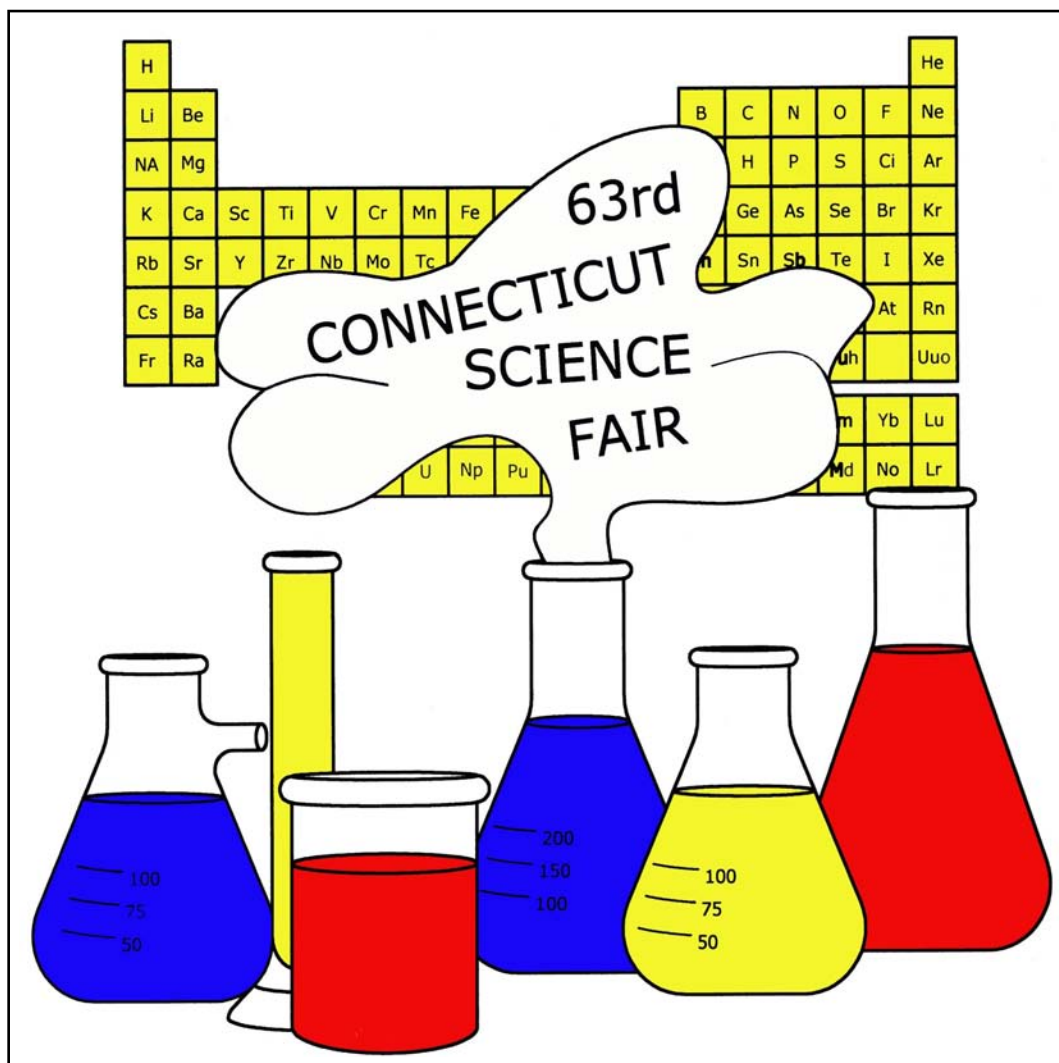


# 2011 Final Report

[www.ctsciencefair.org](http://www.ctsciencefair.org)



**Quinnipiac University, Hamden**  
**March 15-19, 2011**

An all-volunteer Connecticut non-profit organization  
An affiliate of the Intel Science and Engineering Fair

# **63rd Connecticut Science Fair**

**Quinnipiac University**  
Hamden

**March 15 - 19, 2011**

**Connecticut Science Fair Association, Inc**  
Hartford, Connecticut

Publication of the Connecticut Science Fair Association, Inc.

April 2011

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# 63rd Connecticut Science Fair

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## WEB SITES

CSF .....	<a href="http://www.ctsciencefair.org">http://www.ctsciencefair.org</a>
ISEF .....	<a href="http://www.societyforscience.org/isef">http://www.societyforscience.org/isef</a>
2011 ISEF .....	<a href="http://www.societyforscience.org/intelisef2011">http://www.societyforscience.org/intelisef2011</a>
I-SWEEEP .....	<a href="http://www.isweeep.org">http://www.isweeep.org</a>
GENIUS Olympiad .....	<a href="http://www.geniusolympiad.org">http://www.geniusolympiad.org</a>



# AWARDS



## FORMAT KEY

Project No.	Category	Title	Teacher	Regional/City Fair
	SchTown	School		
	Student	Hometown	Grade	
	Awards	Honors		
		Sponsor	Sponsor Award	

**Life Sciences**

- 1001 LT Just How Toxic Are Aerosols?  
Ridgefield, East Ridge Middle School, Teacher - Deborah Sullivan  
Adeleine Hupy, Ridgefield 8 Olivia Miloro Ridgefield 8  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion & Acrylic Award
  - Connecticut State Department of Health Laboratory Employees --- \$75 award
- 1002 LT Plant Nutrition  
Stamford, Bi-Cultural Day School, Teacher - Chistopher Graseck  
Sarah K. Gold, Stamford 7 Aviva M. Attar Stamford 7  
Awards: Honors = 3
- 1004 LT No Pain, Lots of Game  
Bridgeport, Bridgeport Hope School, Teacher - Elizabeth Deshotel  
Tamman Y. Montanaro, Bridgeport 7 Gurion D. Ramirez Bridgeport 8  
Awards: Honors = 2
- 1005 LT What's the Deal With Organic Food? Examining Herbicides in Chickpeas.  
Pawcatuck, St. Michael School, Teacher - Michael DeNoia  
Victoria L. Johnson, Pawcatuck 7 Adeline S. Visscher Mystic 7  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- 3rd Place- Life Sciences MS Team- trophy and Invite to Compete Broadcom MASTERS
  - Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion & Acrylic Award Souvenir
- 1006 LT The Effect of Age on Sound Perception while Blindfolded  
Newtown, Newtown Middle School, Teacher - Ms. Andracchi  
Marisa A. Leone, Sandy Hook 8 Tonya M. Tucker Sandy Hook 8  
Awards: Honors = 2
- 1007 LT I Think I Killed It!!!  
Bridgeport, Park City Prep Charter School, Teacher - Ms. Johnson  
Adonis T. Bligen, Bridgeport 8 James S. Acevedo Bridgeport 8  
Awards: Honors = 3
- 1008 LT Green Magnets  
Danbury, St. Gregory the Great School, Teacher - Mrs. Ferry  
Marin E. Wiltse, Danbury 7 Julia N. Reisert Danbury 7  
Awards: Honors = 3
- 1009 LT Magnificent Mnemonic Memory  
Plantsville, John F. Kennedy Middle School, Teacher - Mrs. Pepin  
Rebecca M. Caisse, Plantsville 7 Angelina J. Zollo Southington 7  
Awards: Honors = 2
- 1010 LT Rainforest  
Bridgeport, Bridgeport Hope School, Teacher - Elizabeth Deshotel  
Shannon M. Gill, Bridgeport 8 Gean M. Bernard Bridgeport 7  
Awards: Honors = 3  
  - Yale Peabody Museum --- Family "six-pack" of free passes to the Yale Peabody Museum



## AWARDS

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- 1011 LT Are the plants digging the batteries?  
West Hartford, Solomon Schechter Day School, Teacher - Barbara Varnum  
Emily B. Gershman, West Hartford 7 Abigail R. Selig West Hartford 7  
Awards: Honors = 2
- 1012 LT Desalination!  
Stratford, St. Mark School, Teacher - Mr. Flynn  
Nicole M. Terrizzi, Stratford 8 Margaret M. Gallagher Stratford 8  
Awards: Honors = 2  
• American Meteorological Society --- Certificate & membership to CT Science Center given by CSF
- 1013 LT Are Fingerprint Patterns Inherited?  
Bridgeport, John Winthrop School, Teacher - Ms. Golino  
Enkeleta Mjeshtri, Bridgeport 7 Cristina A. Dos Passos Bridgeport 7  
Awards: Honors = 2
- 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.  
Windsor, Madina Academy, Teacher - Aisha Seyal  
Rayyan Ashraf, Windsor 8 Shakeel A. Choudhury Bloomfield 8  
Awards: Honors = 2  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- MS Finalist - Audubon gifts, CSF Medallion, Acrylic award  
• Alexion Biotechnology Awards --- 5th Place- Biotechnology 8th grade- trophy  
• Connecticut Science Supervisors Association --- \$125 for a middle school project
- 1015 LT The Strongest Organ  
Stamford, Trailblazers Academy, Teacher - Jessica Maneyapanda  
Imani A. Morgan, Stamford 7 Ashley B. Prawl Stamford 7  
Awards: Honors = 3
- 1016 LT Is Fresh Water Safe To Drink?  
Southington, DePaolo Middle School, Teacher - Mr. Young  
Mack R. Golos, Southington 8 Jake T. Moise Southington 8  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- 2nd Place- Life Sciences MS Team- \$100 each & trophy and Invite Compete Broadcom MASTERS  
• National Oceanic and Atmospheric Administration --- Certificate, medallion, and membership to CT Science Center given by CSF
- 1017 LT Get Clean  
Danbury, St. Gregory the Great School, Teacher - Jo Ferry  
Siobhan Romero, Danbury 8 Janine Dayrit Danbury 8  
Awards: Honors = 3
- 1018 LT Will They Survive...  
Madison, Our Lady of Mercy School, Teacher - Rosalie Zonder  
Kevin O'Brien, Guilford 8 Liam Lynders Guilford 8  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- 1st Place- Life Sciences MS Team- \$100 each & trophy and Invite to Compete Broadcom MASTERS  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- 3rd Place MS- \$100, Trophy, Audubon gifts
- 1019 LT How to Counteract the Effects of Acid Rain on Plant Life  
Stratford, Harry B. Flood Middle School, Teacher - Mr. Gorski  
Lily A. Mudre, Stratford 8 Rachel M. Mudre Stratford 8  
Awards: Honors = 3  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- MS Finalist - Audubon gifts, CSF Medallion, Acrylic award
- 1021 LT Pollution On Our World  
Danbury, Broadview Middle School, Teacher - Ms. Searle  
Siddharth S. Patil, Danbury 8 Shrey S. Patel Danbury 8  
Awards: Honors = 3
- 1022 LT Does Food Affect Fry Growth  
Middlebury, Memorial Middle School, Teacher - Susan Johnson  
Kate F. McDonald, Middlebury 7 Brittany D. McDonald Middlebury 7 Emily R. Amarante Middlebury 7  
Awards: Honors = 2

- 1023 LT You Got Milk?  
Danbury, St. Gregory the Great School, Teacher - Josephine Ferry  
Sean P. McCoy, Danbury 7 Gregory R. Capozzi Danbury 7  
Awards: Honors = 2
- 1024 LT What Cleans Bacteria Better?  
Bridgeport, Park City Prep Charter School, Teacher - Mrs. Vicky Boudreau  
Djimon Johnson, Bridgeport 7 Jordan Hunt Bridgeport 7  
Awards: Honors = 3
- 2001 L7 How Humidity Affects Fungal Growth  
Avon, Talcott Mountain Academy, Teacher - Mr. Pellino  
Gwynne T. Domashinski, Suffield 7  
Awards: Honors = 3  
  - Alexion Biotechnology Awards --- Finalist - Biotechnology 7th grade - CSF Medallion & Acrylic Award Souvenir
  - Yale Peabody Museum --- Family "six-pack" of free passes to the Yale Peabody Museum
- 2002 L7 A Novel Approach to Oil Spill Cleanup: Wood Chips  
Windsor, Madina Academy, Teacher - Mehwish Amin  
Sofija Gjonbalaj, Manchester 7  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- 2nd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
  - Barnes Aerospace Applied Technology Awards --- Middle School Finalist - Medallion and acrylic award
  - Audubon Connecticut & Arch Chemicals Environmental Awards --- MS Finalist - Audubon gifts, CSF Medallion, Acrylic award
  - Talcott Mountain Science Center --- Talcott Mountain Scholarship
- 2003 L7 It's Raining Acid?  
Glastonbury, Smith Middle School, Teacher - Haddock  
Bridget C. O'Neil, Glastonbury 7  
Awards: Honors = 3
- 2005 L7 Whoops!  
Bridgeport, High Horizons Magnet School, Teacher - Ms. Scott  
James R. Speer, Bridgeport 7  
Awards: Honors = 2
- 2007 L7 Color Confusion: Warped Words and the Stroop Effect  
Stafford Springs, St. Edward School, Teacher - Mrs. Milnes  
Amy E. Agro, Somers 7  
Awards: Honors = 2
- 2009 L7 A Dancers Learning Style - Are they the same for Academics and Dance?  
Pawcatuck, St. Michael School, Teacher - Mr. DeNoia  
Taylor M. Hanes, Pawcatuck 7  
Awards: Honors = 2  
  - Connecticut Academy of Audiology --- \$150 Cash Award Middle School- For Excellence in Audiology and Acoustics
- 2010 L7 How do Your Senses Affect Your Appetite?  
Avon, Talcott Mountain Academy, Teacher - Mr. Pellino  
Donnie G. Zeffiro, Canton 7  
Awards: Honors = 3
- 2011 L7 The Relationship Between Different Methods of Thawing and Bacterial Growth on Chicken.  
Middlebury, Memorial Middle School, Teacher - Mrs. Sachs  
Walter J. Manuel, Southbury 7  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- 3rd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
  - Alexion Biotechnology Awards --- 4th Place- Biotechnology 7th grade- trophy
- 2012 L7 The Hidden Dangers of Cell Phone Radiation  
West Hartford, Solomon Schechter Day School, Teacher - Barbra Varnum  
Benjamin T. Rosenblatt, Glastonbury 7  
Awards: Honors = 2  
  - The Children's Museum --- 1 family plus membership to the Children's Museum

## AWARDS

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- 2013 L7 Breath of Life: Does Short Bursts of Aerobic Exercise Increase Vital Capacity of the Lungs?  
Stafford Springs, St. Edward School, Teacher - Mrs. Milnes  
Maria J. Plasse, Stafford Springs 7  
Awards: Honors = 2
- 2014 L7 Bacteria On Cell Phones vs. Public Toilet Seats...Which One Has More Bacteria?  
Stratford, St. Mark School, Teacher - Mr. Flynn  
Ashley R. Young, Stratford 7  
Awards: Honors = 3
- 2015 L7 Flamin' Hot Breath!!!  
Bridgeport, High Horizons Magnet School, Teacher - Mrs. Portia Scott  
Alexis C. Greene, Bridgeport 7  
Awards: Honors = 2
- 2016 L7 Sun: Good or Bad for You?  
Westport, Coleytown Middle School, Teacher - Mrs. Rieman  
Madison A. Dick, Westport 7  
Awards: Honors = 3
- 2017 L7 Oil in a Hairy Situation  
Bridgeport, Park City Prep Charter School, Teacher - Mrs. Vicky Boudreau  
Austin B. Carazo, Stratford 7  
Awards: Honors = 3
- 2018 L7 Cracking Codes And Solving Ciphers  
Bozrah, Fields Memorial School, Teacher - Ev Brown  
Connor S. Provost, Bozrah 7  
Awards: Honors = 2
- ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- 2nd Place Middle School- \$100 from ATOMIC, and Trophy, \$200 from People's United Bank
  - Computer Science Awards --- 2nd Place Middle School - \$200, Trophy and Medallion
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, membership to CT Science Center given by CSF
  - American Psychological Association --- Certificate, membership to CT Science Center given by CSF
- 2019 L7 Do Body Temperature and Time of Day Affect Reaction Time?  
Danbury, St. Joseph School, Teacher - Mrs. Jennifer Page  
Ryan Anderson, Danbury 7  
Awards: Honors = 2
- 2020 L7 Getting Your Clothes Clean While Staying Green  
Windsor, St. Gabriel School, Teacher - Miss. Meg Rosa  
Charlotte P. Tappenden, Windsor 7  
Awards: Honors = 2
- 2021 L7 Save the Sand (When I change the substance of the barrier, what happens to the size of the sand dune that is made?)  
East Haven, East Haven Academy, Teacher - Mrs. Staires  
Bianca M. Pappacoda, East Haven 7  
Awards: Honors = 2
- 2022 L7 Hydration Consideration: The Effects of Water Distribution on Plant Growth  
Trumbull, St. Catherine of Siena School, Teacher - Kelley Collins  
Alana Murphy, Trumbull 7  
Awards: Honors = 3
- 2023 L7 Using Daphnia To Model The Effects Of Common Household Cleaning Agents On Lifespan And Reproduction.  
Guilford, E.C. Adams Middle School, Teacher - Lynn Arnold  
Matthew J. Shorten, Guilford 7  
Awards: Honors = 2
- Alexion Biotechnology Awards --- 3rd Place- Biotechnology 7th grade- \$100 & trophy

- 2024 L7 Which type of water is best for sharing with friends and family?  
Danbury, St. Peter/Sacred Heart School, Teacher - Mr. Greg Capone  
Sarah E. Eriksson, Naugatuck 7  
Awards: Honors = 2
- 2025 L7 Artificial Intelligence  
Bridgeport, Bridgeport Hope School, Teacher - Elizabeth Deshotel  
Jasmeen Mohammed, Bridgeport 7  
Awards: Honors = 3
- 2026 L7 Would A Spill Damage The Glow  
Norwalk, The Montessori Middle School, Teacher - David Lavallee  
Thomas Rosiello, Weston 7  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- 1st Place- Life Sciences 7th grade- \$200 & trophy and Invitation to Compete Broadcom MASTERS
  - Alexion Biotechnology Awards --- 1st Place- Biotechnology 7th grade- \$300 & trophy
- 2027 L7 Acid Rain  
New Haven, Betsy Ross Arts Magnet School, Teacher - Ms. Macdonald  
Ashley R. Velleco, Ansonia 7  
Awards: Honors = 3
- 2028 L7 The Effect of Fertilizer on Compost  
Guilford, E.C. Adams Middle School, Teacher - Ms. Arnold  
Jia I. Spiggle, Guilford 7  
Awards: Honors = 2
- 2029 L7 Disinfect to Protect  
Stratford, St. Mark School, Teacher - Mr. Flynn  
Nicole V. Huben, Stratford 7  
Awards: Honors = 3
- 2030 L7 Eye Can't See You!  
Newtown, St. Rose of Lima School, Teacher - Marde Dimon  
Katerina E. Ringes, Sandy Hook 7  
Awards: Honors = 2
- 2031 L7 Short Term Memory Trivia  
Stamford, Trailblazers Academy, Teacher - Jessica Maneyapanda  
Bojana J. Todorovska, Stamford 7  
Awards: Honors = 2
- 2032 L7 Algae Biofuels  
Greens Farms, Greens Farms Academy, Teacher - Dr. Freeman  
Lydia Picoli, Wilton 7  
Awards: Honors = 1  
  - Alumni Botany Awards --- Alumni Middle School Botany Award- \$100 Cash
- 2033 L7 Ice, Lettuce, and Safety  
New Haven, Betsy Ross Arts Magnet School, Teacher - Ms. Chihus  
Samantha Z. Oliver, North Haven 7  
Awards: Honors = 3
- 2034 L7 Growing Food on Long Range Space Travel: Hydroponics vs. Soil  
Greens Farms, Greens Farms Academy, Teacher - Dr. Freeman  
Ryan D. Petschek, Norwalk 7  
Awards: Honors = 2

## AWARDS

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- 2501 L8 The Effect of pH on the Electrical Output of a Microbial Fuel Cell  
Windsor, Madina Academy, Teacher - Mehwish Amin  
Aasiya M. Ahmed, Tolland 8  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 5th Place- Life Sciences 8th grade- trophy and Invite to Compete Broadcom MASTERS
  - eesmarks/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy
  - United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report
  - U.S. Air Force --- Certificate, charging stand, backpack, flash jotter bundle set
- 2502 L8 How does solar energy, microwaved water, and composted soil effect seed growth ?  
New London, Bennie Dover Jackson Middle School, Teacher - Ms. Ferraiolo  
Megan V. Crespo, New London 8  
Awards: Honors = 2
- 2503 L8 How does soil pH affect the pH of water that is absorbed by the soil?  
Newington, St. Mary School, Teacher - Deborah Giantonio  
Chiara A. Santavenera, New Britain 8  
Awards: Honors = 3
- 2504 L8 Are There Alternatives To Titanium Face Plates?  
Ridgefield, East Ridge Middle School, Teacher - Mr. Christopher Walsh  
Benjamin J. Nussbaum, Ridgefield 8  
Awards: Honors = 2
- 2505 L8 The Effect of Age on Taste Perception  
Bethel, St. Mary School, Teacher - Tricia McDonald  
John Jerolimo, Bethel 8  
Awards: Honors = 3
- 2506 L8 Put Some Sugar in your Life  
Danbury, St. Gregory the Great School, Teacher - Mrs. Josephine Ferry  
Kelly A. Crotty, Brookfield 8  
Awards: Honors = 3
- 2507 L8 Decomposition Rates of Landfill Materials  
Hamden, Hamden Middle School, Teacher - Mr. Chris Sagnella  
Alyssa E. Santos, Hamden 8  
Awards: Honors = 2
- 2508 L8 Fanwort: Friend or Foe?  
Bozrah, Fields Memorial School, Teacher - Evelyn Brown  
Marissa A. Digby, Bozrah 8  
Awards: Honors = 2
- Audubon Connecticut & Arch Chemicals Environmental Awards --- 2nd Place MS- \$200, Trophy, Audubon gifts
  - Banning Family Life Science Award --- For excellence in invasive species research, \$100 cash
- 2509 L8 Effect of Bioremediation Nutrient Cultures on Degradation of Oil Spills, and Effect on Sand and Marsh Grass.  
Orange, Southern Connecticut Hebrew Academy, Teacher - Mrs. Howell  
Chaim M. I. Hodakov, New Haven 8  
Awards: Honors = 2
- Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion & Acrylic Award Souvenir
  - Southeastern New England Marine Educators --- \$75 award and membership in SENEME - 1st Place Junior & T-Shirt
  - Air and Waste Management Association, Connecticut Chapter --- \$100 Junior, Environmental Research, waste recycling related
- 2510 L8 Water vs. Coffee How does coffee affect the growth of radishes?  
Pawcatuck, St. Michael School, Teacher - Mr. DeNoia  
Antonia L. Reynolds, Pawcatuck 8  
Awards: Honors = 3
- 2511 L8 Blood Pressure & Pulse Rate  
Bridgeport, Read School, Teacher - Mr. Tharson  
Zaria A. McIntosh, Bridgeport 8  
Awards: Honors = 3

- 2512 L8 What material is best combined with dispersants to clean up an oil spill?  
 Falls Village, Lee H. Kellogg School, Teacher - Joseph Markow  
 Amelia M. Zucco, Falls Village 8  
 Awards: Honors = 2
- 2513 L8 Oil's Effect on Root Growth  
 Wilton, Middlebrook School, Teacher - Victoria Madden  
 Bridget Fearon, Wilton 8  
 Awards: Honors = 2
- 2514 L8 Improved Process for Bioremediation of Oil Contaminated Seawater  
 Newtown, St. Rose of Lima School, Teacher - Marde Dimon  
 Haley M. Ryan, Newtown 8  
 Awards: Honors = 1
- Pfizer Life Sciences Awards --- 1st Place- Life Sciences 8th grade- \$300 & trophy and Invite to Compete Broadcom MASTERS
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- 2nd Place Middle School - \$200 Cash and Trophy
  - Goodrich ISR Awards for Excellence In Engineering --- 1st Place- Engineering Middle School - \$300 Cash & trophy
  - Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Life Science 8th Grade - \$500 and invite to CSTA Award Banquet
  - Alexion Biotechnology Awards --- 1st Place- Biotechnology 8th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS
  - Connecticut Valley Biological Supply Company, Inc. --- \$50 Gift Certificate w/catalog
- 2515 L8 Cleansing vs. Amount of Bacteria Present  
 Kensington, St. Paul School, Teacher - Elaine Kotler  
 Audra C. Rocco, Kensington 8  
 Awards: Honors = 2
- 2516 L8 Multitasking's Effect on Different Subjects  
 Wilton, Middlebrook School, Teacher - Jessica Garcia  
 Evaline Xie, Wilton 8  
 Awards: Honors = 2
- 2517 L8 How Do Oil Spills Harm Wildlife?  
 East Haven, East Haven Academy, Teacher - Mrs. Staires  
 Tiffany C. Brady, East Haven 8  
 Awards: Honors = 3
- 2518 L8 SPATTER MATTERS  
 New Haven, Betsy Ross Arts Magnet School, Teacher - Amy Piccirillo  
 Sarah G. Sugrue, Milford 8  
 Awards: Honors = 3
- 2519 L8 Outbreak! Predicting the modes and transmission rates of a human viral epidemic  
 Danbury, St. Joseph School, Teacher - Mrs. Jennifer Page  
 Janine A. Kerr, Danbury 8  
 Awards: Honors = 1
- Pfizer Life Sciences Awards --- 3rd Place- Life Sciences 8th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
  - ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- 3rd Place Middle School - Trophy , \$100 from People's United Bank
  - Alexion Biotechnology Awards --- 2nd Place- Biotechnology 8th grade- \$200 & trophy and Invitation Compete in Broadcom MASTERS
  - U.S. Air Force --- Certificate,charging stand, backpack, flash jotter bundle set
  - Ricoh Corporation/Society for Science & the Public --- Certificate and membership to CT Science Center given by CSF
  - Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School Life Sciences
- 2520 L8 Colored Out Cones  
 Hartford, Classical Magnet School, Teacher - Dr. Kalunzy-Blaszczyk  
 Madeline C. Kumm, New Britain 8  
 Awards: Honors = 2

## AWARDS

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- 2521 L8 Quantitative Analysis of Hypoxia and Its' Causes in Long Island Sound's Estuary  
Orange, Southern Connecticut Hebrew Academy, Teacher - Mrs. Karen Howell  
Boruch S. Hecht, Norwalk 8  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 4th Place- Life Sciences 8th grade- trophy and Invite to Compete Broadcom MASTERS
  - Alexion Biotechnology Awards --- 3rd Place- Biotechnology 8th grade- \$100 & trophy and Invitation Compete in Broadcom MASTERS
  - Project Oceanology --- Individual - Book + 2 tickets, First Place Junior, check for \$100, t-shirt
  - Schoepfer Award for Excellence in Local Aquatic Science --- For excellence in a local water quality study, \$100 cash
- 2522 L8 Going "Green" as You Clean.  
Danbury, St. Joseph School, Teacher - Mrs. Jennifer Page  
Lauren G. Guiry, Danbury 8  
Awards: Honors = 2
- 2525 L8 How Sensitive Are You  
Hartford, SS. Cyril and Methodius School, Teacher - Mrs. Powell  
Shiloh M. McClymont, Hartford 8  
Awards: Honors = 3
- 2526 L8 Association of Polymorphisms in Rheumatoid Arthritis and Juvenile Rheumatoid Arthritis Susceptibility Genes  
Westport, Coleytown Middle School, Teacher - Jodi Rieman  
Malin S. Hovstadius, Westport 8  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 2nd Place- Life Sciences 8th grade- \$200 & trophy and Invite to Compete Broadcom MASTERS
  - Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion & Acrylic Award Souvenir
  - Connecticut Valley Biological Supply Company, Inc. --- \$50 Gift Certificate w/ catalog
- 2527 L8 Bacteria in a Bag  
New Britain, Sacred Heart School, Teacher - Dr. Michael Davis  
Simone T. Jaros, New Britain 8  
Awards: Honors = 2
- Sr. Mary Christine Life Sciences Award --- \$100 and plaque for excellence in the life sciences by a middle school project
- 2528 L8 Glow N' Grow: Light Source vs. Height of Plant  
Kensington, St. Paul School, Teacher - Elaine Kotler  
Kaitlin A. Moriarty, Kensington 8  
Awards: Honors = 2
- 2529 L8 The Density of Air Pores on Egg Shells  
Falls Village, Lee H. Kellogg School, Teacher - Joseph Markow  
Hayley I. Kozlowski, Falls Village 8  
Awards: Honors = 3
- Yale Peabody Museum --- Family "six pack" of free passes to the Yale Peabody Museum
- 2530 L8 Growing Green With Greywater  
Danbury, Broadview Middle School, Teacher - Mr. Gomes  
Liat Shenkar, Danbury 8  
Awards: Honors = 2
- 2531 L8 How do people concentrate under different circumstances?  
Middlefield, Independent Day School, Teacher - Charlotte Stutz  
William J. Cutrone, Wallingford 8  
Awards: Honors = 3
- 2532 L8 Yeast Metabolism  
Windsor, Madina Academy, Teacher - Mehwish Amin  
Aden Khan, Windsor 8  
Awards: Honors = 2
- Connecticut State Department of Health Laboratory Employees --- \$75 award
- 2533 L8 What's the Better Breakfast?  
Bethel, St. Mary School, Teacher - Tricia McDonald  
Katherine A. Griffin, Bethel 8  
Awards: Honors = 2

- 2534 L8 Do Certain Colors Affect the Rate of Convergent Lady Bug Activity?  
Fairfield, Our Lady of the Assumption/Holy Family, Teacher - Kathy Almeida  
Michael N. Arias, Bridgeport 8  
Awards: Honors = 3  
• Yale Peabody Museum --- Family “six pack” of free passes to the Yale Peabody Museum
- 2535 L8 The Effect of Sugar and Salt vs. Complex Carbohydrates on Your Heart Rate  
Bethel, St. Mary School, Teacher - Mrs. McDonald  
Taylor C. Basile, Bethel 8  
Awards: Honors = 2
- 2536 L8 Running Barefoot  
Norwalk, The Montessori Middle School, Teacher - David Lavalley  
Melissa A. Luse, Wilton 8  
Awards: Honors = 3
- 2537 L8 “Testing Eco-Friendly Plastics” How does the ingredients in a plastic affect it’s biodegradability?  
East Granby, East Granby Middle School, Teacher - Mr. Paskewitz  
Sydney T. Geer, East Granby 8  
Awards: Honors = 2  
• Ricoh Corporation/Society for Science & the Public --- Certificate and membership to CT Science Center given by CSF
- 2538 L8 How does preconditioning of the mind effect sports performance?  
Middlefield, Independent Day School, Teacher - Charlotte Stutz  
Tyler Mulberry, Middletown 8  
Awards: Honors = 2  
• American Psychological Association --- Certificate, membership to CT Science Center given by CSF
- 2539 L8 Fruit: A Thirst Quenching Alternative  
Trumbull, St. Catherine of Siena School, Teacher - K. Collins  
Lianne X. Bisch, Shelton 8  
Awards: Honors = 2
- 2540 L8 Are the number of fingerprint ridges different between males and females?  
Fairfield, Our Lady of the Assumption/Holy Family, Teacher - Kathy Almeida  
Yvonne X. Nguyen, Bridgeport 8  
Awards: Honors = 2
- 2541 L8 Lung Capacity Athletes verses Non-Athletes  
West Hartford, Solomon Schechter Day School, Teacher - Mrs. Varnum  
Stephanie L. Gold, West Hartford 8  
Awards: Honors = 2
- 2542 L8 Where’s the C?  
Hartford, Hartford Magnet Middle School, Teacher - Mrs. Penny Parmalee  
Myane A. Harris, Windsor 8  
Awards: Honors = 2
- 2543 L8 Earthworms Make Your Magic  
Bridgeport, Multicultural Magnet School, Teacher - Mr. Mayorga  
Cesar R. Poma-Rodriguez, Bridgeport 8  
Awards: Honors = 2
- 2544 L8 Is the Moon Made of Cheese?  
Stratford, Harry B. Flood Middle School, Teacher - Mr. Gorski  
Kayleigh A. Ross, Stratford 8  
Awards: Honors = 3



## AWARDS

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- 3001 LS The Investigation of the Biological Health of the New Creek Salt Marsh through Water Quality Testing and Species Identification of Benthic Invertebrates  
Greens Farms, Greens Farms Academy, Teacher - Sara Campolettano  
Allison C. Kruk, Easton 12  
Awards: Honors = 2
- Audubon Connecticut & Arch Chemicals Environmental Awards --- 2nd Place HS- \$200, Trophy, Audubon gifts
  - Mystic Aquarium --- \$100
  - Yale Peabody Museum --- One-Year Family Membership to the Yale Peabody Museum
  - GENIUS Olympiad --- GENIUS Olympiad Competition for HS student (s) and advisor -Biodiversity
- 3002 LS The effect of dimethyl sulfoxide on the resistance of Escherichia coli to Streptomycin and Tetracycline  
New Milford, New Milford High School, Teacher - Mrs. Eileen Reed  
Theresa DiMascio, New Milford 11  
Awards: Honors = 3
- 3003 LS Development and Characterization of a Novel Listeria-Caspase-3 DNA Vaccine to Eradicate Metastatic Breast Cancer  
Rye, NY, Rye Country Day School, Teacher - Dr. Mary Krasovec  
Swathi Krishnan, Stamford 12  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High- \$500 & trophy, Trip to compete at Intel ISEF
  - H. Joseph Gerber Medal of Excellence, an award of the Connecticut Academy of Science and Engineering in partnership with CCAT --- Life Sciences Senior - \$1,000 cash, Solid Silver Medal of Excellence, invite to CASE Annual Mtg
  - Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
- 3004 LS Water Treatment Residual Solids: The New “Miracle Grow”?  
Guilford, Guilford High School, Teacher - John Cuddy  
Taylor N. Hudak, Guilford 9  
Awards: Honors = 3
- U.S. Metric Association --- Certificate & membership to CT Science Center given by CSF
- 3005 LS Does music help plants grow?  
Fishers Island, Fishers Island School, Teacher - Mrs. Giles  
Ana Rose Webster, Groton 11  
Awards: Honors = 3
- 3006 LS Hematopoiesis and Leukemogenesis  
Westport, Staples High School, Teacher - Dr. Michele Morse  
Isabel Baker, Westport 11  
Awards: Honors = 3
- 3007 LS Improved Antibacterial Wrapping Using Graphene Oxide Coated Paper  
Greenwich, Greenwich High School, Teacher - Mr. Bramante  
Warren Z. Bein, Riverside 11  
Awards: Honors = 2
- Society for In Vitro Biology --- Certificate and membership to CT Science Center given by CSF
- 3008 LS Efficacy of Solar Disinfection Using Artificial Sunlight Versus a Composite of Infrared, Ultraviolet, and Visible Light  
Redding, Joel Barlow High School, Teacher - Dr. Katherine Nuzzo  
Caroline Caglioni, Redding 12  
Awards: Honors = 3
- Barnes Aerospace Applied Technology Awards --- Senior High Finalist - Medallion and acrylic award
  - U.S. Army --- Certificate and \$50 savings bond
- 3009 LS The Effect of Crude Oil on Plant Growth  
Guilford, Guilford High School, Teacher - Lynn Curtis  
Megan Burke, Guilford 9  
Awards: Honors = 3
- 3010 LS The Effect of Diguanylate Cyclase PA0169 on Twitching Motility of Pseudomonas Aeruginosa  
Greens Farms, Greens Farms Academy, Teacher - Dr. Mathieu Freeman  
Emma L. Frank, Norwalk 12  
Awards: Honors = 3

- 3011 LS The Effect of B Vitamins on the Growth of Brassica Rapa  
Danbury, Danbury High School, Teacher - Michael Chapman  
Priyanka B. Altman, Danbury 9  
Awards: Honors = 3
- 3012 LS Hypoxia in Ovarian Cancer  
Woodbridge, Amity Regional High School, Teacher - Ms. Day  
Pauline Dutka, Woodbridge 12  
Awards: Honors = 3
- 3013 LS Anticancer property of major goat milk fatty acids and delineating their mechanisms of action  
Glastonbury, Glastonbury High School, Teacher - Diane Pintavalle  
Amoolya V. Narayanan, Glastonbury 12  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High- \$400 & trophy,
- 3014 LS Diluted Roundup: Plant Killer?  
East Hartford, East Hartford High School, Teacher - Mr. Reid  
Jessica Murdzek, East Hartford 10  
Awards: Honors = 3
- 3015 LS The Effect of Nitrogen on Bioluminescent Bacteria  
Guilford, Guilford High School, Teacher - Lynn Curtis  
Shauna L. McLaughlin, Guilford 9  
Awards: Honors = 3
- 3016 LS Role of Karyogamy Genes in Nuclear Pore Complex Assembly  
Hamden, Sacred Heart Academy, Teacher - Mrs. Brownell  
Dominika A. Bajguz, Naugatuck 12  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- 5th Place- Life Sciences Senior High- trophy
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
  - Biophysical Society --- Biophysics Award - \$100
- 3017 LS Finding the Antibacterial Properties of Coscinium Fenestratum with E. Coli using Bio Film  
Oxford, Oxford High School, Teacher - Mrs. Granucci  
Nisal Y. Hewathanthri, Oxford 11  
Awards: Honors = 3
- 3018 LS The Relationship Between Temperature and Survival of the Larval Tunicate Styela clava  
Woodbridge, Amity Regional High School, Teacher - Ms. Deborah Day  
Williams S. Dixon, Woodbridge 12  
Awards: Honors = 3  
  - Long Island Sound Foundation, Inc. --- \$500 Life Science/Environmental Science/Physical science
- 3020 LS Exploration of the GastroIntestinal Health Benefits of Anthocyanins in Blackcurrant Berries  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Philip W. Geske, Riverside 11  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to dinner
- 3021 LS BCL-xL enhances V-ATPase function: a proposal  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Emily Feng, Bethany 12  
Awards: Honors = 3
- 3022 LS Role of MyD88 in DNA Damage Response  
Hamden, Hamden High School, Teacher - Sonia Beloin  
Yiyuan Hu, Hamden 11  
Awards: Honors = 1  
  - Pfizer Life Sciences Awards --- 2nd Place- Life Sciences Senior High- \$300 & trophy, Trip to compete at Intel ISEF

## AWARDS

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- 3023 LS Involvement of the Carbon Dioxide/Bicarbonate Sensor, Soluble Adenylyl Cyclase, in Growth Regulation of Normal and Malignant Cells.  
Greenwich, Greenwich High School, Teacher - Mr. Bramante  
Hannes Buck, Old Greenwich 12  
Awards: Honors = 3
- 3024 LS Biological Control of Ticks to Prevent Lyme Disease Using Entomopathogenic Nematodes  
Danbury, Danbury High School, Teacher - Marsha Turek  
Ryan D. Kerr, Danbury 10  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- Trip to compete at Intel ISEF, \$500 & trophy,
  - Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a HS student, \$200 cash
  - Science Horizons Senior High Awards --- 1st Place Senior High - \$1,000 & All Expense Paid to Compete at Intel ISEF
- 3025 LS Subsistence of Escherichia Coli on Artificial Turf Surfaces  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Charlotte D'Acerno, Old Greenwich 11  
Awards: Honors = 2
- Audubon Connecticut & Arch Chemicals Environmental Awards --- HS Finalist - Audubon gifts, CSF Medallion, Acrylic award
  - Quinnipiac University Scholarships --- \$20,000, 4 year scholarship to Quinnipiac University for High School Student
- 3026 LS Improving solar water disinfection (SODIS) with a photoreactive titanium dioxide/single-walled carbon nanotube composite coating on plastic PET bottles  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Zizi Yu, Woodbridge 11  
Awards: Honors = 2
- 3027 LS An Approach to Treating Sensorineural Hearing Loss through the Identification and Characterization of Mechanosensory Hair Cell Progenitors in the Zebrafish Lateral Line  
Westport, Staples High School, Teacher - Dr. Aaron Steiner  
Joshua M. Greenberg, Westport 12  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - American Society of Safety Engineers, CT Valley Chapter --- \$150 grade 9-12 project
  - Connecticut Academy of Audiology --- \$150 Cash Award High School- For Excellence in Audiology and Acoustics
- 3028 LS RodA, a Component of the Prokaryotic Cytoskeleton, As a Potential Antibacterial Drug Target  
Glastonbury, Glastonbury High School, Teacher - Ms. Pintavalle  
Kaitavjeet Chowdhary, Glastonbury 10  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
- 3029 LS The Inhibition Of Candida Albicans By Syzygium Aromaticum Oil and Citrus Paradisi.  
Weston, Weston High School, Teacher - Ms. Lauren Hauser  
Esha N. Kaushik, Weston 11  
Awards: Honors = 3
- 3030 LS Star Craft and Roller Coaster Tycoon's Affect on Resource Management Skills  
Woodbridge, Amity Regional High School, Teacher - Ms. Day  
Jared Loewenthal, Orange 10  
Awards: Honors = 2
- 3031 LS Stroop Effect  
Norwalk, Norwalk High School, Teacher - Belmonte  
Samantha S. Steele, Norwalk 9  
Awards: Honors = 3
- 3032 LS KCNQ Channels in Prefrontal Pyramidal Neurons: A Novel Target for Cognitive Enhancement  
Westport, Staples High School, Teacher - Dr. Amy Arnsten  
John Solder, Westport 11  
Awards: Honors = 3

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- 3033 LS Truth has Dirty Hands? Dirty Hands have the Truth  
Bethel, Bethel High School, Teacher - Mr. Raymond Turek  
Madhumita Das, Bethel 11  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
- 3034 LS Crystallizing Lysozyme Protein  
Guilford, Guilford High School, Teacher - Lynn Curtis  
Charlotte C. Killiam, Guilford 9  
Awards: Honors = 2
- 3035 LS The Effect of Temperature on Ocean Organisms  
Fishers Island, Fishers Island School, Teacher - Carol Giles  
Samantha Grader, Groton 11  
Awards: Honors = 2  
• Yale Peabody Museum --- One-Year Family Membership to the Yale Peabody Museum
- 3036 LS Identifying Human-Specific Developmental Enhancers Using Mouse Transgenics  
Wallingford, Choate Rosemary Hall, Teacher - Dr. Rachel Gritzer  
Christopher L. Aguiar, Wallingford 12  
Awards: Honors = 2
- 3037 LS Periodontal Health and Dietary Intake are Novel Indicators of Inflammatory and Chronic Inflammatory Status  
Woodbridge, Amity Regional High School, Teacher - Ms. Deborah Day  
David Powers, Woodbridge 11  
Awards: Honors = 2
- 3038 LS Novel Approach for Microbial Fuel Cell Energy Generation  
Oxford, Oxford High School, Teacher - Ms. Doherty  
Samantha M. Ramsay, Oxford 10  
Awards: Honors = 2  
• CT Technology Council Youth Innovation Award --- \$150 Cash Award for Technological Innovation
- 3039 LS Color Changing Carnations  
Bridgeport, Bassick High School, Teacher - Mr. O'Shea  
Toan Duong, Bridgeport 9  
Awards: Honors = 3
- 3040 LS Don't Tear My Hair  
Bethel, Bethel High School, Teacher - Ms. Bly  
Vincent Do, Bethel 12  
Awards: Honors = 3
- 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  
Darien, Darien High School, Teacher - Mr. David Lewis  
Dana E. Howe, Darien 12  
Awards: Honors = 3  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- HS Finalist - Audubon gifts, CSF Medallion, Acrylic award  
• Yale Peabody Museum --- One year family membership to the Yale Peabody Museum
- 3043 LS Super Weed: Allelopathic Inhibition of Garlic Mustard (*Alliaria Petiolata*) on Germination and Growth of Native Zinnia Seeds  
Bethel, Bethel High School, Teacher - Mr. Raymond Turek  
Julie M. Zeller, Bethel 11  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- HS Finalist - Audubon gifts, CSF Medallion, Acrylic award  
• Connecticut College-Biological and Botany Department --- \$100 for excellence in the biological sciences  
• Alumni Botany Awards --- Alumni High School Botany Award- \$100 Cash  
• Science Horizons Senior High Awards --- Finalist - Senior High - \$100 & Medallion
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## AWARDS

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- 3044 LS Implications of Handedness on Ketamine-Induced Psychosis  
Woodbridge, Amity Regional High School, Teacher - Ms. Deborah Day  
Ming Zhao, Woodbridge 11  
Awards: Honors = 3
- 3045 LS The Relationship Between Melatonin Levels and Cognitive Alertness  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Jed H. McKinney, Old Greenwich 10  
Awards: Honors = 2
- 3046 LS Growth of Plants in Martian Atmosphere  
Oxford, Oxford High School, Teacher - Mrs. Granucci  
Clara McGee, Oxford 9  
Awards: Honors = 3
- 3047 LS The Role of the Placental Folate Receptor in Pre-Eclampsia  
Westport, Staples High School, Teacher - Dr. Morse  
Jessie S. Lunde, Westport 12  
Awards: Honors = 3
- 3048 LS Nutrient Bioextraction using *Crassostrea virginica*  
Bridgeport, Bridgeport Aquaculture School, Teacher - Mr. Shadle  
Titania A. Green, Bridgeport 12  
Awards: Honors = 2
- 3049 LS Spicy Birds Project  
Ridgefield, Ridgefield High School, Teacher - Dr. George Noyes  
Max F. Falkenberg, Ridgefield 11  
Awards: Honors = 2
- 3050 LS Methicillin-Resistant *Staphylococcus Aureus* (MRSA) in New Milford High School  
New Milford, New Milford High School, Teacher - Ms. Reed  
Toni Viola, New Milford 11  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- trophy
  - Society for In Vitro Biology --- Certificate and membership to CT Science Center given by CSF
  - Meyerand Young Woman Scientist Awards --- \$300 cash - High School, Life Sciences
  - Science Horizons Senior High Awards --- 1st Place Senior High - \$1,000 & All Expense Paid to Compete at Intel ISEF
- 3051 LS Autism  
Sandy Hook, Newtown High School, Teacher - DeJulio  
Ali Kennedy, Newtown 11  
Awards: Honors = 3
- 3052 LS Convergent song evolution between two allopatric green lacewing species, *C. "emerald"* and *C. pallida*  
Glastonbury, Glastonbury High School, Teacher - Ms. Pintavalle  
John D. Foster, Glastonbury 12  
Awards: Honors = 2
- Lola Lampe Müller Award --- \$150 cash for a middle or high school project
  - Education Connection - Center for 21st Century Skills Awards --- \$100 For innovative use of technology to advance science or engineering
  - Yale Peabody Museum --- One year family membership to the Yale Peabody Museum
- 3053 LS The Effect of *Escherichia Coli* in the Female Genital Tract  
Hamden, Sacred Heart Academy, Teacher - Sr. Mary Jane Paoella  
Amanda P. Kelly, Shelton 12  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - U.S. Army --- Silver medallion & Certificate & \$100 savings bond

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- 3054 LS “Oh Scat!”: The Effects of Biomass on Biogas Production  
Hebron, RHAM High School, Teacher - Kristin Spinelli  
Joseph R. Day, Andover 9  
Awards: Honors = 3
- 3055 LS Testing Mutagenicity in Substances Using *S. Cerevisiae*  
New Milford, New Milford High School, Teacher - Eileen Reed  
Annie Mao, New Milford 11  
Awards: Honors = 3
- 3056 LS Interactions Between Robot, Adult, and Child in the Task of Secret-Telling  
Woodbridge, Amity Regional High School, Teacher - Ms. Deborah Day  
Jenny J. Liu, Orange 12  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- 4th Place- Life Sciences Senior High- trophy  
• Otero Family Award --- The Otero Family Award; \$200 cash
- 3057 LS Color Matters  
Fishers Island, Fishers Island School, Teacher - Carol Giles  
Mike J. Paciorek, Gales Ferry 12  
Awards: Honors = 3
- 3058 LS Special Analysis of Supernova Remnants to Identify Potential Black Holes  
Sandy Hook, Newtown High School, Teacher - Timothy DeJulio  
Alessandra DiLisio, Newtown 10  
Awards: Honors = 3
- 3059 LS The Effect of Magnetism on Plants  
New Milford, New Milford High School, Teacher - Mrs. Reed  
Kristina M. Wagner, New Milford 11  
Awards: Honors = 2
- 3060 LS The Effect of Nicotine on Plant Growth  
Bethel, Bethel High School, Teacher - Arthur Bailey  
Alyssa Bailey, Bethel 12  
Awards: Honors = 2
- 3061 LS The Effect of Withdrawal Timing on Adenoma Detection Rate  
Westport, Staples High School, Teacher - Dr. Morse  
Max B. Samuels, Westport 12  
Awards: Honors = 2
- 3062 LS Comparisons of Aortic Stiffness using a Hooke’s law Derived Spring Constant Between Aneurysm and Non-Aneurysm Groups  
Glastonbury, Glastonbury High School, Teacher - Diane Pintavalle  
Rahul Sehgal, Rocky Hill 12  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award  
• Mu Alpha Theta --- Certificate, membership to CT Science Center given by CSF
- 3063 LS Flow-stimulated expression of membrane transporter  
Woodbridge, Amity Regional High School, Teacher - Ms. Day  
Qi Yan, Woodbridge 11  
Awards: Honors = 3
- 3064 LS Tbx2 in the Bovine Mammary Gland  
Glastonbury, Glastonbury High School, Teacher - Ms. Diane Pintavalle  
Katelyn K. McFadden, Glastonbury 12  
Awards: Honors = 3

## AWARDS

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- 3065 LS Prevention of Cardiovascular Disease: The Antiseptic Effect of *Syzygium aromaticum* on Periodontal Disease  
Weston, Weston High School, Teacher - Ms. Lauren Hauser  
Sagar N. Kaushik, Weston 12  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award  
• Connecticut Science Supervisors Association --- \$125 for a high school project
- 3066 LS Biodegradation of Polylactide Nanoweb Electrospun for Freshwater Harmful Algal Bloom Removal  
Wallingford, Choate Rosemary Hall, Teacher - Lawrence Stowe  
Joshua S. Kim, Wallingford 11  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- 3rd Place HS- \$100, Trophy, Audubon gifts  
• Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award  
• The Goodwin-Niering Center --- \$100 for "Excellence in Environmental Conservation Studies"  
• Long Island Sound Foundation, Inc. --- \$500 Life Science/Environmental Science/Physical science
- 3067 LS Biological Symbiosis of *Nephromyces Giard* and *Molgula manhattensis* and Metabolic Effect  
Bridgeport, Bridgeport Aquaculture School, Teacher - Kirk Shadle  
Marla G. Tolmie, Fairfield 12  
Awards: Honors = 2
- 3068 LS How Oil Spills Affect the Number of Buds on Plants  
Bridgeport, Central High School, Teacher - Mr. Sebourne  
Erika S. Perez, Bridgeport 11  
Awards: Honors = 3
- 3069 LS The Bio-degradation of Cooking Oil  
New Milford, New Milford High School, Teacher - Mrs. Eileen Reed  
Moe J. Uddin, New Milford 11  
Awards: Honors = 3
- 3070 LS Protein Engineering of NPP4 into NPP2  
Hamden, Hamden High School, Teacher - Dr. Demetrios T. Braddock  
Bonnie E. Hawkins, Hamden 12  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
- 3071 LS Studying the Effect of Targeted Recombination in B-Lymphocytes vs. non B-cells  
Fairfield, Fairfield Warde High School, Teacher - Ms. Higgins  
Neil V. Gade, Fairfield 11  
Awards: Honors = 2
- 3072 LS The Association Between Carbohydrate Intake, Plasma Cholesterol, and Insulin Resistance in Women with Metabolic Syndrome  
Westport, Staples High School, Teacher - Michele Morse  
Jillian M. Pecoriello, Westport 11  
Awards: Honors = 2
- 3073 LS The Effects of DNA Mutations upon the nutritional value of *Musa acuminata* Fruits.  
Oxford, Oxford High School, Teacher - Mrs. Granucci  
Saher Kazi, Seymour 11  
Awards: Honors = 2
- 3074 LS Preventing Seizures: The Size of the Thalamus After an Epileptic Seizure  
Woodbridge, Amity Regional High School, Teacher - Ms. Deborah Day  
Peter Satonick, Orange 10  
Awards: Honors = 3
- 3077 LS Effect of Thioredoxin-2(Trx2)on Cardiac Hypertrophy  
Woodbridge, Amity Regional High School, Teacher - Deborah A. Day  
Shiyu Zhuang, Orange 10  
Awards: Honors = 2



- 3078 LS The Contribution of Nitric Oxide to the Strength of Viral Immunity in Soybeans  
 New Milford, New Milford High School, Teacher - Virginia Landgrebe  
 Ana C. Vargas, New Milford 11  
 Awards: Honors = 2  
 • Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to dinner
- 3079 LS A Comparative Study of Herbs Grown Using an Aquaponic vs. a Hydroponic Growing System  
 Hamden, Sacred Heart Academy, Teacher - Mrs. Frances Saukas  
 Olivia N. Kelly, Shelton 9  
 Awards: Honors = 2  
 • Audubon Connecticut & Arch Chemicals Environmental Awards --- HS Finalist - Audubon gifts, CSF Medallion, Acrylic award  
 • Alexion Biotechnology Awards --- 3rd Place- Biotechnology Senior High- \$300 & trophy  
 • GENIUS Olympiad --- GENIUS Olympiad Competition for HS student (s) and advisor - Ecology  
 • University of Connecticut - Physics Department --- UCONN Early College Experience Program: Life Sciences - \$200 U.S. Savings Bond
- 3080 LS The Effects of Artificial Sweeteners on Escherichia Coli Growth  
 Hartford, Grtr Hartford Academy of Math and Science, Teacher - Dr. Aramli  
 Matthew M. Mashayekhi, Ellington 11  
 Awards: Honors = 3  
 • Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to dinner
- 3081 LS Effects of L-Theanine on Drosophila Melanogaster  
 New Haven, Hopkins School, Teacher - Way Pung  
 Kingston Pung, Madison 11  
 Awards: Honors = 1  
 • Pfizer Life Sciences Awards --- 3rd Place- Life Sciences Senior High- \$200 & trophy
- 3083 LS Mother Nature's Mop - The innovative, eco-friendly alternative for revolutionizing oil spill removal: dehydrated Sphagnum  
 peat moss  
 Shelton, Shelton High School, Teacher - Patricia Presutto  
 Anna Maria Marini, Shelton 11  
 Awards: Honors = 2
- 3084 LS The Effects of the Ketogenic Diet on Anti-Epileptic Drug Duration and Seizure Frequency in Patients with Glucose  
 Transporter Type-1 Disorder  
 Westport, Staples High School, Teacher - Dr. Michele Morse  
 Ash Natarajan, Westport 11  
 Awards: Honors = 3
- 3085 LS What adds to blood pressure and heart rate?  
 Bethel, Bethel High School, Teacher - Mr. Raymond Turek  
 Lisa J. Ferguson, Bethel 11  
 Awards: Honors = 2
- 3086 LS Investigations of Novel Therapies For Lupus  
 Hamden, Hamden High School, Teacher - Mr. Farley  
 Alaric J. Gee, Hamden 12  
 Awards: Honors = 2  
 • Alexion Biotechnology Awards --- 4th Place- Biotechnology Senior High- \$200 & trophy
- 3087 LS How Macroinvertebrates in Tributaries of the Housatonic River Relate to Pollution  
 New Milford, New Milford High School, Teacher - Ms. Langrebe  
 Erin Kersten, New Milford 11  
 Awards: Honors = 3  
 • Project Oceanology --- Individual - Book + 2 tickets, First Place Senior, check for \$100, t-shirt  
 • Science Horizons Senior High Awards --- Finalist - Senior High - \$100 & Medallion
- 3089 LS Can Freshwater Plants Break Down Pesticides in Water?  
 Danbury, Danbury High School, Teacher - Mrs. Sinha  
 Krista Nicholson, Danbury 9  
 Awards: Honors = 2  
 • Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir



## AWARDS

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- 3090 LS Effective Information Communication to Teens  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Joan Kim, Bethany 12  
Awards: Honors = 1
- 3091 LS Gummy Fingers: Replicating Fingerprints  
Bridgeport, Central High School, Teacher - Ms. Sullivan  
Karen Zavala, Bridgeport 10  
Awards: Honors = 3
- 3501 LST Enhancing the Plant Growth and Reducing the Greenhouse Gas Emissions by Using Single Mode Fiber Optics to Transmit Sunlight  
Putnam, Putnam Science Academy, Teacher - Hakan Duman  
Abdul V. Bektas, Putnam 11 Alperen F. Tuzuner Putnam 11 Yusuf Eraslan Putnam 11  
Awards: Honors = 3  
• Northeast Utilities: Environmental Management --- Senior - \$250 Scholarship, pollution prevention, source reduction, recycling, min. waste
- 3502 LST Germ Warfare  
Hartford, Classical Magnet School, Teacher - Thomas Holloway  
Mikela Karaiosifoglou, Manchester 11 Alexander R. Blaszczyk Bristol 11  
Awards: Honors = 3
- 3503 LST Measuring the Effects of Microwave Radiation on Plant Growth and Germination via experiments on Phaseolus Lunatus  
Putnam, Putnam Science Academy, Teacher - Coskun Candan  
Selman F. Avci, Putnam 9 Almas Myrzatay Putnam 9 Samil Y. Isik Putnam 9  
Awards: Honors = 3  
• Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir
- 3505 LST Dirty, Filthy, Money  
New Haven, Wilbur Cross High School, Teacher - Chris Willems  
Tarpley Hitt, New Haven 10 Alessandra Hogan New Haven 10  
Awards: Honors = 2
- 3506 LST The Effects of Ingested Substances on Embryonic Development  
Hartford, Grtr Hartford Academy of Math and Science, Teacher - Dr. Lili Aramli  
Mary Kuchenbrod, Granby 11 Carolyn House Simsbury 12  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion & Acrylic Award
- 3507 LST The Isolation and Analysis of Crude Proteins of the Bacteria Xenorhabdus nematophila  
Bridgeport, Bridgeport Aquaculture School, Teacher - Mr. Kirk Shadle  
Thao Ngoc T. Nguyen, Bridgeport 12 Tobin J. Kulangara Bridgeport 12  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High Team- \$500 (split) & trophy
- 3508 LST The True Green Fuel Of the Future: Algae  
Shelton, Shelton High School, Teacher - Ms. Hayes  
Adam P. Zhitomi, Shelton 10 Samanth E. Dimas Shelton 10  
Awards: Honors = 1  
• Pfizer Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion & Acrylic Award  
• United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report
- 3509 LST Biofeuls to Save the World  
Hamden, Sacred Heart Academy, Teacher - Mrs. Pamela Brownell  
Torrie DeGennaro, Shelton 10 Jessica Widman Milford 10  
Awards: Honors = 2
- 3510 LST The antibiotic effects of antioxidant-rich cruciferous vegetables  
Danbury, Immaculate High School, Teacher - Mr. Hoyt  
Adriana M. DeNardis, Danbury 10 Merna Haddad Danbury 10  
Awards: Honors = 2  
• Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir  
• Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to dinner

- 3512 LST The Spoilage of Organic and Processed Food  
Ellington, Ellington High School, Teacher - Mrs. Ann Johnson  
Alyssa M. Tournaud, Ellington 9 Erin D. Schirra Ellington 9  
Awards: Honors = 3
- 3513 LST Utilizing Autumn Foliage as an Alternative Energy Source and as an Absorbing Agent for Oil Spills  
Putnam, Putnam Science Academy, Teacher - Ahmet Hakan Duman  
Ozkan Cil, Putnam 12 Selahaddin S. Ozkan Putnam 11 Fehmi E. Agaoglu Putnam 11  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 2nd Place- Life Sciences Senior High Team- \$300 (split) & trophy
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- High School Finalist - Medallion, Year Pass to CT Science Center
  - Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir
  - Air and Waste Management Association, Connecticut Chapter --- \$100 Senior, Environmental Research, waste recycling related
- Physical Sciences**
- 4002 PT The Silver Saucers  
Plantsville, John F. Kennedy Middle School, Teacher - Mrs. Pamela Pepin  
Margaret A. Mellitt, Southington 8 Katherine J. Mellitt Southington 8  
Awards: Honors = 2
- American Society of Safety Engineers, CT Valley Chapter --- \$100 grade 7-8 project
- 4003 PT Football Physics  
Bethel, St. Mary School, Teacher - Tricia McDonald  
Jack D. Garvey, Bethel 7 Brendan T. Mitchell Bethel 7  
Awards: Honors = 2
- 4004 PT Which smoke detector will truly save a life?  
Bethel, Bethel Middle School, Teacher - Mr. Labounty  
Daniel T. Chapman, Bethel 8 Justin N. Greene Bethel 8  
Awards: Honors = 2
- 4005 PT Analysis of non-heme iron's rate of cell absorption, and effect of iron's enhancers and inhibitors on cell absorption.  
Orange, Southern Connecticut Hebrew Academy, Teacher - Mrs. Karen Howell  
Rivka Kantor, Westport 7 Bracha E. Hecht Orange 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
  - Alexion Biotechnology Awards --- 2nd Place- Biotechnology 7th grade- \$200 & trophy
- 4006 PT Air Pollution in Wilton  
Wilton, Middlebrook School, Teacher - Mrs. Norman  
Katey J. Forsyth, Wilton 7 Ashley Li Wilton 7  
Awards: Honors = 3
- 4007 PT Motor Oil Madness  
Danbury, St. Gregory the Great School, Teacher - Mrs. Ferry  
John F. Cerrone, Danbury 7 Griffin M. Henley Danbury 7  
Awards: Honors = 2
- U.S. Air Force --- Certificate, charging stand, backpack, flash jotter bundle set
- 4008 PT Floral Preservatives: Which One is Best?  
Madison, Our Lady of Mercy School, Teacher - Rosalie Zonder  
Jackie O'Brien, Guilford 7 Emily Tyler Clinton 7  
Awards: Honors = 2
- 4009 PT The Effect of Water Temperature on the Speed of a Chemical Reaction  
Westport, Bedford Middle School, Teacher - Ms. Jodi Rieman  
Jake Atlas, Westport 8 Nathan Luce Westport 8  
Awards: Honors = 3
- 4010 PT "Slip Slidin' ...Away!"  
Fairfield, St. Thomas Aquinas School, Teacher - Jennifer Oligino  
Emily Cimmino, Fairfield 8 Jackie Brewster Bridgeport 8  
Awards: Honors = 2

## AWARDS

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- 4011 PT Is This The End Of Our Bridges?  
Danbury, St. Gregory the Great School, Teacher - Mrs. Ferry  
Tyler N. Geragi, Danbury 7 Joanna M. Pitrelli Danbury 7  
Awards: Honors = 3
- 4012 PT What Are The Effects Of A Whitening Toothpaste?  
Bridgeport, Park City Prep Charter School, Teacher - Mrs. Vicky Boudreau  
Stefanie M. Nieves, Bridgeport 7 Keallanii Crooks Bridgeport 7  
Awards: Honors = 2
- 4013 PT Water War  
New Haven, Worthington Hooker School, Teacher - Mr. Jones  
Clara Y. Hitt, New Haven 8 Reina Matsuura New Haven 8  
Awards: Honors = 3
- 4014 PT Earthquake  
Danbury, Broadview Middle School, Teacher - D. Rovnak  
Evan L. Coco, Danbury 8 Tyler Amaral Danbury 8  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
  - Goodrich ISR Awards for Excellence In Engineering --- 3rd Place- Engineering Middle School - \$100 Cash & trophy
  - United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report
  - ISA - International Society for Automation --- 2nd - \$75 award
  - Harvey Hubbell Foundation Award --- \$100 For Excellence in Engineering
- 4015 PT Freshen It Up!! Temperature vs. Amount Left in Each Wallflower.  
Kensington, St. Paul School, Teacher - Miss. Kotler  
Victoria M. Drumski, Berlin 7 Marin C. Sisson Newington 7  
Awards: Honors = 2
- 4016 PT Boiling Mad  
Windsor, St. Gabriel School, Teacher - Miss Rosa  
John W. Rutledge, Windsor 8 Megan K. Rutledge Windsor 8  
Awards: Honors = 3
- 4017 PT Ferrofluid  
Ridgefield, East Ridge Middle School, Teacher - Mrs. Sullivan  
Craig W. Burke, Ridgefield 8 Matthew S. Marcon Ridgefield 8  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 3rd Place- Physical Sciences MS Team- trophy, invite to compete Broadcom MASTERS
- 4018 PT Solar Flower Power  
Windsor, St. Gabriel School, Teacher - Margaret Rosa  
Kirsten E. Mossberg, Windsor 7 Alaina J. Mueller Windsor 7  
Awards: Honors = 2
- eesmart's/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy
- 4019 PT Crash Test  
Plantsville, John F. Kennedy Middle School, Teacher - P. Pepin  
Tim A. Carrier, Southington 8 Mike Fazzino Plantsville 8  
Awards: Honors = 3
- 4020 PT Breezin' By  
Stamford, Trailblazers Academy, Teacher - Jessica Maneyapanda  
Tatyana L. Geneste, Stamford 8 Sidney Y. Turnier Stamford 8  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion & Acrylic Award
- 4021 PT Why is the groundwater from the area of Woodstock, Connecticut slightly acidic?  
Woodstock, Woodstock Middle School, Teacher - Mrs. Carter  
Brooklynn L. Saracina, Woodstock 7 Ashley H. Palmerino Woodstock 7  
Awards: Honors = 2

- 4022 PT Frozen Fluids  
Hartford, Classical Magnet School, Teacher - Dr. Kaluzny-Blaszczyk  
Emily L. Gunter, East Hartford 8 Adam M. Haythorn Tolland 8  
Awards: Honors = 3
- 4023 PT Wind Turbines! How much electric energy can be produced by wind turbines?  
Hartford, SS. Cyril and Methodius School, Teacher - Ms. Powell  
Erika M. Diaz, Hartford 7 Goddess Gilbert Hartford 7  
Awards: Honors = 3  
• American Meteorological Society --- Certificate & membership to CT Science Center given by CSF
- 4025 PT If Fire Prevention Is Your Intention, the Right Alarm Will Help You Avoid Harm  
Madison, Our Lady of Mercy School, Teacher - Rosalie Zonder  
Andrew R. Muckle, Madison 8 Michael M. Simoniello Killingworth 8  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion & Acrylic Award
- 4026 PT Keeping Warm: The Best Insulator  
Fairfield, St. Thomas Aquinas School, Teacher - Jennifer Oligino  
Murphy D. Zwahlen, Fairfield 8 Peter V. Campbell Westport 8  
Awards: Honors = 2
- 4027 PT The Magnetic Affect On Water Flow  
Bridgeport, Park City Prep Charter School, Teacher - Ms. Johnson  
Nataeza Z. McCullough, Bridgeport 8 Maylene K. Vidro Bridgeport 8  
Awards: Honors = 3
- 5001 P7 Clash of the Diapers  
West Hartford, St. Brigid School, Teacher - Jennifer Bernaiche  
Blake T. Greenslade, Newington 7  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
- 5002 P7 Super Saver: Saving Energy One House at a Time  
Danbury, St. Joseph School, Teacher - Jennifer Page  
Drew A. Valentine, Danbury 7  
Awards: Honors = 3
- 5003 P7 Football Helmet Safety  
New Britain, Sacred Heart School, Teacher - Mrs. Kornas  
Robert A. Ebrahimi, New Britain 7  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
- 5004 P7 One Fast Video  
Bridgeport, Bridgeport Hope School, Teacher - Elizabeth Deshotel  
Benjamin C. van Geldern, Bridgeport 7  
Awards: Honors = 3
- 5005 P7 The Magic of Magnets  
Newtown, St. Rose of Lima School, Teacher - Mrs. Dimon  
Jesse J. Cabral, Newtown 7  
Awards: Honors = 2
- 5006 P7 When I Change The Type of Antacid, How Many Milliliters of Stomach Acid Will Be Neutralized?  
East Haven, East Haven Academy, Teacher - Mrs. Staires  
Sarah E. Harkins, East Haven 7  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award  
• Quinnipiac University Scholarships --- \$20,000, 4 year scholarship to Quinnipiac University for Middle School Student  
• David and Torrey Fenton Awards --- For creative work in the physical sciences- middle school; \$200 cash

## AWARDS

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- 5007 P7 Geothermal Energy  
Greens Farms, Greens Farms Academy, Teacher - Mr. Freeman  
Jack T. Mackle, New Canaan 7  
Awards: Honors = 2
- 5008 P7 Rocket Science  
Bozrah, Fields Memorial School, Teacher - Mrs. Brown  
Jack A. Santo, Bozrah 7  
Awards: Honors = 2
- Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - The Howard Lessoff Award for Excellence in Physical Science Research --- \$100 check
- 5009 P7 A Cost-Effective, Eco-Friendly Weather Monitoring UAV.  
Greenwich/Riverside, Eastern Middle School, Teacher - Brian Carstens  
Paul J. Hansel, Old Greenwich 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 4th Place- Physical Sciences 7th Grade Ind. - trophy, invite to compete Broadcom MASTERS
  - Barnes Aerospace Applied Technology Awards --- 2nd Place Middle School - \$200 and Trophy, Medallion
  - Computer Science Awards --- Middle School Finalist - Medallion, Acrylic Award
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - American Institute of Aeronautics & Astronautics - Connecticut Section --- \$200 award, certificate
  - John B. Trevor Award in Electrical Engineering --- \$500 cash award for an innovative electronic or electrical project
  - Leask/Francoeur Family Awards --- 1st Place Middle School- For innovation electrical engineering or computer science - \$100 cash
  - Talcott Mountain Science Center --- Talcott Mountain Scholarship
- 5010 P7 Elasticity  
Southington, St. Thomas School, Teacher - Mrs. Pelczar  
Megan L. Miller, Southington 7  
Awards: Honors = 2
- 5011 P7 What Is The Most Effective Substance To Melt Ice?  
Milford, St. Gabriel School, Teacher - Mr. Schnakenberg  
Abby O. Felner, Milford 7  
Awards: Honors = 3
- 5012 P7 Go Green Anti-static Bags  
West Hartford, Solomon Schechter Day School, Teacher - Mrs. Varnum  
Jake M. Gershon, West Hartford 7  
Awards: Honors = 3
- 5013 P7 Wood Strength  
Glastonbury, Smith Middle School, Teacher - Mrs. Nichols  
Nicole Wiedemer, Glastonbury 7  
Awards: Honors = 3
- American Society for Metals - Hartford Chapter --- \$100 Check
- 5014 P7 Which solution is a better cleaner to turn old looking pennies into shiny new ones?  
Newington, St. Mary School, Teacher - Deborah Giantonio  
Tyler J. Rice, Newington 7  
Awards: Honors = 3
- 5015 P7 It's Electric!  
Monroe, Jockey Hollow School, Teacher - Mary Ballas  
Amit Gupta, Monroe 7  
Awards: Honors = 3
- 5016 P7 Baseball Bat Comparison  
Bozrah, Fields Memorial School, Teacher - Mrs. Brown  
Coogan E. Pellerin, Bozrah 7  
Awards: Honors = 2
- Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, membership to CT Science Center given by CSF
  - ISA - International Society for Automation --- 3rd - \$50 award

- 5017 P7 The Effects of Fins on the Distance A Rocket Travels  
Bethel, St. Mary School, Teacher - Ms. Trish McDonald  
Liam D. Kuroski, Bethel 7  
Awards: Honors = 3
- 5018 P7 The Green Smasher vs. Three Soccer Balls  
Plantsville, John F. Kennedy Middle School, Teacher - Mrs. Pepin  
Jonathan R. Doty, Plantsville 7  
Awards: Honors = 3
- 5019 P7 The Battery Brand Battle  
East Haven, East Haven Academy, Teacher - Mrs. Janice Staires  
Katherine E. Schneer, East Haven 7  
Awards: Honors = 2
- 5020 P7 Truss-t In Your Bridge  
Newtown, St. Rose of Lima School, Teacher - Marde Dimon  
Dominic C. Pagliaro, Sandy Hook 7  
Awards: Honors = 2  
  - Goodrich ISR Awards for Excellence In Engineering --- 2nd Place- Engineering Middle School - \$200 Cash & trophy
  - National Society of Professional Engineers --- Certificate, Lapel Pin, membership to CT Science Center given by CSF
- 5021 P7 The Physics of Cheating in Baseball  
Fairfield, St. Thomas Aquinas School, Teacher - Mrs. Oligino  
Chase E. Mascolo, Fairfield 7  
Awards: Honors = 3
- 5022 P7 Aerodynamic Drag  
New Haven, Worthington Hooker School, Teacher - Mr. Jones  
Madeline A. Miranda, New Haven 7  
Awards: Honors = 3
- 5023 P7 The Effect Of Temperature On The Viscosity Of Motor Oil  
Manchester, St. Bridget School, Teacher - Ms. Kim Maysonet  
Nicole Robitaille, Manchester 7  
Awards: Honors = 2  
  - ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- Middle School Finalist - Medallion & Arcylic Award
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- MS Finalist - Medallion, Acrylic Award, Year Pass to CT Science Center
  - ASM Materials Education Foundation --- Certificate & membership to CT Science Center given by CSF & medallion
- 5024 P7 Precipitation On Fire!  
Stamford, Trailblazers Academy, Teacher - Jessica Maneyapanda  
Isis S. Boyd, Stamford 8  
Awards: Honors = 3
- 5025 P7 Electrical Conductivity  
Milford, St. Gabriel School, Teacher - Mr. Schnakenberg  
Sean Lonergan, Milford 7  
Awards: Honors = 3
- 5026 P7 Which Material is the Best Insulator?  
Newington, St. Mary School, Teacher - Deborah Giantonio  
Thomas C. Lanzarone, Newington 7  
Awards: Honors = 3
- 5027 P7 What's the angle? - How does the angle of the ramp affect the length of the jump  
East Granby, East Granby Middle School, Teacher - Mr. Langan  
Kevin W. Raabe, East Granby 7  
Awards: Honors = 2

## AWARDS

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- 5028 P7 The Effect of Salt on the Amount of Hydrogen Produced by the Electrolysis of Water  
Guilford, E.C. Adams Middle School, Teacher - Ms. Meyerjack  
Sean J. Hackett, Guilford 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, membership to CT Science Center given by CSF
- 5029 P7 Are kids or adults better at video games new to them?  
Avon, Talcott Mountain Academy, Teacher - Mr. Pellino  
Mark E. Shapiro, Glastonbury 7  
Awards: Honors = 3
- 5030 P7 Prototype Design of an Electricity Generating Shoe Utilizing a Pumped Air Turbine.  
Hebron, Oei Homeschool, Teacher - Ellen McHugh  
Maura C. Oei, Hebron 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
  - Barnes Aerospace Applied Technology Awards --- Middle School Finalist - Medallion and acrylic award
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 Cash and Trophy
  - eesmarts/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- 3rd Place MS - \$200 Cash and Trophy
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - IEEE, Connecticut Section --- \$100 Honorable Mention
- 5031 P7 Throwing the Distance  
Southington, DePaolo Middle School, Teacher - Mrs. Shea  
John Guzauckas, Southington 7  
Awards: Honors = 2
- 5032 P7 Electronic Waste (E-Waste)...A big problem or not?  
Westbrook, Westbrook Middle School, Teacher - Mrs. Lepore  
Leah M. Cherry, Westbrook 7  
Awards: Honors = 3
- 5033 P7 Pullin' with Pulleys  
Southington, St. Thomas School, Teacher - Mrs. Pelczar  
Jameson C. Kief, Plantsville 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place- Physical Sciences 7th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- 5034 P7 A-MAZE-ing Robots: Data structures, Algorithms, and Modern Robotics  
Danbury, St. Peter/Sacred Heart School, Teacher - Mr. Greg Capone  
Gabriel A. Correa, Danbury 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
  - Computer Science Awards --- 3rd Place Middle School- \$100, Trophy, Medallion
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - IEEE, Connecticut Section --- \$100 Honorable Mention
- 5035 P7 Global Warming and Melting Icebergs  
Wilton, Middlebrook School, Teacher - Victoria Madden  
Jessica E. Kobsa, Wilton 7  
Awards: Honors = 3
- 5036 P7 The Effect of Wavelength of Visible Light on Solar Electricity Generation  
Stamford, Bi-Cultural Day School, Teacher - Christopher Graseck  
Matthew L. Lichtenberg, Stamford 7  
Awards: Honors = 2
- 5038 P7 The Solar Panel Project  
East Haven, East Haven Academy, Teacher - Mrs. Staires  
Vishal V. Patel, East Haven 7  
Awards: Honors = 3



- 5039 P7 Lemon or Light?  
Bridgeport, Bridgeport Hope School, Teacher - Elizabeth Deshotel  
Joohee Choi, Bridgeport 7  
Awards: Honors = 3
- 5040 P7 How Do Mirrors Affect Climate Change?  
Falls Village, Lee H. Kellogg School, Teacher - Joseph Markow  
Riley A. Simmons, Falls Village 7  
Awards: Honors = 3
- 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.  
Windsor, Madina Academy, Teacher - Aisha Seyal  
Sithy A. Mahamoon, Windsor 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 3rd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
  - Barnes Aerospace Applied Technology Awards --- 1st Place Middle School - \$300 and Trophy, Medallion
  - Audubon Connecticut & Arch Chemicals Environmental Awards --- 1st Place MS - \$300, Trophy, Audubon gifts
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - Association for Women Geoscientists --- Certificate & membership to CT Science Center given by CSF
  - Society of Women Engineers - Hartford Section --- Scientific Calculator
- 5042 P7 Which Material is more Conductive? (PVC, Copper, or Galvanized Steel)  
Westbrook, Westbrook Middle School, Teacher - Mrs. Lepore  
Polina M. Weber, Westbrook 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
- 5043 P7 A Study of the Voltage Characteristics of Electrolytic Rectifiers  
Glastonbury, Smith Middle School, Teacher - Mr. Steve Falcigno  
Paul J. Han, Glastonbury 7  
Awards: Honors = 2
- IEEE, Connecticut Section --- \$100 Honorable Mention
  - Wisner Award --- \$250 cash and plaque
  - Dreams Unlimited --- \$100 cash award + certificate
- 5044 P7 Light Intensity Presents the Power of the Bulb  
Bridgeport, Park City Magnet School, Teacher - Mrs. Simone  
Anna Chanyarakskul, Bridgeport 7  
Awards: Honors = 3
- 5045 P7 What a Drag!  
Stratford, St. Mark School, Teacher - Mr. Flynn  
Thomas J. Dillon, Stratford 7  
Awards: Honors = 2
- 5046 P7 What are the effects of pH and temperature on the efficiency of ethanol production from biomass?  
Woodstock, Woodstock Middle School, Teacher - Mrs. Carter  
Deanna L. Guilani, Woodstock Valley 7  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- 1st Place Middle School - \$300 Cash and Trophy
  - eesarts/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- 1st Place Middle School - \$500 Cash and Trophy
  - Alexion Biotechnology Awards --- 5th Place- Biotechnology 7th grade- trophy
  - Society of Women Engineers - Hartford Section --- Scientific Calculator
  - MIT Club of Hartford Awards --- For excellence in energy related research, middle school, \$150 cash award
- 5047 P7 The Most Efficient Nosecone for Rockets  
Westport, Coleytown Middle School, Teacher - Jodi Rieman  
Zachary H. Steuer, Westport 7  
Awards: Honors = 3



## AWARDS

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- 5048 P7 Does It Float?  
West Hartford, St. Brigid School, Teacher - Jennifer Bernaiche  
Kaitlin M. McGuire, West Hartford 7  
Awards: Honors = 3
- 5049 P7 Helmet Impact Study - Which type of sports helmet absorbs the most impact?  
East Granby, East Granby Middle School, Teacher - Mr. Langan  
Gavin S. McConnell, East Granby 7  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
  - American Society of Safety Engineers, CT Valley Chapter --- \$100 grade 7-8 project
- 5050 P7 Well Depth and Contamination  
Southington, St. Thomas School, Teacher - Mrs. Pelczar  
Caleigh M. Waskowicz, Southington 7  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- 5th Place- Physical Sciences 7th Grade Individual - trophy
  - Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School, Physical Sciences
  - Randy Gibson Award for Earth Science Research --- \$100 cash and plaque
- 5051 P7 Quest for Quietness  
West Hartford, St. Timothy Middle School, Teacher - Mrs. Battaglia/Mrs. Breen  
Stephen Gosselin, West Hartford 7  
Awards: Honors = 2  
  - American Society of Safety Engineers, CT Valley Chapter --- \$100 grade 7-8 project
- 5052 P7 Which Substance Melts Ice The Fastest?  
Fairfield, St. Thomas Aquinas School, Teacher - Mrs. Jennifer Oligino  
Katherine Y. Muldoon, Fairfield 7  
Awards: Honors = 2
- 5053 P7 A Comparison of Effective Homemade Water Filters  
Guilford, E.C. Adams Middle School, Teacher - Mr. Cory Slifstein  
Cole B. Horton, Guilford 7  
Awards: Honors = 2
- 5054 P7 Huddle and Cuddle: How Puppies Keep Warm  
Cheshire, St. Bridget School, Teacher - Mr. Kerry Martens  
Maria A. Parenteau, Cheshire 7  
Awards: Honors = 2
- 5055 P7 (Vitamin) C How Sweet It Is  
Newtown, St. Rose of Lima School, Teacher - Mrs. Dimon  
Matthew Pelisson, Sandy Hook 7  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
  - Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to dinner
- 5056 P7 The Effects of Pulleys  
Glastonbury, Smith Middle School, Teacher - Kelly Cruess  
Nick T. Solomon, Glastonbury 7  
Awards: Honors = 2
- 5057 P7 Penny Cleaner  
Trumbull, St. Catherine of Siena School, Teacher - Mrs. Collins  
Jack Hickey, Stratford 7  
Awards: Honors = 3
- 5059 P7 Burning Calories: How Much Energy is Stored in Different Types of Food  
Madison, Our Lady of Mercy School, Teacher - Mrs. Rosalie Zonder  
Helena Bui, Branford 7  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award

- 5060 P7 Magnet Mania - Does the temperature of a magnet affect it's ability to repel another magnet?  
East Granby, East Granby Middle School, Teacher - Mr. Langan  
Andrew R. Eastman, East Granby 7  
Awards: Honors = 3
- 5061 P7 Nuclear vs. Solar and other Energies  
Greens Farms, Greens Farms Academy, Teacher - Dr. Freeman  
Patrick G. Friend, Darien 7  
Awards: Honors = 3
- 5062 P7 The Soccer Experiment  
Manchester, St. Bridget School, Teacher - Mrs. Maysonet  
Mason Worthington, Manchester 7  
Awards: Honors = 3
- 5501 P8 The Space Box Concept: Leading the Way to Landing Humans on Other Planets in Our Solar System  
Stafford Springs, St. Edward School, Teacher - Mrs. Corinne Milnes  
Benjamin Oldham, Stafford Springs 8  
Awards: Honors = 3
- 5502 P8 What is the best packaging material for protecting a given object?  
Cheshire, St. Bridget School, Teacher - Mr. Kerry Martens  
Nicholas J. Indorf, Wallingford 8  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion & Acrylic Award
  - ASM Materials Education Foundation --- Certificate & membership to CT Science Center given by CSF& medallion
- 5503 P8 Can You Cook with the Sun?  
Bridgeport, Bridgeport Hope School, Teacher - Mrs. Elizabeth Deshotel  
Sophia N. Zephir, Bridgeport 8  
Awards: Honors = 3
- 5504 P8 Does the amount of weight placed on a hovercraft determine the distance it will travel?  
Middlefield, Independent Day School, Teacher - Charlotte Stutz  
Insia Naqvi, Middletown 8  
Awards: Honors = 3  
  - U.S. Air Force --- Certificate,charging stand, backpack, flash jotter bundle set
- 5505 P8 Falling Water Balloon Impact  
Hartford, Hartford Magnet Middle School, Teacher - Ms. Penny Parmelee  
Daztar Pagdiwala, Manchester 8  
Awards: Honors = 2
- 5506 P8 Stealthy Shapes  
Ridgefield, East Ridge Middle School, Teacher - David Bozzuto  
Ryan M. McSpedon, Ridgefield 8  
Awards: Honors = 3  
  - U.S. Air Force --- Certificate,charging stand, backpack, flash jotter bundle set
- 5507 P8 Material Influence on Cell Phone Connectivity  
West Hartford, St. Timothy Middle School, Teacher - Mrs. Christine Simao-Breen  
Jennifer Lombard, West Hartford 8  
Awards: Honors = 3
- 5508 P8 Do Different Light Sources Effect the Performance of a Solar Cell  
Westbrook, Westbrook Middle School, Teacher - Mrs. Shafer  
Kaitlyn M. Luft, Westbrook 8  
Awards: Honors = 3  
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- MS Finalist - Medallion, Acrylic Award, Year Pass to CT Science Center

## AWARDS

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- 5509 P8 Vortices and Density  
New Britain, Sacred Heart School, Teacher - Mrs. Wasielewski  
Nadrina M. Ebrahimi, New Britain 8  
Awards: Honors = 3  
• Wilfred A. Müller Award --- \$150 cash award for creative use of mathematics
- 5511 P8 Which Substance Breaks Down Protein The Fastest?  
Westbrook, Westbrook Middle School, Teacher - Mrs. Shafer  
Sarah J. Cruz, Westbrook 8  
Awards: Honors = 2
- 5512 P8 Fuel Cells, Are they the Future?  
Middlefield, Independent Day School, Teacher - Charlotte Stutz  
Danielle M. Shubat, East Haddam 8  
Awards: Honors = 2  
• CT Clean Energy Fund Alternative/Renewable Energy Awards --- MS Finalist - Medallion, Acrylic Award, Year Pass to CT Science Center  
• eesmarks/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy
- 5513 P8 The Mathematics of Card Counting  
Avon, Talcott Mountain Academy, Teacher - Mrs. Bauer  
Brendan Forbes, Granby 8  
Awards: Honors = 3  
• Computer Science Awards --- 1st Place Middle School - \$300, Trophy and Medallion  
• Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School - Certificate, membership to CT Science Center given by CSF  
• American Society for Quality - Thames Valley Section --- \$500 U. S. Savings Bond
- 5514 P8 A New Angle on Green Energy  
Norwalk, Ponus Ridge School, Teacher - Joe Buellesbach  
Elle Buellesbach, Norwalk 8  
Awards: Honors = 2  
• eesmarks/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy  
• Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
- 5515 P8 Phonograph Made From Everyday Items  
West Hartford, Solomon Schechter Day School, Teacher - Barbara Varnum  
Nathan Schachter, West Hartford 8  
Awards: Honors = 3
- 5516 P8 The Effect of Blade Design on The Electrical Output of a Vertical Axis Wind Turbine  
Pawcatuck, St. Michael School, Teacher - Mr. DeNoia  
Catherine E. Montalto, Westerly 8  
Awards: Honors = 3  
• CT Clean Energy Fund Alternative/Renewable Energy Awards --- MS Finalist - Medallion, Acrylic Award, Year Pass to CT Science Center  
• eesmarks/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy  
• IEEE, Connecticut Section --- \$250 Honors Award -Junior
- 5517 P8 Langton's Ant Farm  
Avon, Talcott Mountain Academy, Teacher - Mary Bauer  
Peter P. Baczyk, Avon 8  
Awards: Honors = 2  
• ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- Middle School Finalist - Medallion & Acrylic Award
- 5518 P8 The Buffering Capacity of Various Types of Soils and Grasses on Acid Rain  
Orange, Southern Connecticut Hebrew Academy, Teacher - Mrs. Karen Howell  
Moshe Y. Piekarski, Hamden 8  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- 5th Place- Physical Sciences 8th Grade Ind. - trophy, invite to compete  
Broadcom MASTERS  
• Audubon Connecticut & Arch Chemicals Environmental Awards --- MS Finalist - Audubon gifts, CSF Medallion, Acrylic award  
• Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion & Acrylic Award Souvenir  
• Air and Waste Management Association, Connecticut Chapter --- \$100 Junior, Environmental Research, air pollution related  
• CSF Board of Directors Award --- Certificate & membership to CT Science Center given by CSF

- 5519 P8 Cleaning up Oil Spills.  
Southington, St. Thomas School, Teacher - Mrs. Pauline Pelczar  
Ryan A. Mills, Southington 8  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion & Acrylic Award
- 5520 P8 Drinking Water Filtration System - Can a homemade filter remove fluoride?  
Stratford, Harry B. Flood Middle School, Teacher - Mr. David Gorski  
Bailey A. Lemieux, Stratford 8  
Awards: Honors = 3
- 5521 P8 Carbon Dioxide (CO<sub>2</sub>) and Global Warming  
Milford, St. Gabriel School, Teacher - Mrs. Schnakenberg  
Melissa M. Hanania, Milford 8  
Awards: Honors = 3  
• Association for Women Geoscientists --- Certificate & membership to CT Science Center given by CSF
- 5522 P8 Live Bubble Live!  
Stamford, Trailblazers Academy, Teacher - Jessica Maneyapanda  
Erik A. Lopez, Stamford 8  
Awards: Honors = 2
- 5523 P8 Soccer With A Spin  
Stratford, Harry B. Flood Middle School, Teacher - Mr. Gorski  
Davis W. Jaekle, Stratford 8  
Awards: Honors = 3
- 5524 P8 Water Purification  
Greens Farms, Greens Farms Academy, Teacher - Dr. Freeman  
Firouz Saghri, Weston 8  
Awards: Honors = 3
- 5525 P8 Biofuels for the Future?  
Ridgefield, East Ridge Middle School, Teacher - Mrs. Sullivan  
Austin W. Langer, Ridgefield 8  
Awards: Honors = 3
- 5527 P8 Crystallization  
Windsor, St. Gabriel School, Teacher - Miss Rosa  
Patrick Smith, Windsor 8  
Awards: Honors = 3
- 5528 P8 Solar Energy, Vastly Abundant: Light Intensity vs. Electrical Potential  
Kensington, St. Paul School, Teacher - Miss Elaine Kotler  
Anthony T. Plochocki, Berlin 8  
Awards: Honors = 3
- 5529 P8 Alka Seltzer Reacts!  
Stratford, Harry B. Flood Middle School, Teacher - Mr. David Gorski  
Charlene N. Plavnicky, Stratford 8  
Awards: Honors = 3
- 5530 P8 Will the Use of Lenses Effect the Efficiency of Solar Panels?  
Danbury, St. Joseph School, Teacher - Mrs. Page  
Sophia DiCarlo, Danbury 8  
Awards: Honors = 3  
• eesarts/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy
- 5531 P8 The Battery Project  
New Haven, Betsy Ross Arts Magnet School, Teacher - Ms. MacDonald  
Alexander Castro, Meriden 8  
Awards: Honors = 3

## AWARDS

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- 5533 P8 Candy Chromatography - What Makes Those Colors?  
Milford, St. Gabriel School, Teacher - Mr Schnakenberg  
Josselin L. Lathuras, Milford 8  
Awards: Honors = 2
- 5534 P8 Ultra Simple Electric Generator  
Bridgeport, John Winthrop School, Teacher - Mr. Gregory Walsh  
Zacariah Pena, Bridgeport 8  
Awards: Honors = 3
- 5535 P8 Stubborn Stains  
West Hartford, St. Brigid School, Teacher - Jennifer Bernaiche  
Kathleen H. Craig, Farmington 8  
Awards: Honors = 2
- 5536 P8 What variables affect the flight of a model rocket?  
Fairfield, Our Lady of the Assumption/Holy Family, Teacher - Kathy Almeida  
Katie Gardella, Fairfield 8  
Awards: Honors = 2
- 5538 P8 Aerodynamics: A Study in the Improvement of Auto Body Aerodynamic Efficiency  
West Hartford, St. Timothy Middle School, Teacher - Mrs. Christine Simao-Breen  
Sean Oleasz, West Simsbury 8  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place- Physical Sciences 8th Grade Ind.- \$300 & trophy, invite to compete Broadcom MASTERS
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report
  - Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Science 8th Grade - \$500 and invite to CSTA Award Banquet
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, membership to CT Science Center given by CSF
- 5539 P8 Using a Multiple Regression Model to Predict Success of Major League Baseball Teams  
Avon, Talcott Mountain Academy, Teacher - Mary Bauer  
David P. Marchena, New Hartford 8  
Awards: Honors = 2
- ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- 1st Place Middle School- \$150 from ATOMIC, and Trophy, \$300 from People's United Bank
- 5540 P8 Wind Power  
Bridgeport, Longfellow School, Teacher - Mr. Hyland  
Rami M. Kharbouch, Bridgeport 8  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences 8th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- 5541 P8 Testing Solar Panels  
Danbury, St. Joseph School, Teacher - Mrs. Jennifer Page  
Kara A. Wakeford, Danbury 8  
Awards: Honors = 2
- 5542 P8 Burning Calories  
Southington, DePaolo Middle School, Teacher - Sharon Brostrom  
Jose R. Silva, Southington 8  
Awards: Honors = 2
- 5543 P8 How do magnetic fields affect the flow rate of water?  
East Granby, East Granby Middle School, Teacher - Mr. Paskiewicz  
Saikrishna R. Chintalpelly, East Granby 8  
Awards: Honors = 2

- 5544 P8 Slip & Fall - I think not  
Fairfield, Fairfield Woods Middle School, Teacher - Ms. Anne May  
Sagar Gulati, Fairfield 8  
Awards: Honors = 2
- 5546 P8 Loop the Loop  
Trumbull, St. Catherine of Siena School, Teacher - Mrs. Collins  
Jacqueline R. Williams, Stratford 8  
Awards: Honors = 2
- 5547 P8 Fuel Cells-Fueling the Future  
Fairfield, Tomlinson Middle School, Teacher - Mr. Maier  
Sarathak Bothra, Fairfield 8  
Awards: Honors = 3
- 5548 P8 More Drain, Less Pain  
Hartford, Hartford Magnet Middle School, Teacher - Mrs. Parmalee  
James D. Walsh, Cromwell 8  
Awards: Honors = 2
- 5549 P8 Slingshot Science  
Norwalk, West Rocks Middle School, Teacher - Ms. Delong  
Daniel K. Lott, Norwalk 8  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion & Acrylic Award
  - ISA - International Society for Automation --- 1st - \$125 award
  - Dreams Unlimited --- \$100 cash award + certificate
- 5550 P8 Quantitative Analysis of Bisphenol A, Effect on Simulated Cell and Skin Absorption, and Effect of Chelator  
Orange, Southern Connecticut Hebrew Academy, Teacher - Mrs. Karen Howell  
Menachem T. Meltzer, New Haven 8  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- 3rd Place- Physical Sciences 8th Grade Ind, - \$100 & trophy, invite to compete  
Broadcom MASTERS
  - Alexion Biotechnology Awards --- 4th Place- Biotechnology 8th grade- trophy and Invitation Compete in Broadcom MASTERS
- 5551 P8 Power from the sun: Solar Panel Efficiency  
Fairfield, Fairfield Woods Middle School, Teacher - Ms. Sharon Mallozzi  
Gazal Gulati, Fairfield 8  
Awards: Honors = 2
- 5552 P8 Weighing Down On you  
New Haven, Worthington Hooker School, Teacher - Mr. Jones  
Alexander I. Lomakin, New Haven 8  
Awards: Honors = 3
- 5553 P8 What type of rock makes efficient flooring in different rooms of your home?  
Fairfield, Our Lady of the Assumption/Holy Family, Teacher - Kathy Almeida  
Marleena S. Reed, Bridgeport 8  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion & Acrylic Award
- 5554 P8 Airlift Water Pumping  
Norwalk, The Montessori Middle School, Teacher - David Lavallee  
Eric Smith, Norwalk 8  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- 4th Place- Physical Sciences 8th Grade Ind. - trophy, invite to compete  
Broadcom MASTERS
  - Barnes Aerospace Applied Technology Awards --- 3rd Place Middle School - \$100 and Trophy, Medallion
  - eesmarts/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- 2nd Place Middle School - \$300 Cash and Trophy
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering Middle School - CSF Medallion & Acrylic Award
  - Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a MS student, \$100 cash

## AWARDS

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- 5555 P8 Water Works!  
Bridgeport, Multicultural Magnet School, Teacher - Walter Mayorga  
Camille S. Di Bella, Bridgeport 8  
Awards: Honors = 3
- 5556 P8 Water Bottle Wind Turbine  
Bridgeport, Park City Prep Charter School, Teacher - Ms. Johnson  
Blake M. Sherwood, Bridgeport 8  
Awards: Honors = 3
- 5557 P8 Medieval Pitcher  
Hartford, Hartford Magnet Middle School, Teacher - Penny Parmelee  
CJ Humphries, Hartford 8  
Awards: Honors = 2
- 5558 P8 Can Color affect Heating by Absorption of Light  
Bridgeport, Read School, Teacher - Mr. Tharson  
Anthonia Wray, Bridgeport 8  
Awards: Honors = 3
- 5559 P8 Ion Engines: A Superior Deep Space Propulsion Method  
Stafford Springs, St. Edward School, Teacher - Mrs. Milnes  
Benjamin S. Teerlinck, Monson 8  
Awards: Honors = 3
- Barnes Aerospace Applied Technology Awards --- Middle School Finalist - Medallion and acrylic award
  - Barker Mohandas Award for Transportation Research --- \$250 Cash for Excellence in Transportation Related Research
- 5560 P8 Cosmic Rays: Comparing the Frequency of Muon Strikes with Heliospheric and Atmospheric Variables  
Stratford, St. Mark School, Teacher - Philip Flynn  
Emily M. Robertson, Stratford 8  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion & Acrylic Award
  - Astronomical Society of Greater Hartford --- Junior Project- \$100 and ASGH meeting invitation
  - Connecticut College-Physics, Astronomy, & Geophysics Dept. --- \$100 and certificate, Junior Physics & teshirt
- 5561 P8 Building Multi-Purpose Craft  
Ridgefield, East Ridge Middle School, Teacher - Mr. Walsh  
Gurumeher Sawhney, Ridgefield 8  
Awards: Honors = 2
- National Society of Professional Engineers --- Certificate, Lapel Pin, membership to CT Science Center given by CSF
- 5562 P8 Crazy Crystals: How do salt crystals grow under different conditions?  
Middlefield, Independent Day School, Teacher - Charlotte Stutz  
Olivia R. Ransohoff, Hamden 8  
Awards: Honors = 3
- 5563 P8 Material vs. Magnetism  
New Haven, Engineering & Science University Magnet, Teacher - Dr. Marjorie Edmonds-Lloyd  
J. S. Joseph II, New Haven 8  
Awards: Honors = 3
- American Society for Metals - Hartford Chapter --- \$100 Check
- 5564 P8 Which Liquid Evaporates the Fastest?  
Newington, St. Mary School, Teacher - Mrs. Debbie Giantonio  
Alex M. Baczewski, New Britain 8  
Awards: Honors = 3
- 5565 P8 The Effect of Ingredients on the Overall Quality of Cookies.  
Bethel, St. Mary School, Teacher - Tricia McDonald  
Julia G. Decker, Bethel 8  
Awards: Honors = 3

- 5566 P8 Is that Battery really dead? And what are the limits of battery chemistry?  
Madison, Walter C Polson Middle School, Teacher - Madhuparna Roychoudhury  
Shayan Roychoudhury, Madison 8  
Awards: Honors = 2  
• FuelCell Energy --- Fuel Cell Car and Experiment Kit (\$150) + Jacket (\$50) + Pen (\$25) and Certificate
- 5567 P8 The Use of Bike Gears and How They Work  
East Haven, East Haven Academy, Teacher - Mrs. J. Staires  
Bruno M. Lieto, East Haven 8  
Awards: Honors = 3
- 6001 PS Renewable Energy For Mobile Devices  
Shelton, Shelton High School, Teacher - Ausif Mahmood  
Rigel Mahmood, Shelton 9  
Awards: Honors = 2  
• Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award
- 6002 PS Using Refinery Produced CO2 Emissions to Form Limestone Aggregate Industrial Grade Cement, Calcium Carbonate, When Combined With Calcium.  
Oxford, Oxford High School, Teacher - Mrs. Granucci  
Jared A. Schulman, Oxford 11  
Awards: Honors = 2  
• CT Clean Energy Fund Alternative/Renewable Energy Awards --- High School Finalist - Medallion, Year Pass to CT Science Center  
• Connecticut Association of Physics Teachers --- \$100 Senior project
- 6004 PS Frequency-Dependent Sound Absorption  
Fairfield, Fairfield Ludlowe High School, Teacher - MaryJac Reed  
Anurag Kalra, Fairfield 9  
Awards: Honors = 2
- 6005 PS A Personal Autonomous Robot  
West Hartford, Kingswood Oxford School, Teacher - Mr. Livesay  
Liz Miller, Ellington 12  
Awards: Honors = 3
- 6006 PS Can Bacteria Withstand the Power of UV Light?  
Bethel, Bethel High School, Teacher - Ray Turek  
Brian Michalka, Bethel 11  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award  
• Science Horizons Senior High Awards --- Finalist - Senior High - \$100 & Medallion
- 6007 PS A novel approach for mineral accretion and artificial reef formation  
Bridgeport, Bridgeport Aquaculture School, Teacher - Mr. Shadle  
Joseph N. Patria, Stratford 12  
Awards: Honors = 2
- 6008 PS Roof Style and Water Rejection  
Bridgeport, Central High School (Magnet), Teacher - Ms. Kato  
Nicholas E. Tornifoglia, Bridgeport 10  
Awards: Honors = 3
- 6009 PS Viscosity Variations among Different Diesel Fuel to Vegetable Oil Mixtures  
Madison, Daniel Hand High School, Teacher - Howard Boey  
Adam P. Boey, Madison 9  
Awards: Honors = 2
- 6010 PS The Evaluation, Design & Application of a Military Class Gunship Subsequent Analysis of United States Air Force Fleet  
Westport, Staples High School, Teacher - Dr. Morgan  
Brandon L. Edelson, Westport 12  
Awards: Honors = 3  
• U.S. Air Force --- Certificate, charging stand, backpack, flash jotter bundle set



## AWARDS

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- 6011 PS Wind Generator Efficiency  
New Haven, High School in the Community, Teacher - Paul Jones  
Max Pelloth, Milford 10  
Awards: Honors = 2  
  - Environmental/ Energy Award- New Haven Public School Student --- \$100 Award for top environmental or alternative energy project from a New Haven public school
- 6012 PS Using a Laser to Measure the Speed of Light in Jello  
Norwalk, Norwalk High School, Teacher - Frank Moffett  
Christopher D. Burr, Norwalk 9  
Awards: Honors = 2  
  - Henderson Award --- certificate and 1 year pass for two for the CT Science Center given by CSF
- 6013 PS A Model Diesel Spill and Its Impact on Biological Oxygen Demand  
Bridgeport, Bridgeport Aquaculture School, Teacher - Mr. Shadle  
Taylor A. Sambrook, Trumbull 12  
Awards: Honors = 1  
  - Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
  - Long Island Sound Foundation, Inc. --- \$500 Life Science/Environmental Science/Physical science
  - David and Torrey Fenton Awards --- For creative work in the physical sciences- high school; \$200 cash
  - Meyerand Young Woman Scientist Awards --- \$300 cash - High School, Physical Sciences
  - Society of Women Engineers - Hartford Section --- Scientific Calculator
- 6014 PS Improving the Efficiency of Robotic Arm Movement through Advanced Geometric Calculations  
Putnam, Putnam Science Academy, Teacher - Fatih Cekic  
Serik Tukupov, Putnam 10  
Awards: Honors = 2  
  - ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- 2nd Place High School- \$100 from ATOMIC, Trophy, \$300 from People's United Bank
  - Barnes Aerospace Applied Technology Awards --- Senior High Finalist - Medallion and acrylic award
  - Society of Women Engineers - Hartford Section --- Scientific Calculator
- 6015 PS Analysing Sport Drink  
Bridgeport, Warren Harding High School, Teacher - Ms. Tichy  
Justin J. Javier, Bridgeport 10  
Awards: Honors = 2
- 6016 PS Long Term Analysis of Coefficient of Variation of Labor Costs across Industries  
Fairfield, Fairfield Ludlowe High School, Teacher - Dr. Mousumi Bhattacharya  
Arvind Kalra, Fairfield 11  
Awards: Honors = 3
- 6017 PS Result of Flight Time of Moth Paper Airplanes with Different Tips  
East Hartford, East Hartford High School, Teacher - Mr. Reid  
Saad Islam, East Hartford 10  
Awards: Honors = 3  
  - American Institute of Aeronautics & Astronautics - Connecticut Section --- \$200 award, certificate
- 6018 PS The Best Place in New Milford, Ct to Build an Observatory  
New Milford, New Milford High School, Teacher - Miss. Stolle  
Olivia R. O'Neil, New Milford 11  
Awards: Honors = 3
- 6019 PS Which Strings Will Sing Longest  
Shelton, Shelton High School, Teacher - Mrs. Lucia  
Catherine Cheu, Shelton 11  
Awards: Honors = 2
- 6020 PS Solid State Thermoelectric Power Generation Using Strategic Household Placement  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Carl O. Akerman, Greenwich 11  
Awards: Honors = 2  
  - eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award
  - Yale Science & Engineering Association, Inc. --- Certificate, Medallion, membership to CT Science Center given by CSF

- 6022 PS A Kinesiology approach to evaluate the biomechanics of the typical long distance runner's gait and its relation to repetitive stress injury  
Oxford, Oxford High School, Teacher - Mrs. Doherty  
Skyler A. Werner, Oxford 11  
Awards: Honors = 2  
• Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award
- 6023 PS Stain Remover Effectiveness  
Glastonbury, Glastonbury High School, Teacher - Dr. Blain  
Patrick R. Weber, Glastonbury 9  
Awards: Honors = 3
- 6025 PS Whatever Floats Your Boat  
Fishers Island, Fishers Island School, Teacher - Carol Giles  
Lily J. Stafford, New London 12  
Awards: Honors = 3
- 6026 PS Cost of Heating an Engine: The Effect of Using an Engine Block Heater on the Cost of Heating a Diesel Engine to Full Operating Temperature  
Guilford, Guilford High School, Teacher - John Cuddy  
Maya Morduch-Toubman, Guilford 9  
Awards: Honors = 2
- 6027 PS A Surprising Geometric Transformation  
Glastonbury, Glastonbury High School, Teacher - Diane Pintavalle  
Chung Su Hong, Glastonbury 12  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- 3rd Place- Physical Sciences Senior High Individual - \$200 & trophy  
• ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- 1st Place High School- \$150 from ATOMIC, Trophy, \$500 from People's United Bank  
• United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report  
• Mu Alpha Theta --- Certificate, membership to CT Science Center given by CSF
- 6028 PS Modeling proton reduction catalyzed by a novel nickel electrocatalyst with density functional theory  
Wallingford, Choate Rosemary Hall, Teacher - Dr. Rachel Gritzer  
Shubhro Saha, Avon 12  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Individual - \$300 & trophy, trip to compete at Intel ISEF
- 6029 PS Impact of Turbine Design on Renewable Energy Storage System Efficiency  
Norwich, Norwich Free Academy, Teacher - Mr. Robert V Johnson  
Ian D. Dakers, Bozrah 11  
Awards: Honors = 1  
• Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award  
• eesmart/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award  
• Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award  
• United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report  
• GENIUS Olympiad --- GENIUS Olympiad Competition for HS student (s) and advisor -Environmental
- 6030 PS The Haunt of Computerized Hogwash: An Analysis of E-Waste  
Redding, Joel Barlow High School, Teacher - Katherine Nuzzo  
Lia N. Cirelli, Redding 9  
Awards: Honors = 3
- 6031 PS The Effect of Soil Type on Groundwater Flow: Application of Darcy's Law  
Hebron, RHAM High School, Teacher - Mrs. Kristin Spinelli  
Ryan J. Cordier, Hebron 9  
Awards: Honors = 2
- 6032 PS Solar Cells  
Shelton, Shelton High School, Teacher - Mr. Nazzaro  
Shannon L. Kennedy, Shelton 12  
Awards: Honors = 3

## AWARDS

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- 6033 PS Timed Burning Of Fabric Softener  
Bridgeport, Warren Harding High school, Teacher - Mr. Fred Vigeant  
Anna E. Cruz, Bridgeport 11  
Awards: Honors = 3
- 6034 PS Using Polycaprolactone for Tissue Engineering  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Satish Bhat, Orange 10  
Awards: Honors = 2
- 6035 PS Biodiesel: A cleaner-burning diesel fuel made from natural, renewable sources. Production and Testing.  
Storrs, E.O. Smith High School, Teacher - Julia Sherman  
Athanasios A. Provas, Mansfield Center 12  
Awards: Honors = 2
- 6036 PS A Modified Crutch Designed to Decrease Axillary Stress During Crutch Ambulation  
Sandy Hook, Newtown High School, Teacher - Mr. Tim DeJulio  
Adam A. Morehouse, Newtown 12  
Awards: Honors = 2
- 6037 PS Characterization of Nickel and Copper Complexes  
Greens Farms, Greens Farms Academy, Teacher - Dr. Freeman  
Kaitlyn N. Morio, Westport 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- 6038 PS The Effect of Fuel Type on Emissions and Energy Production  
Guilford, Guilford High School, Teacher - Mr. Lynn Curtis  
Gabrielle M. Sejourne, Guilford 9  
Awards: Honors = 2
- 6039 PS Computational Investigation of Astrophysical Nuclear Reaction Rate Dominance  
Westport, Staples High School, Teacher - Dr. Nicholas Morgan  
Rachel A. Myers, Westport 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
  - U.S. Army --- Certificate and \$50 savings bond
  - Astronomical Society of Greater Hartford --- Senior Project- \$150 and ASGH meeting invitation
  - Leask/Francoeur Family Awards --- 1st Place High School- For innovation electrical engineering or computer science - \$200 cash
- 6040 PS Electrified Nanoscale Architecture in Mixed Matrix Membranes as a Means of Rapid Throughput Water Sterilization  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Will B. Hallisey, Greenwich 11  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 4th Place- Physical Sciences Senior High Individual - trophy
  - Audubon Connecticut & Arch Chemicals Environmental Awards --- 1st Place HS- \$500, Trophy, Audubon gifts
  - Goodrich ISR Awards for Excellence In Engineering --- 3rd Place- Engineering Senior High - \$200 & trophy
  - Stockholm Junior Water Prize --- Certificate, Letter, membership to CT Science Center given by CSF, possible advance to further competition
- 6041 PS How the Number of Vanes on an Arrow Affects its Accuracy  
East Hartford, East Hartford High School, Teacher - Mr. Reid  
Matt R. Whitesell, East Hartford 10  
Awards: Honors = 3
- 6042 PS The Mary Poppins Project  
New Haven, Wilbur Cross High School, Teacher - Mr. Willems  
Esther E. Rose-Wilen, New Haven 10  
Awards: Honors = 3
- 6043 PS Polotics, Extroversion/Introversion, and Education  
Fishers Island, Fishers Island School, Teacher - Carol Giles  
Andrew K. Elmore, Stonington 11  
Awards: Honors = 2

- 6044 PS Sensitivity of Snow-melt to Soot, Sand, and Salt  
Hamden, Sacred Heart Academy, Teacher - Mrs. Saukas  
Helen Park, Hamden 9  
Awards: Honors = 3
- 6046 PS Waste Free Biodiesel Production  
Danbury, Immaculate High School, Teacher - Mr. Dave Hoyt  
Narmien Haddad, Danbury 11  
Awards: Honors = 2
- 6047 PS Does your physique in terms of moment of inertia predetermine your dancing capabilities?  
Redding, Joel Barlow High School, Teacher - Dr. Nuzzo  
Samantha R. Goldberg, Easton 11  
Awards: Honors = 3
- 6048 PS Design and Testing of Two-step Arsenic - remediating water filtration system (year two)  
Oxford, Oxford High School, Teacher - Mrs. Doherty  
Joseph A. Bonavita Jr, Oxford 12  
Awards: Honors = 2
- Audubon Connecticut & Arch Chemicals Environmental Awards --- HS Finalist - Audubon gifts, CSF Medallion, Acrylic award
  - U.S. Army --- Certificate and \$50 savings bond
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
- 6049 PS Oil's Calming Effect on Water  
Storrs, E.O. Smith High School, Teacher - Dr. Gary Bent  
Alison P. Hosey, Coventry 11  
Awards: Honors = 3
- 6050 PS Development of a Composite Clay Polymer Sponge for Remediation of Oil Contaminated Water.  
Manchester, East Catholic High School, Teacher - Ms. Holly Noble  
Theresa A. Oei, Hebron 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
  - Barnes Aerospace Applied Technology Awards --- 3rd Place High School - \$ 200 and Trophy, Madllion
  - eesarts/CT Energy Efficiency Fund Future Sustainability Awards --- 1st Place High School - \$800 Cash, Trophy, and Trip to Compete I-SWEEEP, Houston
  - Goodrich ISR Awards for Excellence In Engineering --- 1st Place - Engineering Senior High - \$500 & trophy
  - Southeastern New England Marine Educators --- \$75 award and membership in SENEME - 1st Place Senior & T-Shirt
  - University of Connecticut - Physics Department --- UCONN Early College Experience Program: Physical Sciences - \$200 U.S. Savings Bond
- 6051 PS Purification of Biofuel Syngas via Methanation of CO<sub>2</sub> with a Raney Nickel-Aluminum Alloy  
Greenwich, Greenwich High School, Teacher - Andy Bramante  
Nicholas M. Ornitz, Old Greenwich 11  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- High School Finalist - Medallion, Year Pass to CT Science Center
- 6052 PS Tensile Strength  
Bridgeport, Bassick High School, Teacher - Dr. Camacho  
Jazmin Rivera, Bridgeport 10  
Awards: Honors = 2
- 6053 PS Asteroid Compositions and the Implications on Deflecting Potentially Hazardous Asteroids  
Sandy Hook, Newtown High School, Teacher - Tim DeJulio  
Brandon J. Hart, Newtown 11  
Awards: Honors = 3

## AWARDS

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- 6054 PS Visible Illumination of Ferroelectric BiFeO<sub>3</sub> Thin Films to Produce a Polarization-Dependent Bulk Photovoltaic Effect  
Greenwich, Greenwich High School, Teacher - Mr. Andrew Bramante  
James P. O'Sullivan, Old Greenwich 11  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 5th Place- Physical Sciences Senior High Individual - trophy
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award
  - United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report
  - U.S. Metric Association --- Certificate & membership to CT Science Center given by CSF
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
  - IEEE, Connecticut Section --- \$100 Honorable Mention
  - Coherent, Inc. Richard Hart Award for Excellence in Photonics --- \$300 cash, plaque, invitation to lunch and tour Coherent factory
- 6055 PS The Effect of Different Detergents and Surface Tensions on the Detergency of Feathers  
Woodbridge, Amity Regional High School, Teacher - Ms. Deborah Day  
Andrew H. Chen, Bethany 10  
Awards: Honors = 2
- 6056 PS Detecting the Difference between Tempered and Untempered Music.  
Greens Farms, Greens Farms Academy, Teacher - Dr. Freeman  
Elizabeth Woodson, Westport 12  
Awards: Honors = 2
- 6057 PS Application of Non-Newtonian Fluids for the Prevention of Sports Injuries  
Brewster, Brewster High School, Teacher - Mr. Edward Schmidt  
Drew Podgorski, Brewster 10  
Awards: Honors = 3
- American Society of Safety Engineers, CT Valley Chapter --- \$150 grade 9-12 project
- 6058 PS Study of the performance of commercial dispersants in improving the solubility of non-polar petroleum oil in sea water.  
Bridgeport, Central High School, Teacher - Ms. Sullivan  
Michael A. Quintero, Bridgeport 10  
Awards: Honors = 3
- 6059 PS The Effects of Polymers on Beta Radiation  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Evan A. Fox, Woodbridge 10  
Awards: Honors = 3
- 6060 PS What are the most desirable sources of mud for a microbial fuel cell?  
New Milford, New Milford High School, Teacher - Mr. Felten  
Tara E. Larkin, New Milford 11  
Awards: Honors = 2
- Barnes Aerospace Applied Technology Awards --- Senior High Finalist - Medallion and acrylic award
  - eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award
  - FuelCell Energy --- Fuel Cell Car and Experiment Kit (\$150) + Jacket (\$50) + Pen (\$25) and Certificate
  - Science Horizons Senior High Awards --- Finalist - Senior High - \$100 & Medallion
- 6061 PS Turn that Light Off!  
East Hartford, East Hartford High School, Teacher - Tim Reid  
Rachel Forte, East Hartford 10  
Awards: Honors = 2
- 6063 PS Splash, Splat, Sizzle  
East Hartford, East Hartford High School, Teacher - Tim Reid  
Cassie Quattropani, East Hartford 10  
Awards: Honors = 3
- 6064 PS Evaluation of Venting-to-Coolant in Sodium-Cooled Fast Neutron Reactors  
Westport, Staples High School, Teacher - Dr. Nicholas Morgan  
Tessa D. Green, Westport 12  
Awards: Honors = 2
- Barnes Aerospace Applied Technology Awards --- Senior High Finalist - Medallion and acrylic award
  - Westinghouse Electric Company/New England Chapter of North American Young Generation in Nuclear --- 1st place, Excellence in Energy Research, \$100 cash award

- 6065 PS Microprocessor square root algorithms  
 Branford, Branford High School, Teacher - Mrs. Elperina  
 Brede E. Doerner, Branford 11  
 Awards: Honors = 2  
 • ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- High School Finalist - Medallion & Acrylic Award  
 • Computer Science Awards --- 1st Place High School - \$400, Trophy, Medallion  
 • Intel Excellence in Computer Science Award --- \$200 & certificate • IEEE, Connecticut Section --- \$250 Honors Award -Senior
- 6066 PS Synthesis of Hot Electron Carrier Lead Selenide Nanocrystals and Thin Film Layers using a Novel Vitamic C Reduction  
 Greenwich, Greenwich High School, Teacher - Mr. Andrew Bramante  
 Victoria R. Leto, Greenwich 11  
 Awards: Honors = 1  
 • Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award  
 • CT Clean Energy Fund Alternative/Renewable Energy Awards --- High School Finalist - Medallion, Year Pass to CT Science Center  
 • eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award
- 6067 PS Strong Bars  
 Sandy Hook, Newtown High School, Teacher - Dejulio  
 Kurt Liniger, Newtown 11  
 Awards: Honors = 3  
 • American Society of Safety Engineers, CT Valley Chapter --- \$150 grade 9-12 project
- 6068 PS Trusses and Triangles  
 Norwalk, Norwalk High School, Teacher - Mr. Belmonte  
 Madeline E. Mannella, Norwalk 9  
 Awards: Honors = 3
- 6069 PS Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor  
 Greenwich, Greenwich High School, Teacher - Andrew Bramante  
 Ryota Ishizuka, Cos Cob 11  
 Awards: Honors = 1  
 • Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & trophy, trip to compete at Intel ISEF  
 • Barnes Aerospace Applied Technology Awards --- 1st Place High Sch - \$500 and Trophy, Medallion and lunch with intellectual property attorney  
 • CT Clean Energy Fund Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 Cash and Trophy  
 • eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award  
 • United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report  
 • H. Joseph Gerber Medal of Excellence, an award of the Connecticut Academy of Science and Engineering in partnership with CCAT --- Physical Sciences Senior - \$1,000 cash, Solid Silver Medal of Excellence, invite to CASE Annual Mtg
- 6070 PS How does the length of a resistor affect voltage.  
 Bridgeport, Bassick High School, Teacher - Ms. Koolis  
 Aaron B. Lopez, Bridgeport 9  
 Awards: Honors = 3
- 6071 PS Improved Spectral Response of Dye Sensitized Solar Cells through Red-Shift Fluorescence Resonance Energy Transfer (FRET)  
 Greenwich, Greenwich High School, Teacher - Andrew Bramante  
 Thomas C. Newberry, Riverside 11  
 Awards: Honors = 2  
 • CT Clean Energy Fund Alternative/Renewable Energy Awards --- 3rd Place High School - \$200 Cash and Trophy  
 • eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award  
 • Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award  
 • Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate

## AWARDS

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- 6072 PS Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine  
Manchester, East Catholic High School, Teacher - Ms. Noble  
Bridget M. Oei, Hebron 9  
Awards: Honors = 2
- Barnes Aerospace Applied Technology Awards --- 2nd Place High School - \$300 and Trophy, Medallion
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- 1st Place High School - \$500 Cash and Trophy
  - eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- 2nd Place High School - \$500 Cash and Trophy and Trip to Compete I-SWEEEP, Houston
  - Goodrich ISR Awards for Excellence In Engineering --- 2nd Place- Engineering Senior High - \$300 & trophy
  - Society of Women Engineers - Hartford Section --- Scientific Calculator
  - MIT Club of Hartford Awards --- For excellence in energy related research, high school, \$150 cash award
  - ProConn Power Inc. Award for Sustainable Electrical Energy Research --- \$250 for Excellence in Sustainable Electrical Energy Research
  - The Arthur Mensing Award --- \$500 cash award for excellence in the physical sciences
  - Yale Chapter of Sigma Xi, The Scientific Research Society --- Dinner at Mory's for four - with members of Yale Chapter of Sigma Xi
  - University of Connecticut - Physics Department --- Physics Department UCONN Co-Op \$75 Gift Certificate
- 6073 PS Glowsticks and Temperature  
Norwalk, Norwalk High School, Teacher - Belmonte  
Amanda Murphy, Norwalk 9  
Awards: Honors = 3
- 6074 PS Modeling an Optimal Receiver for a Binary Quantum Channel Using Information Theory  
Westport, Staples High School, Teacher - Dr. Nick Morgan  
Yuri D. Lenskiy, Westport 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
  - ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- 3rd Place High School - Trophy, \$200 from People's United Bank
  - Computer Science Awards --- 3rd Place High School- \$200, Trophy, Medallion
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award
  - U.S. Army --- Certificate and \$50 savings bond
- 6075 PS Biomimetic Insulation: Inspired by the eastern tent caterpillar and white-tailed deer  
Brewster, Brewster High School, Teacher - Mr. Schmidt  
Madeleine L. Skaller, Brewster 12  
Awards: Honors = 2
- eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award
  - Science Horizons Senior High Awards --- Finalist - Senior High - \$100 & Medallion
- 6076 PS Non-Metal Redox Kinetics: Acid-catalyzed Reaction of N-chloro-N-methylacetamide with Sulfite and Hydrogen Sulfite Ion  
Glastonbury, Glastonbury High School, Teacher - Diane Pintavalle  
Akilesh V. Potti, Glastonbury 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- 6077 PS What are the effects of a person's mass on the types of Judo throws performed?  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Jordan L. Henck, Woodbridge 10  
Awards: Honors = 2
- 6078 PS Brand of towel paper vs. amount of water it can absorb.  
Southington, Southington High School, Teacher - Allison H. Gamzon  
Deana E. Sobilo, East Berlin 9  
Awards: Honors = 3
- 6079 PS Synthesis of Novel Nile Red Coated ZnO Nanocrystals for Use in a Dye Sensitized Solar Cell  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Nick Dorian, Riverside 11  
Awards: Honors = 2
- 6080 PS Heat of Combustion of Biodiesel from Different Sources  
New Milford, New Milford High School, Teacher - Mrs. Reed  
Johnny Zheng, New Milford 11  
Awards: Honors = 2



- 6081 PS Solar Energy  
New Haven, Wilbur Cross High School, Teacher - Mr. Kelsey  
Jian Gao, New Haven 9  
Awards: Honors = 3
- 6082 PS Ways to affect the size of a Leyden Jar's spark  
Fishers Island, Fishers Island School, Teacher - Carol Giles  
Connor J. Thompson, Ledyard 11  
Awards: Honors = 3
- 6084 PS Testing for Nitrates in Commercial and Private Water Sources  
Oxford, Oxford High School, Teacher - Mrs. Granucci  
Thomas W. Baker, Oxford 9  
Awards: Honors = 3
- 6085 PS Financial Alert Software. A novel creation using the Database Management System (DBMS): SQL Server.  
Shelton, Shelton High School, Teacher - Mrs. Clark, Mr. Mohan  
Priya R. Mohan, Shelton 12  
Awards: Honors = 3
- 6086 PS The Establishment of the Micro Circulation of Fresh Air in the Student's Dorm  
Watertown, The Taft School, Teacher - James J. Lehner  
Xin Chen, Watertown 11  
Awards: Honors = 3
- 6087 PS Brown's Gas: The Fuel Source of the Future?  
New Haven, Wilbur Cross High School, Teacher - Jarret Moyer  
Andrew B. Suzuki, New Haven 10  
Awards: Honors = 3
- 6088 PS Effects of Deionizing Radiation on the Molecular Makeup of Nonorganic Materials/Objects  
Oxford, Oxford High School, Teacher - Mrs. Granucci  
Aedan M. Kennedy, Oxford 11  
Awards: Honors = 3
- 6089 PS The Effect of Weather Variations on Wind Turbine Productivity  
Guilford, Guilford High School, Teacher - Mr. John Cuddy  
Brian M. DaCorte, Guilford 9  
Awards: Honors = 2
- 6090 PS Statistical machine translation with syntactic weighting of target-language translation probabilities  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Connor M. Harris, Riverside 11  
Awards: Honors = 2  
  - Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award
  - Yale Science & Engineering Association, Inc. --- Certificate, Medallion, membership to CT Science Center given by CSF
  - Education Connection - Center for 21st Century Skills Awards --- \$100 For innovative use of technology to advance science or engineering
- 6092 PS Design and Construction of a Linear Particle Accelerator  
Watertown, The Taft School, Teacher - William Kron  
Matthew A. Petroff, Cheshire 12  
Awards: Honors = 2  
  - Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award
  - Connecticut College-Physics, Astronomy, & Geophysics Dept. --- \$100 and certificate, Senior Physics & teeshirt
  - IEEE, Connecticut Section --- \$100 Honorable Mention



## AWARDS

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- 6093 PS Autonomous Kite Wind Generator to Capture Troposphere Winds  
Fairfield, Fairfield College Preparatory School, Teacher - Mrs. O'Reilly  
Kyle T. Ryan, Trumbull 10  
Awards: Honors = 2
- Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award
  - eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- 3rd Place High School - \$300 Cash and Trophy
  - Goodrich ISR Awards for Excellence In Engineering --- Finalist - Engineering High School - CSF Medallion & Acrylic Award
  - Northeast Utilities: Environmental Management --- Senior - \$250 Scholarship, energy conservation and renewable energy sources
  - GENIUS Olympiad --- GENIUS Olympiad Competition for HS student (s) and advisor - 1st Place HS Energy
- 6501 PST What makes your heart race? The affect of cheerleading motions on heart rate.  
Bridgeport, Central High School, Teacher - Ms. Sullivan  
Ariana E. Mesaros, Bridgeport 11 Dalii Almanzar Bridgeport 11  
Awards: Honors = 3
- 6502 PST Efficient and Practical Measurement of Natural and Waste Water Pollution by Determining the Chemical Oxygen Demand (COD) via Standard Method  
Putnam, Putnam Science Academy, Teacher - Serdar Haytiyev  
Nahit Akarsu, Putnam 11 Mehmet S. Akarsu Putnam 11  
Awards: Honors = 2
- 6503 PST The Effect of Fertilization and Environmental Factors on Water Quality in the Upper Cove River Watershed  
Woodbridge, Amity Regional High School, Teacher - Deborah Day  
Zelun Wang, Orange 11 Danielle Eldracher Woodbridge 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Team- \$300(split) & trophy
- 6504 PST The Pinhole and Hologram Room  
Stamford, Academy of Info Tech & Engineering (AITE), Teacher - Mr. Kondracky  
Reuel E. Camacho, Stamford 12 Dijon Whyte Stamford Ivan Abrego Stamford 12  
Awards: Honors = 3
- 6505 PST The Structural Feasibility of Pykrete  
Hamden, Sacred Heart Academy, Teacher - Mrs. Pamela Brownell  
Raeanne Nuzzo, North Haven 10 Yasmine Shreiteh Guilford 10  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion & Acrylic Award
  - Connecticut Architecture Foundation --- \$100 U.S. Savings Bond
- 6506 PST Pinhole Camera and Photonics  
Stamford, Academy of Info Tech & Engineering (AITE), Teacher - Mark Kondracky  
ChanYu Mao, Norwalk 12 Evan P. Norton Norwalk 11 Mark A. Gladstone Stamford 11  
Awards: Honors = 3
- 6507 PST What's In Your Water?  
Shelton, Shelton High School, Teacher - Daniel Nazzaro  
Mac H. Thompson, Shelton 10 John Fenton Shelton 10  
Awards: Honors = 2
- 6508 PST Green Your PC  
Hartford, Classical Magnet School, Teacher - Thomas Holloway  
Haley B. Troy, Manchester 11 Jordan S. Kunzika Hartford 11  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion & Acrylic Award
  - Stanley Lessoff Award for Excellence In Analytical Technique --- \$200 Cash and Plaque
- 6509 PST Polyphenols from Pomegranates  
Norwalk, Norwalk High School, Teacher - Dr. Munrow  
Hayley N. Prescott, Norwalk 12 Sabrina Church Norwalk 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion & Acrylic Award

- 6510 PST Eggs-traordinary Strength  
 Shelton, Shelton High School, Teacher - Mrs. Pickett  
 John D. Hunter, Shelton 9 Kristian R. Schif Shelton 9  
 Awards: Honors = 1  
 • Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion & Acrylic Award  
 • Connecticut Architecture Foundation --- \$100 U.S. Savings Bond
- 6511 PST Cooling Down  
 Bridgeport, Central High School (Magnet), Teacher - Ms. Kato  
 Ro-Anna R. Thomas, Bridgeport 10 Ro-Anne R. Thomas Bridgeport 10  
 Awards: Honors = 3
- 6512 PST Using Atomic Absorption Spectrometer to Determine Lead Levels  
 Hamden, Sacred Heart Academy, Teacher - Mrs. Pamela Brownell  
 Laura G. Smith, Madison 10 Christina Jiang Hamden 10  
 Awards: Honors = 2
- 6513 PST The Effects of Different Atmospheric Gases on Solar Energy  
 Hebron, RHAM High School, Teacher - Mrs. Kristin Spinelli  
 Katie Savage, Amston 9 Olivia Tarca Hebron 9  
 Awards: Honors = 2  
 • Air and Waste Management Association, Connecticut Chapter --- \$100 Senior, Environmental Research, air pollution related
- 6514 PST Do Cell Phones put out dangerous energy?  
 Stamford, Academy of Info Tech & Engineering (AITE), Teacher - Mark Kondracky  
 Ayush Rathore, Stamford 9 Lohith D. Annumala Stamford 9 Chandu Goli Stamford 9  
 Awards: Honors = 3
- 6515 PST Water Purification via Double Precipitate Reactions  
 New Haven, Wilbur Cross High School, Teacher - Bernard Hulin  
 Lea R. Winter, New Haven 12 Lily Engbith New Haven 10  
 Awards: Honors = 2
- 6516 PST Using Citrus Fruit Peels as Environmentally Friendly and Low Cost Bio-Sorbents to Effectively Remove Phenol from Industrial Wastewater  
 Putnam, Putnam Science Academy, Teacher - Serdar Haytiyev  
 Yusuf Yilmaz, Putnam 12 Fadil A. Sencan Putnam 12 Abdurrahman Cam Putnam 12  
 Awards: Honors = 1  
 • Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place- Physical Sciences Senior High Team- \$500 (split) & trophy  
 • Stockholm Junior Water Prize --- Certificate, Letter, member ship to CT Science Center given by CSF, possible advance to further competition
- 6517 PST Power Acids  
 Bridgeport, Central High School, Teacher - Ms. Kato  
 Amy J. Cerezo, Bridgeport 9 Jasmine Riodin Bridgeport 9  
 Awards: Honors = 3
- 6518 PST Programming a LEGO NXT Robot to Work as a Search and Rescue Robot  
 Norwich, Norwich Free Academy, Teacher - Robert Johnson  
 Miranda R. Cirrito, Bozrah 9 Remington J. Carle Norwich 10  
 Awards: Honors = 2  
 • Computer Science Awards --- 2nd Place High School - \$300, Trophy, Medallion  
 • Intel Excellence in Computer Science Award --- \$200 & certificate

## AWARDS

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### International Sustainable World (I-SWEEEP) Competitors

#### High School

- 6050 PS Development of a Composite Clay Polymer Sponge for Remediation of Oil Contaminated Water.  
Manchester, East Catholic High School, Teacher - Ms. Holly Noble  
Theresa A. Oei, Hebron 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
  - Barnes Aerospace Applied Technology Awards --- 3rd Place High School - \$ 200 and Trophy, Medallion
  - eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- 1st Place High School - \$800 Cash, Trophy, and Trip to Compete I-SWEEEP, Houston
  - Goodrich ISR Awards for Excellence In Engineering --- 1st Place - Engineering Senior High - \$500 & trophy
  - Southeastern New England Marine Educators --- \$75 award and membership in SENEME - 1st Place Senior & T-Shirt
  - University of Connecticut - Physics Department --- UCONN Early College Experience Program: Physical Sciences - \$200 U.S. Savings Bond
- 6072 PS Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine  
Manchester, East Catholic High School, Teacher - Ms. Noble  
Bridget M. Oei, Hebron 9  
Awards: Honors = 2
- Barnes Aerospace Applied Technology Awards --- 2nd Place High School - \$300 and Trophy, Medallion
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- 1st Place High School - \$500 Cash and Trophy
  - eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- 2nd Place High School - \$500 Cash and Trophy and Trip to Compete I-SWEEEP, Houston
  - Goodrich ISR Awards for Excellence In Engineering --- 2nd Place- Engineering Senior High - \$300 & trophy
  - Society of Women Engineers - Hartford Section --- Scientific Calculator
  - MIT Club of Hartford Awards --- For excellence in energy related research, high school, \$150 cash award
  - ProConn Power Inc. Award for Sustainable Electrical Energy Research --- \$250 for Excellence in Sustainable Electrical Energy Research
  - The Arthur Mensing Award --- \$500 cash award for excellence in the physical sciences
  - Yale Chapter of Sigma Xi, The Scientific Research Society --- Dinner at Mory's for four - with members of Yale Chapter of Sigma Xi
  - University of Connecticut - Physics Department --- Physics Department UCONN Co-Op \$75 Gift Certificate

### Intel International Science & Engineering Fair (ISEF) Competitors

#### Science Horizons

- 3024 LS Biological Control of Ticks to Prevent Lyme Disease Using Entomopathogenic Nematodes  
Danbury, Danbury High School, Teacher - Marsha Turek  
Ryan D. Kerr, Danbury 10  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- Trip to compete at Intel ISEF, \$500 & trophy,
  - Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a HS student, \$200 cash
  - Science Horizons Senior High Awards --- 1st Place Senior High - \$1,000 & All Expense Paid to Compete at Intel ISEF
- 3050 LS Methicillin-Resistant Staphylococcus Aureus (MRSA) in New Milford High School  
New Milford, New Milford High School, Teacher - Ms. Reed  
Toni Viola, New Milford 11  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- trophy
  - Society for In Vitro Biology --- Certificate and membership to CT Science Center given by CSF
  - Meyerand Young Woman Scientist Awards --- \$300 cash - High School, Life Sciences
  - Science Horizons Senior High Awards --- 1st Place Senior High - \$1,000 & All Expense Paid to Compete at Intel ISEF

**Intel International Science & Engineering Fair (ISEF) Competitors**

**CSF Life Sciences**

- 3003 LS Development and Characterization of a Novel Listeria-Caspase-3 DNA Vaccine to Eradicate Metastatic Breast Cancer  
Rye, NY, Rye Country Day School Teacher - Dr. Mary Krasovec  
Swathi Krishnan, Stamford 12  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High- \$500 & trophy, Trip to compete at Intel ISEF
  - H. Joseph Gerber Medal of Excellence, an award of the Connecticut Academy of Science and Engineering in partnership with CCAT --- Life Sciences Senior - \$1,000 cash, Solid Silver Medal of Excellence, invite to CASE Annual Mtg
  - Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir
  - Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
- 3022 LS Role of MyD88 in DNA Damage Response  
Hamden, Hamden High School, Teacher - Sonia Beloin  
Yiyuan Hu, Hamden 11  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- 2nd Place- Life Sciences Senior High- \$300 & trophy, Trip to compete at Intel ISEF

**CSF Physical Sciences**

- 6069 PS Optimization of a Microbial Fuel Cell Structure to Drive a Bioelectrochemically-Assisted Wastewater Treatment Reactor  
Greenwich, Greenwich High School, Teacher - Andrew Bramante  
Ryota Ishizuka, Cos Cob 11  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & trophy, trip to compete at Intel ISEF
  - Barnes Aerospace Applied Technology Awards --- 1st Place High Sch - \$500 and Trophy, Medallion and lunch with intellectual property attorney
  - CT Clean Energy Fund Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 Cash and Trophy
  - eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award
  - United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack and Annual Report
  - H. Joseph Gerber Medal of Excellence, an award of the Connecticut Academy of Science and Engineering in partnership with CCAT --- Physical Sciences Senior - \$1,000 cash, Solid Silver Medal of Excellence, invite to CASE Annual Mtg
- 6028 PS Modeling proton reduction catalyzed by a novel nickel electrocatalyst with density functional theory  
Wallingford, Choate Rosemary Hall, Teacher - Dr. Rachel Gritzer  
Shubhro Saha, Avon 12  
Awards: Honors = 1
- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Individual - \$300 & trophy, trip to compete at Intel ISEF

**Alexion Biotechnology**

*This 1st Place project will represent Science Horizons at ISEF.*

- 3024 LS Biological Control of Ticks to Prevent Lyme Disease Using Entomopathogenic Nematodes  
Danbury, Danbury High School, Teacher - Marsha Turek  
Ryan D. Kerr, Danbury 10  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- Trip to compete at Intel ISEF, \$500 & trophy,
  - Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a HS student, \$200 cash
  - Science Horizons Senior High Awards --- 1st Place Senior High - \$1,000 & All Expense Paid to Compete at Intel ISEF
- 3013 LS Anticancer property of major goat milk fatty acids and delineating their mechanisms of action  
Glastonbury, Glastonbury High School, Teacher - Diane Pintavalle  
Amoolya V. Narayanan, Glastonbury 12  
Awards: Honors = 1
- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
  - Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High- \$400 & trophy,

# AWARDS

## Winning Projects of Regular Categories

Awd	CSF – Life Sciences					CSF – Physical Sciences				
	LT	L7	L8	LS	LST	PT	P7	P8	PS	PST
1	1018	2026	2514	3003	3507	4005	5033	5538	6069	6516
2	1016	2002	2526	3022	3513	4014	5046	5540	6028	6503
3	1005	2011	2519	3081		4017	5041	5550	6027	
4			2521	3056			5009	5554	6040	
5			2501	3016			5050	5518	6054	
M	1001			3013	3506	4020	5001	5502	6006	6505
M				3020	3508	4025	5003	5519	6013	6508
M				3024			5006	55549	6029	6509
M				3027			5028	5553	6037	6510
M				3028			5030	5560	6039	
M				3033			5034		6050	
M				3043			5042		6051	
M				3050			5049		6066	
M				3053			5055		6074	
M				3062			5059		6076	
M				3065						
M				3066						
M				3070						

## Winning Projects of Special Categories

Awd	Biotechnology									
	7th grade	8th grade	9-12th gr							
1	2026	2514	3024							
2	4005	2519	3013							
3	2023	2521	3079							
4	2011	5550	3086							
5	5046	1014	3050							
M	1005	2509	3003							
M	2001	2526	3089							
M		5518	3503							
M			3510							
M			3513							

Winning Projects of Special Categories

Award	Computer Science		Mathematics		Applied Tech		Envir Science		Engineering	
	Middle	High	Middle	High	Middle	High	Middle	High	Middle	High
1	5513	6065	5539	6027	5041	6069	5041	6040	2514	6050
2	2018	6518	2018	6014	5009	6072	2508	3001	5020	6072
3	5034	6074	2519	6074	5554	6050	1018	3066	4014	6040
M	5009	6090	5023	6065	2002	3008	1014	3025	5008	3066
M		6092	5517		5030	6014	1019	3041	5009	6001
M		6093			5559	6060	2002	3043	5016	6022
M						6064	5518	3079	5030	6029
M								6048	5034	6054
M									5041	6071
M									5514	6074
M									5538	6093
M									5554	

Award	Energy		Sustainable Resource		Future Sustainability					
	Middle	High		Middle	High					
1	5046	6072		5046	6050	I-SWEEEP				
2	2514	6069		5554	6072	I-SWEEEP				
3	5030	6071		5030	6093					
M	5023	3513		2501	6020					
M	5508	6002		4018	6029					
M	5512	6051		5512	6060					
M	5516	6066		5514	6066					
M				5516	6069					
M				5530	6071					
M					6075					

UTC		CSTA	CASE	QU		DeRocco			ISEF	
Middle	High	Middle	High	Middle	High	High			Sponsor	Project
2501	3508	2514	3003	5006	3025	Not Given			CSF	3003
4014	6027	5538	6069						CSF	3022
5538	6029								CSF	6028
	6054								CSF	6069
	6069								Alexion	3013
									SH	3024
									SH	3050



# STATS PLUS





## Projects

Project Category	JrTm	7th	8th	Sr	SrTm	Total	%
Life Sciences	22	31	42	85	11	191	43%
Physical Sciences	25	60	62	86	18	251	57%
<b>Total</b>	47	91	104	171	29	<b>442</b>	
Percent	11%	21%	24%	39%	7%		100%

Project Grade	7	8	9	10	11	12	Total
Life Sciences	42	53	13	14	38	31	191
Physical Sciences	70	77	23	22	33	26	251
<b>Total</b>	112	130	36	36	71	57	<b>442</b>
Percent	25%	29%	8%	8%	16%	13%	100%

Project Gender	7	8	9	10	11	12	Total
Male	53	58	14	20	36	24	205
Female	59	72	22	16	35	33	237
Not Given							
<b>Total</b>	112	130	36	36	71	57	<b>442</b>

## Students

Student Category	JrTm	7th	8th	Sr	SrTm	Total	%
Life Sciences	45	31	42	85	25	228	43%
Physical Sciences	50	60	62	86	40	298	57%
<b>Total</b>	95	91	104	171	65	<b>526</b>	
Percent	18%	17%	20%	33%	12%		100%

Student Grade	7	8	9	10	11	12	Total
Life Sciences	54	64	16	18	43	33	228
Physical Sciences	81	91	28	28	38	32	298
<b>Total</b>	135	155	44	46	81	65	<b>526</b>
Percent	26%	29%	8%	9%	15%	12%	100%

Student Gender	7	8	9	10	11	12	Total
Male	57	72	19	22	45	29	244
Female	78	83	25	24	36	36	282
Not Given							
<b>Total</b>	135	155	44	46	81	65	<b>526</b>

Summary

Category	Students			Student Gender			Schools		Total
	Jr	Sr	Total	Male	Fem	Total	Jr	Sr	Jr
Life Sciences	118	110	228	77	151	228	51	35	37
Physical Sciences	172	126	298	167	131	298	69	40	43
<b>Total</b>	290	236	<b>526</b>	244	282	<b>526</b>	74	50	45
Percent	55%	45%		46%	54%		Not to be totaled		

Category	Projects			Individual Projects			Team Projects		
	Jr	Sr	Total	Jr	Sr	Total	Jr	Sr	Total
Life Sciences	95	96	191	73	85	158	22	11	33
Physical Sciences	147	104	251	122	86	208	25	18	43
<b>Total</b>	242	200	<b>442</b>	195	171	<b>366</b>	47	29	<b>76</b>
Percent	55%	45%		53%	47%		62%	38%	

Awards

Regular = Reg + SpCat

Projects --> Category	Regular Awards			Special Awards			All Awards		
	Jr	Sr	Total	Jr	Sr	Total	Jr	Sr	Total
Life Sciences	20	32	52	24	28	52	30	42	72
Physical Sciences	44	37	81	37	71	108	57	44	101
<b>Total</b>	64	69	<b>133</b>	61	99	<b>160</b>	87	86	<b>173</b>
Percent	48%	52%		38%	62%		50%	50%	

Honors

Category	Hon	Projects				Students			
		Jr	Sr	Total	%	Jr	Sr	Total	%
Life Sciences	<b>1</b>	13	23	36		17	28	45	
Physical Sciences		30	21	51		35	28	63	
<b>Sub Total</b>		<b>43</b>	<b>44</b>	<b>87</b>	20%	<b>52</b>	<b>56</b>	<b>108</b>	21%
Life Sciences	<b>2</b>	49	31	80		59	34	93	
Physical Sciences		49	44	93		60	50	110	
<b>Sub Total</b>		<b>98</b>	<b>75</b>	<b>173</b>	39%	<b>119</b>	<b>84</b>	<b>203</b>	39%
Life Sciences	<b>3</b>	33	42	75		42	48	90	
Physical Sciences		68	39	107		77	48	125	
<b>Sub Total</b>		<b>101</b>	<b>81</b>	<b>182</b>	41%	<b>119</b>	<b>96</b>	<b>215</b>	41%
<b>Total</b>				<b>442</b>				<b>526</b>	

General Totals History

Year	Location	Proj	Stu	Sch	Twn
1992	Quinnipiac College, Hamden	403	465	130	81
1993	U.S. Coast Guard Academy, New London	393	461	119	78
1994	U.S. Coast Guard Academy, New London	435	511	123	72
1995	University of Connecticut, Storrs	421	513	121	70
1996	Connecticut College, New London	430	527	116	77
1997	Connecticut College, New London	410	491	119	75
1998	Quinnipiac College, Hamden	435	527	110	64
1999	Quinnipiac College, Hamden	419	525	102	65
2000	Quinnipiac College, Hamden	416	533	93	61
2001	Quinnipiac University, Hamden	430	543	118	65
2002	Quinnipiac University, Hamden	463	583	124	64
2003	Quinnipiac University, Hamden	482	613	114	68
2004	Quinnipiac University, Hamden	421	536	121	70
2005	Quinnipiac University, Hamden	407	501	103	63
2006	Quinnipiac University, Hamden	415	538	105	66
2007	Quinnipiac University, Hamden	407	498	103	65
2008	Quinnipiac University, Hamden	374	450	101	64
2009	Quinnipiac University, Hamden	409	498	114	68
2010	Quinnipiac University, Hamden	395	476	114	66
<b>2011</b>	<b>Quinnipiac University, Hamden</b>	<b>442</b>	<b>526</b>	<b>122</b>	<b>66</b>

Project History by Category

Year	LT	L7	L8	LS	LST	PT	P7	P8	PS	PST
1992	32	35	60	79	7	23	45	60	62	0
1993	37	53	58	47	4	23	45	74	49	3
1994	31	40	70	64	14	25	49	88	51	3
1995	34	46	57	60	11	37	53	68	50	5
1996	40	42	64	53	14	37	44	76	54	6
1997	35	51	49	60	11	32	41	80	49	2
1998	35	58	61	56	15	30	58	54	58	10
1999	40	46	39	63	18	39	49	63	58	4
2000	46	46	44	62	11	43	42	59	50	13
2001	36	47	56	78	7	54	38	56	45	13
2002	43	44	63	74	27	36	47	59	58	12
2003	39	54	57	59	32	42	44	78	64	13
2004	32	40	44	67	16	42	38	65	58	19
2005	21	35	48	54	24	35	51	72	56	11
2006	22	25	46	48	29	33	47	76	63	26
2007	20	38	28	66	16	38	48	65	76	12
2008	19	38	46	59	29	14	47	51	61	10
2009	24	40	35	83	18	27	53	44	69	16
2010	19	30	36	75	16	23	52	61	65	18
<b>2011</b>	<b>22</b>	<b>31</b>	<b>42</b>	<b>85</b>	<b>11</b>	<b>25</b>	<b>60</b>	<b>62</b>	<b>86</b>	<b>18</b>

# STATS PLUS

Town	School	Type, No Reg, & Path	Reserved		Registered		Entered		
			J1	S1	J2	S2	J3	S3	P3
Project Type: 2 = High or High/ Middle School, 1 = Middle School Only									
Avon	Talcott Mountain Academy	1 - -	6	0	6	-	6	-	6
Bethel	Bethel High School	2 - sh	0	6	-	6	-	6	6
Bethel	Bethel Middle School	1 - sh	2	0	1	-	1	-	1
Bethel	St. Mary School	1 - sh	6	0	6	-	6	-	6
Bozrah	Fields Memorial School	1 - -	4	0	4	-	4	-	4
Branford	Branford High School	2 - -	0	1	-	1	-	1	1
Brewster	Brewster High School	2 - sh	0	8	-	5	-	2	2
Bridgeport	Bridgeport Hope School	1 - -	6	0	6	-	6	-	6
Bridgeport	Park City Prep Charter School	1 - -	6	0	6	-	6	-	6
Bridgeport	Bassick High School	2 x bc	-	-	-	3	-	3	3
Bridgeport	Bridgeport Aquaculture School	2 x bc	-	-	-	5	-	5	5
Bridgeport	Central High School	2 x bc	-	-	-	6	-	5	5
Bridgeport	Central High School (Magnet)	2 x bc	-	-	-	2	-	2	2
Bridgeport	High Horizons Magnet School	1 x bc	-	-	2	-	2	-	2
Bridgeport	John Winthrop School	1 x bc	-	-	2	-	2	-	2
Bridgeport	Longfellow School	1 x bc	-	-	1	-	1	-	1
Bridgeport	Multicultural Magnet School	1 x bc	-	-	2	-	2	-	2
Bridgeport	Park City Magnet School	1 x bc	-	-	1	-	1	-	1
Bridgeport	Read School	1 x bc	-	-	2	-	2	-	2
Bridgeport	Warren Harding High School	2 x bc	-	-	-	4	-	2	2
Cheshire	St. Bridget School	1 - -	2	0	2	-	2	-	2
Danbury	Danbury High School	2 - sh	0	8	-	4	-	3	3
Danbury	Immaculate High School	2 - -	0	3	-	2	-	2	2
Danbury	St. Gregory the Great School	1 - sh	6	0	6	-	6	-	6
Danbury	St. Joseph School	1 - sh	6	0	6	-	6	-	6
Danbury	St. Peter-Sacred Heart Upper Sch	1 - sh	2	0	2	-	2	-	2
Danbury	Broadview Middle School	1 x sh	3	0	3	-	3	-	3
Darien	Darien High School	2 - -	0	1	-	1	-	1	1
East Granby	East Granby Middle School	1 - -	6	0	6	-	5	-	5
East Hartford	East Hartford High School	2 - -	0	5	-	5	-	5	5
East Haven	East Haven Academy	1 - -	6	0	6	-	6	-	6
Ellington	Ellington High School	2 - -	0	2	-	2	-	1	1
Fairfield	Fairfield College Preparatory School	2 - -	0	1	-	1	-	1	1
Fairfield	Fairfield Ludlowe High School	2 - -	0	2	-	2	-	2	2
Fairfield	Fairfield Warde High School	2 - -	0	1	-	1	-	1	1
Fairfield	Fairfield Woods Middle School	1 - -	2	0	2	-	2	-	2
Fairfield	Our Lady of Assumption/Holy Family School	1 - -	4	0	4	-	4	-	4
Fairfield	St. Thomas Aquinas School	1 - -	4	0	4	-	4	-	4
Fairfield	Tomlinson Middle School	1 - -	1	0	1	-	1	-	1
Falls Village	Lee H. Kellog School	1 - -	6	0	4	-	3	-	3
Fishers Island	Fishers Island School	2 - -	0	7	-	6	-	6	6
Glastonbury	Glastonbury High School	2 - -	-	8	-	8	-	8	8
Glastonbury	Smith Middle School	1 x -	6	-	4	-	4	-	4
Greens Farms	Greens Farms Academy	2 - -	6	6	5	6	5	4	9
Greenwich	Greenwich High School	2 - -	0	14	-	14	-	14	14
Greenwich/Rvrsde	Eastern Middle School	1 x In	1	0	1	-	1	-	1
Guilford	E.C. Adams Middle School	1 - -	4	0	4	-	4	-	4
Guilford	Guilford High School	2 - -	0	8	-	8	-	7	7
Hamden	Hamden High School	2 - -	0	4	-	3	-	3	3
Hamden	Hamden Middle School	1 - -	4	0	2	-	1	-	1
Hamden	Sacred Heart Academy	2 - -	0	8	-	7	-	7	7
Hartford	Classical Magnet School	2 - -	2	2	2	2	2	2	4
Hartford	Greater Hartford Academy of Math & Sci	2 - -	0	8	-	2	-	2	2
Hartford	Hartford Magnet Middle School	1 - -	4	0	4	-	4	-	4
Hartford	SS. Cyril and Methodius School	1 - -	4	0	3	-	2	-	2
Hebron	Oei Home School	1 - -	1	0	1	-	1	-	1
Hebron	RHAM High School	2 - -	0	3	-	3	-	3	3
Kensington	St. Paul School	1 - -	4	0	4	-	4	-	4
Madison	Daniel Hand High School	2 - -	0	1	-	1	-	1	1
Madison	Our Lady of Mercy School	1 - -	4	0	4	-	4	-	4
Madison	Walter C. Polson Middle School	1 - -	1	0	1	-	1	-	1

## School Tracking

Town	School	Type, No Reg, & Path	Reserved		Registered		Entered		
			J1	S1	J2	S2	J3	S3	P3
Project Type: 2 = High or High/ Middle School, 1 = Middle School Only									
Manchester	East Catholic High School	2 - -	0	2	-	2	-	2	2
Manchester	St. Bridget School	1 - -	2	0	2	-	2	-	2
Middlebury	Memorial Middle School	1 - -	6	0	3	-	2	-	2
Middlefield	The Independent Day School	1 - -	6	0	6	-	5	-	5
Milford	St. Gabriel School	1 - -	4	0	4	-	4	-	4
Monroe	Jockey Hollow School	1 - -	4	0	2	-	1	-	1
New Britain	Sacred Heart School	1 - -	3	0	3	-	3	-	3
New Haven	Betsy Ross Arts Magnet School	1 - -	4	0	4	-	4	-	4
New Haven	Engineering and Science University Magnet	1 - -	2	0	2	-	1	-	1
New Haven	High School in the Community	2 - -	0	6	-	1	-	1	1
New Haven	Wilbur Cross High School	2 - -	0	6	-	6	-	5	5
New Haven	Worthington Hooker School	1 - -	4	0	4	-	3	-	3
New Haven	Hopkins School	2 x In	0	1	-	1	-	1	1
New London	Bennie Dover Jackson Middle School	1 - -	4	0	1	-	1	-	1
New Milford	New Milford High School	2 - sh	0	10	-	10	-	10	10
Newington	St. Mary School	1 - -	4	0	4	-	4	-	4
Newtown	Newtown Middle School	1 - sh	2	0	2	-	1	-	1
Newtown	St. Rose of Lima School	1 - sh	6	0	5	-	5	-	5
Norwalk	Norwalk High School	2 - np	-	-	-	5	-	5	5
Norwalk	Ponus Ridge Middle School	1 - np	-	-	1	-	1	-	1
Norwalk	The Montessori Middle School	1 - -	6	0	4	-	3	-	3
Norwalk	West Rocks Middle School	1 - np	2	0	1	-	1	-	1
Norwich	The Norwich Free Academy	2 - -	0	5	-	3	-	2	2
Orange	Southern CT Hebrew Academy	1 - -	6	0	5	-	5	-	5
Oxford	Oxford High School	2 - -	0	13	-	12	-	9	9
Pawcatuck	St. Michael School	1 - -	4	0	4	-	4	-	4
Plantsville	John F. Kennedy Middle School	1 - -	4	0	4	-	4	-	4
Putnam	Putnam Science Academy	2 - -	0	12	-	6	-	6	6
Redding	Joel Barlow High School	2 - -	0	5	-	3	-	3	3
Ridgefield	East Ridge Middle School	1 - sh	6	0	6	-	6	-	6
Ridgefield	Ridgefield High School	2 - sh	0	2	-	1	-	1	1
Rye	Rye Country Day School	2 - -	0	1	-	1	-	1	1
Sandy Hook	Newtown High School	2 - -	0	5	-	5	-	5	5
Shelton	Shelton High School	2 - -	0	8	-	8	-	8	8
Southington	Joseph A. DePaolo Middle School	1 - -	4	0	3	-	3	-	3
Southington	Southington High School	2 - -	0	1	-	1	-	1	1
Southington	St. Thomas School	1 - -	4	0	4	-	4	-	4
Stafford Springs	St. Edward School	1 - -	4	0	4	-	4	-	4
Stamford	Academy of Information Technology & Eng	2 - -	0	3	-	3	-	3	3
Stamford	Bi-Cultural Day School	1 - -	3	0	3	-	2	-	2
Stamford	Trailblazers Academy	1 - -	6	0	5	-	5	-	5
Storrs	E.O. Smith High School	2 - -	0	3	-	2	-	2	2
Stratford	Harry B. Flood Middle School	1 - -	6	0	6	-	5	-	5
Stratford	St. Mark Reg School	1 - -	6	0	6	-	5	-	5
Trumbull	St. Catherine of Siena School	1 - -	4	0	4	-	4	-	4
Wallingford	Choate Rosemary Hall	2 - -	0	4	-	3	-	3	3
Watertown	The Taft School	2 - -	0	2	-	2	-	2	2
West Hartford	Kingswood-Oxford School	2 - -	0	3	-	1	-	1	1
West Hartford	Solomon Schechter Day School	1 - -	6	0	6	-	5	-	5
West Hartford	St. Brigid School	1 - -	4	0	3	-	3	-	3
West Hartford	St. Timothy Middle School	1 - -	4	0	3	-	3	-	3
Westbrook	Westbrook Middle School	1 - -	4	0	4	-	4	-	4
Weston	Weston High School	2 - -	0	2	-	2	-	2	2
Westport	Bedford Middle School	1 - -	6	0	1	-	1	-	1
Westport	Coleytown Middle School	1 - -	4	0	3	-	3	-	3
Westport	Staples High School	2 - -	0	12	-	12	-	11	11
Wilton	Middlebrook School	1 - -	4	0	4	-	4	-	4
Windsor	Madina Academy	1 - -	6	0	5	-	5	-	5
Windsor	St. Gabriel School	1 - -	4	0	4	-	4	-	4
Woodbridge	Amity Regional High School	2 - -	0	14	-	17	-	17	17
Woodstock	Woodstock Middle School	1 - -	6	0	2	-	2	-	2

## STATS PLUS

Yrs	Student	Hometown	Grade	School	SchTown	Honors
<b>6 Years - 2 Students</b>						
6	Oei Theresa A.	Hebron	12	East Catholic High School	Manchester	1
6	Petroff Matthew A.	Cheshire	12	The Taft School	Watertown	2
<b>5 Years - 1 Student</b>						
5	Dakers Ian D.	Bozrah	11	Norwich Free Academy	Norwich	1
<b>4 Years - 6 Students</b>						
4	Feng Emily	Bethany	12	Amity Regional High School	Woodbridge	3
4	Haddad Narmien	Danbury	11	Immaculate High School	Danbury	2
4	Krishnan Swathi	Stamford	12	Rye Country Day School	Rye, NY	1
4	Liu Jenny J.	Orange	12	Amity Regional High School	Woodbridge	1
4	Narayanan Amoolya V.	Glastonbury	12	Glastonbury High School	Glastonbury	1
4	Ryan Kyle T.	Trumbull	10	Fairfield College Preparatory School	Fairfield	2
<b>3 Years - 10 Students</b>						
3	Carle Remington J.	Norwich	10	Norwich Free Academy	Norwich	2
3	Cirrito Miranda R.	Bozrah	9	Norwich Free Academy	Norwich	2
3	Dixon Williams S.	Woodbridge	12	Amity Regional High School	Woodbridge	3
3	Gade Neil V.	Fairfield	11	Fairfield Warde High School	Fairfield	2
3	Kerr Ryan D.	Danbury	10	Danbury High School	Danbury	1
3	Kim Joan	Bethany	12	Amity Regional High School	Woodbridge	1
3	Miller Liz	Ellington	12	Kingswood Oxford School	West Hartford	3
3	Mohan Priya R.	Shelton	12	Shelton High School	Shelton	3
3	Oei Bridget M.	Hebron	9	East Catholic High School	Manchester	2
3	Yilmaz Yusuf	Putnam	12	Putnam Science Academy	Putnam	1
2	Acevedo James S.	Bridgeport	8	Park City Prep Charter School	Bridgeport	3
<b>2 Years - 84 Students</b>						
2	Ahmed Aasiya M.	Tolland	8	Madina Academy	Windsor	1
2	Akarsu Mehmet S.	Putnam	11	Putnam Science Academy	Putnam	2
2	Akarsu Nahit	Putnam	11	Putnam Science Academy	Putnam	2
2	Baczewski Alex M.	New Britain	8	St. Mary School	Newington	3
2	Baczyk Peter P.	Avon	8	Talcott Mountain Academy	Avon	2
2	Bailey Alyssa	Bethel	12	Bethel High School	Bethel	2
2	Bajguz Dominika A.	Naugatuck	12	Sacred Heart Academy	Hamden	1
2	Bligen Adonis T.	Bridgeport	8	Park City Prep Charter School	Bridgeport	3
2	Boey Adam P.	Madison	9	Daniel Hand High School	Madison	2
2	Bonavita Jr Joseph A.	Oxford	12	Oxford High School	Oxford	2
2	Bothra Sarthak	Fairfield	8	Tomlinson Middle School	Fairfield	3
2	Buck Hannes	Old Greenwich	12	Greenwich High School	Greenwich	3
2	Caglioni Caroline	Redding	12	Joel Barlow High School	Redding	3
2	Cam Abdurrahman	Putnam	12	Putnam Science Academy	Putnam	1
2	Castro Alexander	Meriden	8	Betsy Ross Arts Magnet School	New Haven	3
2	Cheu Catherine	Shelton	11	Shelton High School	Shelton	2
2	Chintalpelly Saikrishna R.	East Granby	8	East Granby Middle School	East Granby	2
2	Chowdhary Kaitavjeet	Glastonbury	10	Glastonbury High School	Glastonbury	1
2	Cruz Sarah J.	Westbrook	8	Westbrook Middle School	Westbrook	2
2	DeNardis Adriana M.	Danbury	10	Immaculate High School	Danbury	2
2	Digby Marissa A.	Bozrah	8	Fields Memorial School	Bozrah	2
2	Ebrahimi Nadrina M.	New Britain	8	Sacred Heart School	New Britain	3
2	Edelson Brandon L.	Westport	12	Staples High School	Westport	3
2	Eldracher Danielle	Woodbridge	12	Amity Regional High School	Woodbridge	1
2	Engbith Lily	New Haven	10	Wilbur Cross High School	New Haven	2
2	Fearon Bridget	Wilton	8	Middlebrook School	Wilton	2
2	Geer Sydney T.	East Granby	8	East Granby Middle School	East Granby	2
2	Goldburg Samantha R.	Easton	11	Joel Barlow High School	Redding	3

## Returning Students

Yrs	Student	Hometown	Grade	School	SchTown	Honors	
2	Goli	Chandu	Stamford	9	Academy of Info Tech & Engineering	Stamford	3
2	Golos	Mack R.	Southington	8	DePaolo Middle School	Southington	1
2	Green	Titania A.	Bridgeport	12	Bridgeport Aquaculture School	Bridgeport	2
2	Greenberg	Joshua M.	Westport	12	Staples High School	Westport	1
2	Guiry	Lauren G.	Danbury	8	St. Joseph School	Danbury	2
2	Gulati	Gazal	Fairfield	8	Fairfield Woods Middle School	Fairfield	2
2	Gulati	Sagar	Fairfield	8	Fairfield Woods Middle School	Fairfield	2
2	Hallisey	Will B.	Greenwich	11	Greenwich High School	Greenwich	1
2	Hanania	Melissa M.	Milford	8	St. Gabriel School	Milford	3
2	Hawkins	Bonnie E.	Hamden	12	Hamden High School	Hamden	1
2	Hovstadius	Malin S.	Westport	8	Coleytown Middle School	Westport	1
2	Hu	Yiyuan	Hamden	11	Hamden High School	Hamden	1
2	Hudak	Taylor N.	Guilford	9	Guilford High School	Guilford	3
2	Jaros	Simone T.	New Britain	8	Sacred Heart School	New Britain	2
2	Joseph II	J. S.	New Haven	8	Engineering & Science University Magnet	New Haven	3
2	Kalra	Anurag	Fairfield	9	Fairfield Ludlowe High School	Fairfield	2
2	Kaushik	Esha N.	Weston	11	Weston High School	Weston	3
2	Kaushik	Sagar N.	Weston	12	Weston High School	Weston	1
2	Kelly	Amanda P.	Shelton	12	Sacred Heart Academy	Hamden	1
2	Kelly	Olivia N.	Shelton	9	Sacred Heart Academy	Hamden	2
2	Kerr	Janine A.	Danbury	8	St. Joseph School	Danbury	1
2	Killiam	Charlotte C.	Guilford	9	Guilford High School	Guilford	2
2	Luft	Kaitlyn M.	Westbrook	8	Westbrook Middle School	Westbrook	3
2	Lynders	Liam	Guilford	8	Our Lady of Mercy School	Madison	1
2	Marchena	David P.	New Hartford	8	Talcott Mountain Academy	Avon	2
2	Moise	Jake T.	Southington	8	Depaolo Middle School	Southington	1
2	Montalto	Catherine E.	Westerly	8	St. Michael School	Pawcatuck	3
2	Morehouse	Adam A.	Newtown	12	Newtown High School	Sandy Hook	2
2	Muckle	Andrew R.	Madison	8	Our Lady of Mercy School	Madison	1
2	Nicholson	Krista	Danbury	9	Danbury High School	Danbury	2
2	O'Brien	Kevin	Guilford	8	Our Lady of Mercy School	Madison	1
2	O'Sullivan	James P.	Old Greenwich	11	Greenwich High School	Greenwich	1
2	Oleasz	Sean	West Simsbury	8	St. Timothy Middle School	West Hartford	1
2	Paciorek	Mike J.	Gales Ferry	12	Fishers Island School	Fishers Island	3
2	Plochocki	Anthony T.	Berlin	8	St. Paul School	Kensington	3
2	Potti	Akilesh V.	Glastonbury	12	Glastonbury High School	Glastonbury	1
2	Quintero	Michael A.	Bridgeport	10	Central High School	Bridgeport	3
2	Rathore	Ayush	Stamford	9	Academy of Info Tech & Engineering	Stamford	3
2	Robertson	Emily M.	Stratford	8	St. Mark School	Stratford	1
2	Rocco	Audra C.	Kensington	8	St. Paul School	Kensington	2
2	Roychoudhury	Shayan	Madison	8	Walter C Polson Middle School	Madison	2
2	Rutledge	John W.	Windsor	8	St. Gabriel School	Windsor	3
2	Rutledge	Megan K.	Windsor	8	St. Gabriel School	Windsor	3
2	Ryan	Haley M.	Newtown	8	St. Rose of Lima School	Newtown	1
2	Sherwood	Blake M.	Bridgeport	8	Park City Prep Charter School	Bridgeport	3
2	Skaller	Madeleine L.	Brewster	12	Brewster High School	Brewster	2
2	Smith	Eric	Norwalk	8	The Montessori Middle School	Norwalk	1
2	Sobilo	Deana E.	East Berlin	9	Southington High School	Southington	3
2	Stafford	Lily J.	New London	12	Fishers Island School	Fishers Island	3
2	Suzuki	Andrew B.	New Haven	10	Wilbur Cross High School	New Haven	3
2	Teerlinck	Benjamin S.	Monson	8	St. Edward School	Stafford Springs	3
2	Tuzuner	Alperen F.	Putnam	11	Putnam Science Academy	Putnam	3
2	Wang	Zelun	Orange	11	Amity Regional High School	Woodbridge	1
2	Werner	Skyler A.	Oxford	11	Oxford High School	Oxford	2
2	Yu	Zizi	Woodbridge	11	Amity Regional High School	Woodbridge	2

**Total Returns - 103 Students**



**I-SWEEP Abstracts**

NAME: Theresa A. Oei  
SCHOOL: East Catholic High School, Manchester, CT  
TEACHER/MENTOR: Ms. Holly Noble

TITLE: Development of a Composite Clay Polymer Sponge for Remediation of Oil Contaminated Water.

The recent Exxon Valdez and Gulf oil spill posed a major environmental impact to the fragile marine and coastal ecosystems. This project explores the idea of creating an oleophilic (oil absorbent), lightweight sponge using a composite of clay with an active polymer binder. The sponge would be molded and flattened into large sheets and the sheets would roll out and float on the top of the oil spill. The main ingredient for the clay polymer sponge is Fuller's earth clay which was used centuries ago to soak up oil from sheep in the wool making industry. Because of the fine granularity of Fuller's Earth, it is very brittle. Therefore, a PVC polymer binder (Liquid Sculpey) was added to the mixture. The mixture will be molded into shape and the product will be baked to drive off the water and the resulting material will be a porous, low-density composite clay polymer sponge. High resolution Scanning Electron Microscope shows that the porous clay polymer is quite similar to that of a synthetic sponge. The porous nature of the material is important in increasing the surface area of the clay polymer sponge sheet and thereby the contact area with the oil. The clay polymer sponge sheet did an exceptional job in absorbing oil. The rate of oil absorption was between 4.3 ml per minute for 5W30 grade of oil and 5.0 ml per minute for 10W40 grade of oil. It absorbed 9.3 times its weight in oil before reaching a saturation level. The ingredients of the clay polymer sponge are non toxic. The PVC polymer used as the binding agent, translucent Liquid Sculpey, is non-toxic and conforms to ASTM D4236. Fuller's Earth is a safe, non-toxic, naturally occurring clay that is often used to deodorize domestic dogs and cats.

NAME: Bridget M. Oei  
SCHOOL: East Catholic High School, Manchester, CT  
TEACHER/MENTOR: Holly Noble

TITLE: Applying the Principles of the Tesla Engine to Design and Construct a Prototype of a Bladeless Wind Turbine

Traditional wind turbines are extremely inefficient and cause environmental problems because they kill birds and often generate noise that disturbs nearby residents. In 1913, Nikola Tesla invented the Tesla engine that achieved an astonishing 60% efficiency. With modern day improvements in materials and technology higher efficiencies can be obtained. This project explores the idea of using a Tesla engine to harness wind energy and solve the key environmental problems. A prototype of the bladeless wind turbine was built. A cowling made from an umbrella will direct the wind through screened nozzles that will direct it to the edge of a series of disks. The disks are comprised of thin, plastic CD-ROM disks. The wind will drag on the disks following the principle of viscosity and the adhesion of the surface layer of the gas. This will add force to the disks. In between the disks, magnets are employed to hold the disks together and to also provide a magnetic field that passes through copper coils and generates electricity. The bladeless wind turbine spun at speeds of 1221 rpm at wind speeds of 25 mph. This produced approximately 32 Volts DC and 2 amps DC. The power generated was 64 Watts. The 32 Volts DC EMF that was produced is below the theoretical value of 131 Volts DC that was calculated using Faraday's Law. Therefore the efficiency of the prototype is only 25%. This is much higher than the 15% efficiency of modern wind turbines. Using more efficient materials (stronger magnets, less friction between disks and shaft, additional layers of magnetic wire coils, etc.) will widen this gap. Based on the prototype of the Tesla Bladeless Wind Turbine that was built and the tests that were run, it is clear that the device produces environmentally friendly, clean, reliable, scalable, low-cost renewable energy.

**GENIUS Olympiad Abstracts**

NAME: Allison C. Kruk  
SCHOOL: Greens Farms Academy, Greens Farms, CT  
TEACHER/MENTOR: Sara Campolettano

TITLE: The Investigation of the Biological Health of the New Creek Salt Marsh through Water Quality Testing and Species Identification of Benthic Invertebrates

Benthic invertebrates, vital components of the communities of which they belong, are important indicators of environmental disturbance in a region. In the marsh studied, three soil samples were obtained at each sampling site and invertebrates in the samples were later identified by genus and, if possible, species. The organisms found are known to be relatively pollutant-tolerant, indicating a potentially disturbed system. Additionally, due to the intrinsic link between benthic communities and water quality, water quality data was obtained at two sampling sites and assessed for dissolved oxygen, nitrate, phosphate, biological oxygen demand, pH, and coliform bacteria levels. The findings indicated relatively normal concentrations at each site, although more quantitative data is needed to better examine the water quality and its biological impact. As a whole, this project will allow for a better understanding of the environmental conditions both in this ecosystem and, on a global scale, in other ecological communities.

NAME: Ian D. Dakers  
SCHOOL: Norwich Free Academy, Norwich, CT  
TEACHER/MENTOR: Mr. Robert V. Johnson

TITLE: Impact of Turbine Design on Renewable Energy Storage System Efficiency

The present concerns of using fossil fuels and the resulting CO<sub>2</sub> is making nations investigate renewable ways to produce and store energy. This project investigates the impact of turbine design on the efficiency of two renewable energy storage systems, pumped water and compressed air storage. Two methods of renewable storage that were tested were compressed air storage where energy is used to compress air in storage tank and is released when it is needed, to spin a turbine to produce energy. The pumped water storage system raises water to a high elevation reservoir and when energy is needed the water is released to turn a turbine to create energy. In this experiment a turbine design, different than last year, was used in both the pumped water and compressed air storage systems. The pumped water turbine was changed from an open waterwheel design to a closed design. The closed design has the advantage of collecting all the energy from the water because none is lost through splashing. With this change the system output energy became 292.63 times greater. The compressed air system was changed by making the diameter smaller and the blades thicker to catch maximum air flow. These changes made the new design 58.88 times more efficient than the old design. This project determined that when the turbine design is changed, both storage systems were able to store energy more efficiently. Continued refinement of turbine designs could lead to capturing a higher percentage of energy contained in the storage system.

**GENIUS Olympiad Abstracts**

NAME: Olivia N. Kelly  
SCHOOL: Sacred Heart Academy, Hamden, CT  
TEACHER/MENTOR: Mrs. Frances Saukas

TITLE: A Comparative Study of Herbs Grown Using an Aquaponic vs. a Hydroponic Growing System

Aquaponic (integrated system of aquaculture and hydroponics) growing systems are of great significance because fish and plants support each other's growth with little effect on the environment. The purpose of this experiment was to discover if plants can be grown using goldfish waste as nourishment using an in-home, "float style" aquaponic growing system, and to test the hypothesis that basil and thyme will grow more quickly in this aquaponic system vs. an in-home, Aerogarden hydroponic system. Independent variables were the two systems and dependent variables were growth rates of basil and thyme. The procedure involved the set-up and establishment of an aquarium with 2 goldfish. Immediately after sprouting, 3 pods each of basil and thyme were placed in the Aerogarden and aquaponic systems. Plant height was measured after one, two, and three weeks and leaves counted after one and three. The hypothesis was not supported because both herbs grew much more poorly in the aquaponic vs. the hydroponic system. After 3 weeks, the hydroponic system allowed basil to grow over 4 times as fast as in the aquaponic system and thyme grew 1.8 times as fast. Moreover, using the hydroponic herb growth rate as controls, after 3 weeks basil should have reached twice the height of thyme in the aquaponic system, but instead only reached only 90% of the thyme height. This experiment should be repeated with several improvements such including running the filter part-time and using an "ebb and flow" aquaponic method, where the plant/waste exposure is lengthened.

NAME: Kyle T. Ryan  
SCHOOL: Fairfield College Preparatory School, Fairfield, CT  
TEACHER/MENTOR: Mrs. O'Reilly

TITLE: Autonomous Kite Wind Generator to Capture Troposphere Winds

The quest for creating a revolutionary power generator with the potential to compete with fossil fuels starts with the wind. Modern wind turbines are extremely efficient, but have insurmountable limitations. The future of wind energy lies in the troposphere which modern turbines cannot reach. The most efficient part of a wind turbine is the tip of the blade which, in some cases, produces 75% of the power. Moreover, if the tower, hub, and inner blade are removed, the tip of the blade may resemble a kite. Draw a tether to the ground, and the tip of the blade becomes a kite. Mount smaller turbines onto the kite, and power is generated. It will not only face the wind, but fly autonomously in a circular path. In this project, a kite power apparatus, as described, was built and tested. To ensure an orbital flight path, a robotic system was created to maneuver it in a circular motion. Two different power generators were explored: a traditional turbine and an experimental generator called a windbelt. This cost-effective generator is a nylon ribbon utilizing aeroelastic flutter. The wind induces ribbon vibration and produces electricity. The windbelt and turbine were attached to an aerodynamic sport kite under the control of the robotic system. Flying autonomously at ninety feet, the kite flew in a circular path mimicking the blade tip. In the experiment, an identical ground based setup was compared to the kite's output. Experimentation supported the mathematical model in that a 55 inch wingspan kite power generator in 10 miles per hour can produce greater than 100 watts of electricity at a fraction of the expense of modern wind turbines.

**ISEF Abstracts - Science Horizons**

NAME: Ryan D. Kerr  
SCHOOL: Danbury High School, Danbury, CT  
TEACHER/MENTOR: Marsha Turek

TITLE: Biological Control of Ticks to Prevent Lyme Disease Using Entomopathogenic Nematodes

Lyme disease is a serious health concern in the U.S. with more than 30,000 reported cases each year. It is caused by the bite of a blacklegged tick infected by the *B. burgdorferi* bacteria. I measured the prevalence of *B. burgdorferi* infection to be as high as 93% using direct immunofluorescence microscopy. Presently, the only method to control tick populations is through environmentally harmful insecticides. These insecticides kill not only ticks, but other non-target species including mammals. In order to determine the feasibility of biological control using entomopathogenic nematodes, I tested the effectiveness of two different species on their ability to kill ticks over a 7-day period. Neither species were effective in killing normal adult ticks. However, both were effective in killing engorged adult females with an LD50 of 63/cm<sup>2</sup>. The nematodes were approximately half as effective against ticks compared to a positive control of mealworms (LD50 25/cm<sup>2</sup>). Since only engorged female ticks can lay eggs, entomopathogenic nematodes can potentially be used on a large scale to decrease tick populations and prevent Lyme disease in an environmentally-sound manner.

NAME: Toni Viola  
SCHOOL: New Milford High School, New Milford, CT  
TEACHER/MENTOR: Ms. Reed

TITLE: Methicillin-Resistant *Staphylococcus Aureus* (MRSA) in New Milford High School

In 2007 Governor Jodi Rell advised Connecticut to offer schools assistance in preventing the spread of the potentially dangerous bacteria, Methicillin-Resistant *Staphylococcus Aureus* (MRSA). There has been increased attention on MRSA due to the resulting risk of serious infection. The purpose of this experiment was to investigate the occurrence of *Staphylococcus Aureus*, specifically MRSA, in New Milford High School. Thirty samples were taken from commonly touched objects in the school and from the shared gym equipment including handballs, goggles, field hockey sticks, and mats. The samples were then incubated at New Milford Hospital on agar blood plates to investigate growth. As needed, the following tests were completed to properly identify the growth on the agar: a gram stain confirmed gram positive bacteria, a catalase test confirmed *Staphylococcus*, a coagulase test confirmed *Staphylococcus Aureus*, and an Oxacillin Sensitivity Test confirmed MRSA. The results concluded: out of thirty samples, six were found to be *Staphylococcus Aureus*, two of which tested positive for MRSA. Further investigation would be necessary, however this experimentation proves that MRSA does exist in New Milford High School, therefore the importance of sanitation can be emphasized.

**ISEF Abstracts - CSF Life Sciences**

NAME: Swathi Krishnan,  
SCHOOL: Rye Country Day School, Rye, NY  
TEACHER/MENTOR: Dr. Mary Krasovec

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

One of the main problems in cancer vaccination is the strong suppression of vaccine-induced immune responses in tumor environments, especially in patients 65 years and older, due to T cell unresponsiveness. The goal of this study was to develop and test a potentially effective breast cancer vaccine to eradicate metastasis without inducing T cell responses. The developed vaccine is a combination of Caspase-3, an apoptotic enzyme, and the bacterium *Listeria monocytogenes* – an intracellular pathogen that can deliver vaccine antigens. *Listeria-Caspase-3* kills tumor cells through different pathways: (1) tumor cell kill by Caspase-3 induced apoptosis, (2) tumor cell kill through *Listeria*-induced Reactive-Oxygen-Species, and (3) tumor cell kill by natural-killer cells.

Using a two-step procedure, wild-type Caspase-3 was cloned into the *Listeria* bacterium, and then tested for its infectivity, kill capabilities, and ability to induce apoptosis in MCF-7, a human breast cancer tumor cell-line. The kill experiments demonstrated that *Listeria-Caspase-3* kills MCF-7 cells at a similar rate as *Listeria* alone, 97.2% and 97.9% respectively, however, the infection experiments give evidence that *Listeria-Caspase-3* infected 133% more MCF-7 cells than *Listeria* alone. The apoptosis assay, however, was inconclusive. Although initial testing shows promising results, further testing is needed to understand the capabilities of *Listeria-Caspase-3*.

NAME: Yiyuan Hu  
SCHOOL: Hamden High School, Hamden, CT  
TEACHER/MENTOR: Sonia Beloin

TITLE: Role of MyD88 in DNA Damage Response

The myeloid differentiation primary response factor (88) (MyD88) is a critical adaptor protein in the signaling of the innate immune system through Toll-like receptors (TLRs). Evidence from our laboratory indicated that expression of DNA damage repair genes was induced by TLR stimulation. To evaluate MyD88's role in the DNA damage response, murine embryonic fibroblasts (MEFs) derived from MyD88 wild-type and MyD88-deficient (knockout) mouse embryos were studied. MyD88 knockout MEFs had less growth when compared to that of wild-type MEFs. Knockout cells were more sensitive to ionizing and ultraviolet radiation than wild-type cells as defined by cell survival seven days following irradiation. Knockout cells also exhibited delayed reentry into mitosis following irradiation. These results suggest an unexpected and novel role for MyD88 in the cellular response and repair of DNA damage. Current experiments include analyses of cell cycle checkpoints and elucidating interactions between the innate immune and DNA damage responses through flow cytometry, immunoprecipitation, and Western blot analyses.

## ISEF Abstracts - CSF Physical Sciences

NAME: Ryota Ishizuka  
SCHOOL: Greenwich High School, Greenwich, CT  
TEACHER/MENTOR: Andrew Bramante

TITLE: Optimization of a Microbial Fuel Cell to Drive a Bioelectrochemically Assisted Wastewater Treatment Reactor

Bioelectrochemically Assisted Microbial Reactor (BEAMRs) promise to employ organic materials in wastewater to produce hydrogen at high conversion efficiencies. In past literature, the non-spontaneous BEAMR reaction has been supplemented by external artificial power sources. Microbial Fuel Cells (MFCs) may, instead, drive such BEAMRs by manipulating bacteria in the same wastewater to convert biodegradable pollutants into electricity, thereby eliminating outside inputs. This investigation first determined optimal conditions for an MFC to enable practical applications. Samples of wastewater were taken from three stages at a local wastewater treatment plant: influent, biological reactor, and thickener underflow. The effectiveness of wastewater treatment was established through the colorimetric determination of Chemical Oxygen Demand (COD). Pyrex cells served as the base for single-chamber air cathode MFCs, while the electricity generated was measured with a data acquisition system. The MFC output and cost efficiency was thus maximized by varying electrode materials, catalyst loadings, PTFE diffusion layers, inoculant pre-treatment, carbon support materials, and bacterial source (wastewater, *C. saccharolyticus*). SEM and EDS determined the composition and bacteria present on such electrodes. A maximum voltage of 0.65V was ultimately generated, amounting to a 67% increase in production over cells constructed according to previous literature. COD removal efficiency increased as a function of voltage and indicated that  $94.9 \pm 3\%$  of organic material in the wastewater was removed. The successfully optimized MFC effectively powered a BEAMR in a fully autonomous system requiring only wastewater as fuel, producing 25% hydrogen gas, as measured through thermal conductivity-based GC.

NAME: Shubhro Saha  
SCHOOL: Choate Rosemary Hall, Wallingford, CT  
TEACHER/MENTOR: Dr. Rachel Gritzer

TITLE: Modeling Hydrogen Production Catalyzed by a Novel Electrocatalyst with Density Functional Theory

Though hydrogen has been widely accepted as a feasible energy carrier for the future, its production via platinum-based water electrolysis remains costly and inefficient. While most research for platinum alternatives has focused on hydrogenase mimics, this report investigates the proton reduction mechanism of a nickel electrocatalyst, abbreviated LNiX. I computed and analyzed the results of ab-initio calculations at the DFT/B3LYP level of theory to characterize the identity of this novel catalyst. In addition, I developed an understanding of intermolecular interactions, and proposed a plausible reaction mechanism and kinetic profile after considering alternative reaction pathways. Thorough analysis of several configurations for LNiX revealed the water-ligated ( $\text{LNiH}_2\text{O}^{+2}$ ) and bromine-ligated ( $\text{LNiBr}^{+1}$ ) complexes to be the most stable species. Comparison of reduction potentials developed strong agreement between theory and experiment, and from this the water-ligated complex was determined to be the active catalytic species. A reaction mechanism was proposed, and though the overall reaction is spontaneous, a small kinetic barrier was found to exist before the first protonation step. The findings advance not only the potential for this new class of catalysts as a more affordable alternative to hydrogen production, but the time and cost-efficient computational methodologies implemented can be extended to study similar organometallic complexes

**ISEF Abstracts - Alexion Biotechnology**

NAME: Amoolya V. Narayanan

SCHOOL: Glastonbury High School, Glastonbury, CT

TEACHER/MENTOR: Diane Pintavalle

TITLE: Anticancer Property of Major Goat Milk Fatty Acids and Delineating their Mechanisms of Action

Colorectal cancer, breast cancer and skin cancer are commonly reported cancer types in the US. Although radiations and chemotherapeutic drugs are routinely used to treat cancer, they produce harmful side effects in patients. Additionally, resistance to chemotherapeutic drugs has been noticed in cancers. Thus, there is a need for effective and safe molecules for preventing and treating cancers. Natural products from a variety of sources have served as a basis for the development of novel drugs, thereby contributing to human health. The medicinal value of goat milk has been recognized for centuries, and is attributed to three fatty acids, namely capric, caprylic and caproic acids. This research investigated the anticancer property of these fatty acids on human colorectal, skin, mammary gland cancer cells. The cancer cells were treated with various concentrations of fatty acids for 48 hours and cell viability monitored by MTT assay. Additionally, the potential mechanisms behind the anticancer property of three fatty acids was investigated by subjecting mRNA from cancer cells to real-time quantitative PCR (RT-qPCR) for determining the expression of cell cycle and apoptosis (cell death) genes. Capric, caprylic and caproic acids reduced cell viability of three cancer types by 70 to 90% ( $P < 0.05$ ) compared to controls. RT-qPCR data indicated that these natural molecules produced anticancer effect by down-regulating cell cycle genes, and up-regulating genes involved in apoptosis. Capric, caprylic, and caproic acids exerted significant inhibitory effect on cancer cells, and future research will validate their anticancer effect in an appropriate in vivo model.

# INDEX





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	3085	6006		
*Bethel Middle School	4004			
*St. Mary School	2505	2533	2535	4003
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*Longfellow School	5540			
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Fishers Island School	3005	3035	3057	6025
	6043	6082		
<b>Glastonbury</b>				
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	3064	6023	6027	6076
Smith Middle School	2003	5013	5043	5056
<b>Greens Farms</b>				
Greens Farms Academy	2032	2034	3001	3010
	5007	5061	5524	6037
	6056			
<b>Greenwich</b>				
Greenwich High School	3007	3020	3023	3025
	3045	6020	6040	6051
	6054	6066	6069	6071
	6079	6090		
<b>Greenwich/Riverside</b>				
Eastern Middle School	5009			
<b>Guilford</b>				
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Mesaros	Ariana E.	6501	Patel	Vishal V.	5038
Michalka	Brian	6006	Patil	Siddharth S.	1021
Miller	Liz	6005	Patria	Joseph N.	6007
Miller	Megan L.	5010	Pecoriello	Jillian M.	3072
Mills	Ryan A.	5519	Pelisson	Matthew	5055
Miloro	Olivia	1001	Pellerin	Coogan E.	5016
Miranda	Madeline A.	5022	Pelloth	Max	6011
Mitchell	Brendan T.	4003	Pena	Zacariah	5534
Mjeshtri	Enkeleta	1013	Perez	Erika S.	3068
Mohammed	Jasmeen	2025	Petroff	Matthew A.	6092

Petschek	Ryan D.	2034	Shapiro	Mark E.	5029
Picoli	Lydia	2032	Shenkar	Liat	2530
Piekarski	Moshe Y.	5518	Sherwood	Blake M.	5556
Pitrelli	Joanna M.	4011	Shorten	Matthew J.	2023
Plasse	Maria J.	2013	Shreiteh	Yasmine	6505
Plavnicky	Charlene N.	5529	Shubat	Danielle M.	5512
Plochocki	Anthony T.	5528	Silva	Jose R.	5542
Podgorski	Drew	6057	Simmons	Riley A.	5040
Poma- Rodriguez	Cesar R.	2543	Simoniello	Michael M.	4025
Potti	Akilesh V.	6076	Sisson	Marin C.	4015
Powers	David	3037	Skaller	Madeleine L.	6075
Prawl	Ashley B.	1015	Smith	Eric	5554
Prescott	Hayley N.	6509	Smith	Laura G.	6512
Provatas	Athanasios A.	6035	Smith	Patrick	5527
Provost	Connor S.	2018	Sobilo	Deana E.	6078
Pung	Kingston	3081	Solder	John	3032
Quattropani	Cassie	6063	Solomon	Nick T.	5056
Quintero	Michael A.	6058	Speer	James R.	2005
Raabe	Kevin W.	5027	Spiggle	Jia I.	2028
Ramirez	Garion D.	1004	Stafford	Lily J.	6025
Ramsay	Samantha M.	3038	Steele	Samantha S.	3031
Ransohoff	Olivia R.	5562	Steuer	Zachary H.	5047
Rathore	Ayush	6514	Sugrue	Sarah G.	2518
Reed	Marleena S.	5553	Suzuki	Andrew B.	6087
Reisert	Julia N.	1008	Tappenden	Charlotte P.	2020
Reynolds	Antonia L.	2510	Tarca	Olivia	6513
Rice	Tyler J.	5014	Teerlinck	Benjamin S.	5559
Ringes	Katerina E.	2030	Terrizzi	Nicole M.	1012
Riodin	Jasmine	6517	Thomas	Ro-Anna R.	6511
Rivera	Jazmin	6052	Thomas	Ro-Anne R.	6511
Robertson	Emily M.	5560	Thompson	Connor J.	6082
Robitaille	Nicole	5023	Thompson	Mac H.	6507
Rocco	Audra C.	2515	Todorovska	Bojana J.	2031
Romero	Siobhan	1017	Tolmie	Marla G.	3067
Rose-Wilen	Esther E.	6042	Tornifoglia	Nicholas E.	6008
Rosenblatt	Benjamin T.	2012	Tournaud	Alyssa M.	3512
Rosiello	Thomas	2026	Troy	Haley B.	6508
Ross	Kayleigh A.	2544	Tucker	Tonya M.	1006
Roychoudhury	Shayan	5566	Tukupov	Serik	6014
Rutledge	John W.	4016	Turnier	Sidney Y.	4020
Rutledge	Megan K.	4016	Tuzuner	Alperen F.	3501
Ryan	Haley M.	2514	Tyler	Emily	4008
Ryan	Kyle T.	6093	Uddin	Moe J.	3069
Saghri	Firouz	5524	Valentine	Drew A.	5002
Saha	Shubhro	6028	van Geldern	Benjamin C.	5004
Sambrook	Taylor A.	6013	Vargas	Ana C.	3078
Samuels	Max B.	3061	Velleco	Ashley R.	2027
Santavenere	Chiara A.	2503	Vidro	Maylene K.	4027
Santo	Jack A.	5008	Viola	Toni	3050
Santos	Alyssa E.	2507	Visscher	Adeline S.	1005
Saracina	Brooklynn L.	4021	Wagner	Kristina M.	3059
Satonick	Peter	3074	Wakeford	Kara A.	5541
Savage	Katie	6513	Walsh	James D.	5548
Sawhney	Gurumeher	5561	Wang	Zelun	6503
Schachter	Nathan	5515	Waskowicz	Caleigh M.	5050
Schif	Kristian R.	6510	Weber	Patrick R.	6023
Schirra	Erin D.	3512	Weber	Polina M.	5042
Schneer	Katherine E.	5019	Webster	Ana Rose	3005
Schulman	Jared A.	6002	Werner	Skyler A.	6022
Sehgal	Rahul	3062	Whitesell	Matt R.	6041
Sejourne	Gabrielle M.	6038	Whyte	Dijon	6504
Selig	Abigail R.	1011	Widman	Jessica	3509
Sencan	Fadil A.	6516	Wiedemer	Nicole	5013

Williams	Jacqueline R.	5546	Zavala	Karen	3091
Wiltse	Marin E.	1008	Zeffiro	Donnie G.	2010
Winter	Lea R.	6515	Zeller	Julie M.	3043
Woodson	Elizabeth	6056	Zephir	Sophia N.	5503
Worthington	Mason	5062	Zhao	Ming	3044
Wray	Anthonia	5558	Zheng	Johnny	6080
Xie	Evaline	2516	Zhitomi	Adam P.	3508
Yan	Qi	3063	Zhuang	Shiyu	3077
Yilmaz	Yusuf	6516	Zollo	Angelina J.	1009
Young	Ashley R.	2014	Zucco	Amelia M.	2512
Yu	Zizi	3026	Zwahlen	Murphy D.	4026

**2011 Intel ISEF**

May 8-13, 2011  
Los Angeles, CA

**2011 I-SWEEP**

May 4-8, 2011  
Houston, Texas

**2011 Genius Olympiad**

June 26-30, 2011  
Oswego, NY

**2012 CSF**

64rd Connecticut Science Fair  
March 13-17, 2012  
Quinnipiac University, Hamden