

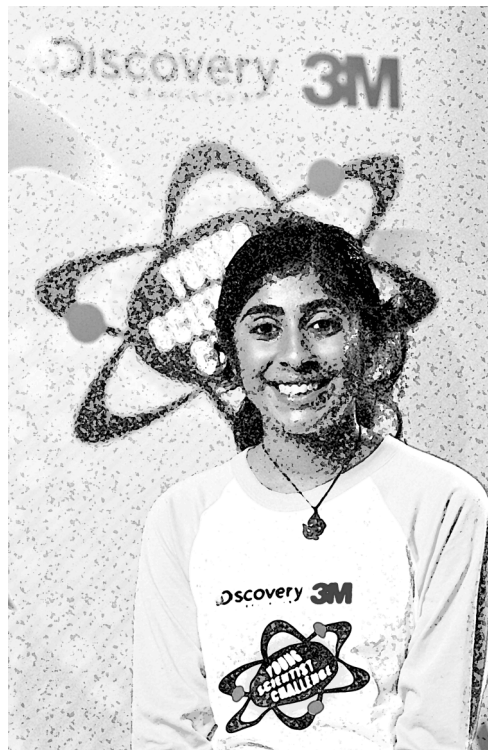
# **The Vermont State Science & Math Fair**

2013 Awards Ceremony Speaker

**Deepika Kurup**

presents

**"Science to Solve the Global Water Crisis"**



Deepika is the 2012 Discovery 3M  
America's Top Young Scientist

# Map of Norwich University



## Schedule

- 7:45 - 9:00     **Registration**, Lobby of Science Building  
& project set up in assigned rooms
- 9:00 - 12:30    **Judging of projects** - Projects open to public
- 10:00 - 10:30   **Mid-morning break** - Students may visit exhibits
- 12:30 - 2:00    **Lunch**, Wise Campus Center Food Court  
& Take down projects
- 2:00 - 4:00     **Program & Awards**, Dole Auditorium, Webb Hall
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- 11:00 - 1:30    **University and Museum Exhibits**, 2nd floor  
Lobby, Wise Campus Center and Lobby of the Sullivan Museum  
and History Center



**Floor Plan**  
**Rooms in the**  
**Engineering-Math-Science Complex**  
**Used in the VSSMF**  
  
**First Floor**



**Floor Plan**  
**Rooms in the**  
**Engineering-Math-Science Complex**  
**Used in the VSSMF**  
**Second Floor**

## Project Numbers & Room Assignments

Subject Area	Project Numbers	Room Numbers
General Biology	B01-B26	243
Physiology	B27-B42	239
Zoology	B43-B48	243
Chemistry	C01-C26	235
Environmental	G01-G30	267
Math	M01-M04	165
Physics	P01-P32	145 & 165
Social Sciences	S01-S23	160 & 176
Group Bio	GP01-GP08	165
Group Chem	GP09-GP10	151
Group Physics	GP11-GP21	151
Group Soc	GP22-GP27	195

### Lounges

141	SWE Food Sales
139 & 271	Parent/Teacher Lounges
155, 251 & 275	Judges Lounges

## Awards Program, April 13<sup>th</sup>, 2013

### VSSMF Awards

VSSMF Silver Medalists  
VSSMF Gold Medalists  
Vermont Principals' Association

### Next Generation Scholarships

St Michael's College  
Vermont Technical College  
Announcement about Green Mountain College  
& Norwich University's NG Scholarship winners  
Norwich University- top five juniors

### VSSMF Local Awards

AllEarth Renewables  
American Chemical Society, Green Mountain  
Local Section  
Dufresne Group  
Eagle Hill Naturalist  
Entergy Vermont Yankee  
Ethical Science and Education Coalition  
Green Mountain Water Environment  
Association  
GroSolar  
Haematologic Technologies  
Nathaniel Group  
Northeast Branch, American Society of  
Microbiology  
Northeast Section Institute of Food  
Technologists  
NRG Systems  
Polhemus  
Resource Systems Group  
Society of Manufacturing Engineers, Green  
Mountain Chapter  
Society of Women Engineers  
Stockholm Junior Water Prize  
Superior Technical Ceramics Corporation  
Tau Beta Pi  
Tcorp  
Ted Marsden Memorial Award  
Vermont Academy of Arts and Sciences

### VSSMF Local Awards, Contd.

Vermont Energy Education Program  
Vermont Chapter, Sigma Xi  
Vermont Organization of Nurse Leaders

### National Awards

#### Grades 5-8

Broadcom Masters

#### Grades 9-12

1-SWEEEP  
Genius Olympiad

### ISEF Affiliation Awards

#### Grades 5-8

U.S. Marines

#### Grades 9-12

### Professional Awards

American Meteorological Society  
American Psychological Association  
American Society of Materials  
Association of Women Geoscientists  
Intel Excellence in Computer Science  
Mu Alpha Theta  
National Society of Professional Engineers  
Ricoh Sustainable Development  
Society for In-vitro Biology  
United States Metric Association  
Yale Science and Engineering Association

### U.S. Government Awards

National Oceanographic and Atmospheric  
Association

### U.S. Military Awards

U.S. Army  
U.S. Navy  
U.S. Air Force  
  
ISEF Finalists

## VISION & MISSION

The Vermont State Science & Mathematics Fair (VSSMF) envisions Vermont as a state where an increasing proportion of our secondary students continue their post-secondary education or training in STEM (Science, Technology, Engineering and/or Math), and our youth see the vibrant STEM culture and the promising future in STEM related careers and occupations in Vermont.

Our mission is to inspire and reward Vermont middle or high school students for high quality STEM inquiry by providing free access to competitions for independent student research, STEM scholarships to Vermont colleges, and cash and recognition awards and opportunities worth almost a million dollars through participation in the VSSMF.

## INTRODUCTION

We believe conducting and presenting independent research prepares middle and high school students for post secondary education or training, and lifelong learning in STEM. The Scientific Methods empower students to innovate, solve problems and make discoveries that will impact the future. A crucial part of this process is the evaluation of their work by established scientists in the field using standards-based scoring rubrics. In this way the VSSMF contributes to the overall educational experience of the student.

The VSSMF annual inquiry based poster-presentation competition is an exciting opportunity for aspiring scientists and engineers (grades 5-12), and their teachers to showcase the results of their independent research. Each year 200 student projects, selected from over 2000 projects statewide, address questions and solve problems in all areas of STEM.

Students compete for more than \$8000 in cash and prizes, \$13,000 in trip awards and expenses donated by local organizations, and \$900,000 in scholarships to Vermont colleges. The fair is also affiliated with the International Science and Engineering Fair, and five other national and international competitions, which award additional prizes.

Projects are judged by at least three Judges, separately, over the course of the morning to determine winners for medals, cash, trips and scholarships. Our approximately 150 Judges include industry scientists and engineers, secondary education faculty, medical professionals, military personnel and retirees, and other science related professionals from across Vermont who hold advanced degrees, have extensive experience, or both in the STEM disciplines.

The VSSMF, sponsored by the VPA, is an all-volunteer, non-profit [501(c)(3)] education organization supported by Norwich University and around 100 other Vermont organizations, colleges and industry partners.

The VSSMF is an all-volunteer organization. Over 80% of the \$32,000 raised annually goes to students and their teachers. The remainder goes to operating costs. The money raised comes from 51 financial partners in Vermont who provide gifts or grants from \$50-\$1000. This year, these partners provided nearly \$16,000 for student and teacher trips to competitions beyond Vermont and expenses. Money also comes from 27 award sponsors in Vermont that provide \$7000 in prizes. In addition to the above money raised by VSSMF, four Vermont colleges provide Next Generation Scholarships totaling nearly \$900,000. Finally, our affiliation with competitions beyond Vermont provides another \$9,000 to Vermont students and their teachers. We also have judges from 50 STEM partners in academia, industry, and professional organizations. In short, we have a total of 100 Vermont-based partners that share our vision joining us to make the VSSMF a huge success.

The following lists the above Vermont stakeholders who as partners and sponsors, consider investing in YOU NOW to be a wise move so they can employ you in the future when you finish your education!

#### VERMONT SPONSORING PARTNERS

Applied Research Associates Randolph	Environmental Compliance Services Brattleboro	Lyndon State College Lyndonville
ATC Associates Williston	Fairbanks Scales St Johnsbury	Med-Associates St. Albans
BioTek Winooski	FairPoint Communications South Burlington	Mylan Technologies St Albans
Capital Connections Montpelier	First Wind Sheffield	New England Research White River Junction
Castleton State College Castleton	Goodrich Corporation: United Technologies Corporation Aerospace Systems Vergennes	Northfield Savings Bank Northfield
Chroma Technology Corp Rockingham	Green Mountain Antibodies Burlington	Norwich University Northfield
Concepts NREC White River Junction	Green Mountain Power Corporation Colchester	Norwich University Applied Research Institute Northfield
D.E.W. Construction Company Williston	Haematologic Technologies Essex Junction	Omya, Inc. Proctor
DeWolf Engineering Montpelier	Hallam, ICS South Burlington	Phoenix Chemistry Services North Ferrisburg
Dufresne Group Windsor	Husky Injection Molding Milton	Physician's Computer Company Winooski
EF Wall Barre	IVEK Corporation North Springfield	Plasan Carbon Composites Bennington
Engleberth Construction Colchester	Johnson State College Johnson	Resource Systems Group White River Junction
Entergy Vermont Yankee Vernon	LORD Corporation-Microstrain Williston	Rock of Ages Graniteville



Saint Michael's College  
Colchester

Stantec  
South Burlington

TelJet Longhaul  
Williston

University of Vermont  
Burlington

Vermont Energy Partnership  
Montpelier

Vermont EPSCoR  
Colchester

Vermont Gas Systems, Inc.  
Burlington

Vermont Principals' Association  
Montpelier

Vermont Systems, Inc  
Essex Junction

Vermont Technical College  
Randolph Center  
Vermont Technology Council  
Burlington

Washington Electric Co-op  
East Montpelier

Wright & Morrissey  
South Burlington

## VERMONT AWARD SPONSORS

Vermont Principals' Association  
Montpelier

AllEarth Renewables  
Williston

American Chemical Society, Green  
Mountain Local Section  
Burlington

Dufresne Group, Consulting Engineers  
Windsor

Eagle Hill Institute  
Steuben, ME

Entergy Vermont Yankee  
Vernon

Ethical Science and Education Coalition  
Boston, MA

Green Mountain Water Environment  
Association  
Montpelier

GroSolar  
White River Junction

Haematologic Technologies, Inc.  
Essex Junction

I-SWEEEP Runner Up Award  
Northfield

Nathaniel Group Inc.  
Vergennes

Northeast Branch, American Society for  
Microbiology  
Northfield

Northeast Section, Institute of Food  
Technologists  
Natick, MA

NRG Systems  
Hinesburg

Polhemus  
Colchester

Resource Systems Group  
White River Junction

Society of Women Engineers,  
North Country Section

Stockholm Junior Water Prize  
Montpelier

Superior Technical Ceramics  
St. Albans

Tau Beta Pi, Norwich University Chapter  
Northfield

TCORP  
Colchester

Ted Marsden Memorial Award  
Northfield

Vermont Academy of Arts and Sciences  
Northfield

Vermont Chapter, Sigma Xi  
Northfield

Vermont Energy Education Program  
Burlington

Vermont Organization of Nurse Leaders  
Montpelier

## VERMONT PARTNERS PROVIDING JUDGES

### Vermont Post-Secondary STEM School Partners

Middlebury College Middlebury	University of Vermont Medical School Burlington	Saint Michael's College Colchester
Norwich University Northfield	Burlington Vermont Technical College East Randolph	Dartmouth College Hanover, New Hampshire
University of Vermont, College of Engineering and Mathematical Sciences		

### Vermont STEM Professional Partners

American Chemical Society, Green Mountain Local Section	Society of Women Engineers, North Country Section	Vermont Organization of Nurse Leaders
Vermont Entergy Women in Nuclear	Tau Beta Pi, Engineering Honor Society, Norwich University Chapter	Vermont Academy of Science and Engineering
Green Mountain Water Environment Association	Vermont Academy of Arts and Sciences Vermont Chapter of Sigma Xi	Vermont Astronomical Society
Northeast Branch, American Society for Microbiology		Vermont Genetics Network Outreach

### Vermont STEM State & Federal Government Partners

Fish & Wildlife/Agency of Natural Resources Waterbury	U.S. Army Northfield	US Navy White River Junction	US Air Force Burlington
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### Vermont STEM Industry Partners

AllEarth Renewables Williston	Island Innovations Grand Isle	Precision Bioassay Burlington
Blue Cross, Blue Shield of Vermont Berlin	LORD Corporation-Microstrain Williston	Resource Systems Group White River Junction
Carbon Catalyst Burlington	Nathaniel Group Vergennes	UTC-AS, Goodrich, Vergennes
Central Vermont Medical Center Berlin	Northfield Dental Group Northfield	VELCO Rutland
D.E.W. Construction Corporation	Northfield Elite Dental Northfield	Vermont Energy Education Program, Burlington
Hughlett Technical Services Waterbury	Phoenix Chemical Services North Ferrisburg	Weston and Sampson Engineers, Inc. Waterbury
IBM (International Business Machines) Essex Junction	Polhemus Colchester	

### **Avalon Triumvirate Academy**

Amanda Gifford

Kahla Reinhart	5	Muddy Waters	G26	Room 267
Sabrina Allain	11	Texting and Driving	GP27	Room 195
Gordon Clark	6	EMP's	P07	Room 145
Keagan McNamara	6	Texting and Driving	GP27	Room 195
TJ Beaumier	10	Prime Patterns?	M01	Room 165

### **Barre Town Middle School**

Jennifer Aither

Nick Blow	8	Water Filtration	GP13	Room 151
Shannon Brodie	8	Fear Factor	GP23	Room 195
Emily Couture	8	Rainbow Flames	GP20	Room 151
Catherine Dune	8	Aromatherapy	GP22	Room 195
Natalie Dunn	8	Water Hardness	GP14	Room 151
Jazmine Franks	8	Aromatherapy	GP22	Room 195
Katherine Gurin	8	Rainbow Flames	GP20	Room 151
Ashley Henry	8	Fear Factor	GP23	Room 195
Madison Hewitt	8	Scare Fair	S10	Room 160
Alexandra Marek	8	Rainbow Flames	GP20	Room 151
Peter Maurice	8	Affects of Electronics on Sleep	S14	Room 176
Kaden McSheffrey	8	How Yeast Affects Bread	GP03	Room 195
Yvonne Otis	8	Water Hardness	GP14	Room 151
Danielle Petrie	8	Aromatherapy	GP22	Room 195
Bradley Romeo	8	Water Filtration	GP13	Room 151
Cody Rosa	8	How Yeast Affects Bread	GP03	Room 195
Hamisi Wabuti	8	How Yeast Affects Bread	GP03	Room 195
Braxton Williams	8	Water Filtration	GP13	Room 151

### **Brattleboro Union High School**

Matt Betz

Oliver Pomazi	11	Knotweed Removal	B20	Room 243
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### **Burlington High School**

Gailin Pease	11	The Effect of Biodegradation products on Plant Germination and Growth	B18	Room 243
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### **Champlain Valley Union High School**

Dr. Nancy Elwess

Christopher Petrillo	12	Testing Frogs from the Lake Champlain Basin for the Presence of the Chytrid Fungus	B46	Room 243
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### **Christ The King, Burlington**

Mrs. Vidula Srivastava

Shane O'Brien	7	Soda VS Teeth	GP06	Room 195
Erin O'Donnell	7	Package Power	GP26	Room 195
Maryann Pohlen	7	Package Power	GP26	Room 195
Owen Whitney	7	Soda VS Teeth	GP06	Room 195

**Christ The King, Rutland**

Sophia Moore-Smith	7	Water for Life	C26	Room 235
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**Essex High School**

Maria Ung

VigneshRajendran	10	Designing and Optimizing a Cost-Effective Model for Lipid Extraction from Algae	C18	Room 235
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**Frederick H. Tuttle Middle School**

Christopher Towle, Amelia Lutz, Greg Wolf

Lana Alnamee	7	How do you Learn Best	S01	Room 160
Marley Beers	7	Eggseptioanlly Strong Eggs	GP15	Room 151
Grace Bodykevich	7	Eggseptioanlly Strong Eggs	GP15	Room 151
Sabrina Choudhary	7	How Distractions Affect (Ooh Look A Butterfly) Concentration	GP25	Room 195
Maddie Gallagher-Strauss	7	Dough On Ice	C08	Room 235
Joey Geremia	7	Battery Life	P11	Room 145
Evan Jones	7	Does Age Affect Reaction Time?	GP02	Room 195
Finley Killeen	7	Leaf Energy	GP05	Room 195
Brandon Lee	7	Leaf Energy	GP05	Room 195
Kyle McLane	7	Reaction Times	P19	Room 145
Alex Pollack	7	Does Age Affect Reaction Time?	GP02	Room 195
Mehul Shah	8	The Effect of Water Density on the Flotation of a Boat	P30	Room 165
Dilaram Temirova	7	Is lung capacity different for athletes or non-athletes?	B40	Room 239
Kiran Waqar	7	How Distractions Affect (Ooh Look A Butterfly) Concentration	GP25	Room 195
Claire Wright	7	How Distractions Affect (Ooh Look A Butterfly) Concentration	GP25	Room 195

**Hinesburg Community School**

Stephanie Konowitz

Sofia Dattilio	7	I'm in Hot Water	C05	Room 235
Connor Durochia	7	Spooky Sounds!	S07	Room 160
Jeffrey Giroux	8	Carbon Conundrum	C10	Room 235
Ashley Larrabee	8	Brain Teasers	S12	Room 160
Natalie Meyer	8	Doll Studies	S16	Room 176
Sasha Pearson	7	The Eggregious Earbuds	B37	Room 239
Sage Coates-Farley	7	Pull Your Own Weight	P08	Room 145

**Home school**

Marcia Knapp

Eric Knapp	9	Flatline fact or fiction?	P16	Room 145
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### Main Street Middle School

Eli Rosenberg, Amy Kimball

Jacob Bee Ho Brown	8	Does Walking Through a Doorway Affect Short-Term Memory?	S04	Room 160
Tyler Cain	7	Don't Get Shafted!	P04	Room 145
Lexie Drew	8	Got Pain? Get The Fastest Relief	GP09	Room 151
Kelsey Golonka	8	Undercover Bacteria	GP07	Room 195
Andrew Holt	8	Is It Really Compostable?	GP04	Room 195
Emma Murray-Clausen	8	Undercover Bacteria	GP07	Room 195
Theresa Noonan	8	Got Pain? Get The Fastest Relief	GP09	Room 151
Miles Rapaport	8	Does Positive or Negative Reinforcement Affect Performance?	S19	Room 176
Asa Richardson-Skinder	7	Does Hand Sanitizer Really Kill 99.99% of Germs?	B22	Room 243
Karyka Taylor	8	Is It Really Compostable?	GP04	Room 195

### Mater Christi School

Mark Pendergrass

Amanda Bloom	7	What's Your Beat?	P03	Room 145
Will Couch	7	Bacteria-R-Us	B07	Room 243
Tré Diemer	6	How clean are your hands- REALLY?	B08	Room 243
Erynn Ferraro	7	Giddy Up	B43	Room 243
Olivia Ferraro	7	Bird Bon Appetit	B44	Room 243
Davis Lavoie	6	"Did I Just See That?" - Subliminal Messaging	S13	Room 176
Chris Neimeth	7	Are you snowboarding as fast as you really can?	P21	Room 165
Marcus Roberge	8	Home made snow	P25	Room 165
Beatrice Shlansky	7	It's in the Water	G27	Room 267
Eliza Thomas	8	Grain For Thought	B48	Room 243
Dan Wagner	8	Brighter than a star	G30	Room 267
Phoebe Weller	6	From Chemicals To Colors	C24	Room 235

### Missisquoi Valley Union High School

Maria D. Dezotell

Hannah Choiniere	11	The Impact of Superstorm Sandy on Water Quality in Vermont	GP12	Room 151
Kaylee Clark	10	Saponification of By-Product Glycerol Formed in Production of Biodiesel	GP10	Room 151
Rebecca Cross	11	The Impact of Superstorm Sandy on Water Quality in Vermont	GP12	Room 151
Lindsay Daly	10	Saponification of By-Product Glycerol Formed in Production of Biodiesel	GP10	Room 151
Elijah Eaton	11	Producing Biodiesel by Heatless Transesterification of Recycled Cooking Oil	GP19	Room 151

**Missisquoi Valley Union High School - Continued**

Taylor Marquis	11	Producing Biodiesel by Heatless Transesterification of Recycled Cooking Oil	GP19	Room 151
Kraig McFadden	11	Producing Biodiesel by Heatless Transesterification of Recycled Cooking Oil	GP19	Room 151
Lillian Meunier	10	Saponification of By-Product Glycerol Formed in Production of Biodiesel	GP10	Room 151

**Northfield Middle High School**

Mrs. Tomczyk

Natasha Brightly	11	The Effect of Various Substances on the Voltage Produced in a Solar Cell	G05	Room 267
Ashley Heaney	11	The Effect of Different Temperatures on the Growth of Bacterial Colonies in Baby Food	B13	Room 243
Lydia Hoffman	11	The Effect of Wind and Temperature on the Amount of Voltage Produced by a Photovoltaic	G13	Room 267

**Northwest Technical Center**

Doug Bell

Nathan Adamczak	11	Structure Tester	GP21	Room 151
Dominic Cicilio	12	Load Cell Computer Interface	GP17	Room 151
Ryan Gerrity	12	Load Cell Computer Interface	GP17	Room 151
Colton McCracken	11	Structure Tester	GP21	Room 151
Kyle Putnam	11	Structure Tester	GP21	Room 151
Nathan Spaulding	10	Load Cell Computer Interface	GP17	Room 151

**Randolph Homeschool Co-Op**

Gina sweet

Joshua Brown	7	The math noise	S05	Room 160
Elissa Doering	7	The Impacts of Different Plant Fertilizer	G07	Room 267
Olivia Knudsen	6	Five Pennies or a Nickel?	GP24	Room 195
Kasie Mills	6	Five Pennies or a Nickel?	GP24	Room 195
Hannah St.Denis		Don't Judge a Book by it's Cover	S20	Room 176
Katie Sweet	9	Brain and Eyes	S21	Room 176
Luke Sweet	10	Wheels in the Water	P32	Room 165
Rebecca Youmans	11	Depression and Artistic Expression	S23	Room 176

## Rutland High School

Deborah Rodolfy, Ann Marie Mahar, Susan Ponto, Dawn Adams, Michael Ellis

Shauntel Alger	10	How is Sound Affected by Density?	P01	Room 145
Taylor Ampatiellos	11	Hydro-Harmonics: The Study behind Water and Music	P02	Room 145
Marissa Arduca	10	Cosmetic chemistry	C02	Room 235
Kelsey Bullock	11	The Effects of Lactobacillus Casei on Probiotic growth	B04	Room 243
Talla Caruso	11	To Febreze or not to Febreze	B06	Room 243
Andrew Cassarino	11	Breaking the Rules	P05	Room 145
Lauren Cheney	11	Hot Wires	P06	Room 145
Hunter Cole	11	Soy Candles: Do They Compare?	C04	Room 235
Courtney Connolly	11	Rosin Affects Sound	P09	Room 145
Ailaini Corsones-brown	11	Bowling with Physics	P10	Room 145
Katherine Fusco	11	What Affects The Rate of Drug Solubility	C07	Room 235
Caitlin Hanley	11	Digestion's Impact On Green House Gases	B31	Room 239
Evan Hill	11	Cork or no Cork	P12	Room 145
Melanie Hubbard	11	Aw Sugar!	B32	Room 239
Timothy Hughes	11	Hydrogen Electrolysis	P13	Room 145
Rachel Kiefaber	11	Optimizing the Sun	P15	Room 145
Augie Levins	10	Geothermal Heat Pumps	G15	Room 267
Christina Lovett	11	Comparison of Four Potential Parameters for Predicting Radiation Pneumonitis in Lung Cancer	M03	Room 165
Shannon Mee	11	Flour's Affect on the Density of a Cupake	C13	Room 235
Olivia Pockette	11	The Effects of Soda on Tooth Enamel	C16	Room 235
Simeon Pol	11	Torque	P23	Room 165
Samantha St. Marie	11	Tension Controls the Game	M04	Room 165
Kristen Switzer	11	The Flammability of Paint	C22	Room 235
Baylee Thompson	11	Taste The Dye	C23	Room 235
Brooke Westcott	11	Waterproof Mascara	C25	Room 235

## Saint Francis Xavier

Mary Ellen Varhue

Mercy Beaudoin	7	Grow Grow Grow	B02	Room 243
Sarah Eustis	8	Salty Sells	C06	Room 235
Katrina Garrow	7	Bye Bye Eggs	C09	Room 235
Madison Gorrigan	7	What a Relief	C11	Room 235
Curtis Ianni	8	Radical Roofing	P14	Room 145
Casey Keenan	7	Scuba Pro	C12	Room 235
Robinson McCormick	8	Tidal Here _____	P18	Room 145
Abigail Monahan	6	Detergent Wars!	C14	Room 235
Zachary Rongo	7	Bright Ideas	P26	Room 165
Savana Senecal	7	I Can See Clearly Now The Stain Is Gone	C19	Room 235
Junior Serwili	7	Rainbow Panels	P29	Room 165
Nathalie Simon	8	Number 1 Water Filter	C20	Room 235

## South Burlingotn High School

Curtis Belton, Gerard LaVarnway

Melissa Arioli	10	Pathogenic Bacteria on Household surfaces	B01	Room 243
Noah Beatty	10	The Effects of Road Salt on Plants	G04	Room 267
Peter Camardo	10	The Effects of Smiling	S06	Room 160
James Gregoire	10		B11	Room 243
Declan Quinlan	10	Music and Dementia	S18	Room 176
Rashad Alsaffar	10	Bioremediation: Cleaning up Oil Spills in Aquatic Biomes	G01	Room 267
Sharvari Athalye	10	Finding the Best Herbaceous Plant Buffer to Limit Phosphorus and Algae Content in the Lake	G02	Room 267
Ali Barron	9	Effectiveness of Water Drainage Systems	G03	Room 267
Blair Bean	10	How do Study Patterns Impact Test Anxiety?	S02	Room 160
Victor Boardman	9	Effect of External Stimuli of the Stomata of Plants	B03	Room 243
Jean-Baptiste Bolh	10	The Effect of Exercise on the Prefrontal Cortex	B27	Room 239
Emily Camardo	12	A Mathematical Investigation of the Geometric Properties of the Arbelos	M02	Room 165
Griffin Cannon	10	The Ability of Radish Roots to Filter Bacteria	B05	Room 243
Leah Charash	10	The Effects of Stress on the Body	B28	Room 239
Joy Cohen	10	Correlation Between Blood Glucose Levels Measured at Different Sites On the Body	B29	Room 239
Nevil Desai	9	Bioremediation using Pseudomonas Aeruginosa on Oil's	G06	Room 267
William Fretwell	9	What is the most efficient culture for anaerobic digestion?	B09	Room 243
Karim Fuad	10	Subliminal Messages	S08	Room 160
Alec Gelfenbein	10	The Effect of Wetlands on Water Pollutants	G08	Room 267
Evan Geremia	10	Demonstration of renewable energy production using household food waste.	G09	Room 267
Kayla Gilding	10	How Phosphorus in Lawn Fertilizer Affects Lake Water	G10	Room 267
Aiman Ginawi	10	Bioremediation of Oil Spills in Aquatic Environments	G11	Room 267
Gia Gould	10	Impact of Perceived Intelligence on Male Attraction	S09	Room 160
Danny Greenblatt	10	Freezing and Thawing Microorganisms	B10	Room 243
Logan Hall-Potvin	10	Bacteria on Floors - The Different Harms	B12	Room 243



### South Burlington High School – Continued

Julia Halvorson-Phelan	10	Effects of Acid Precipitation on Environment	G12	Room 267
Philip Holt	10	Personality and Politics	S11	Room 160
Vivian Huang	9	Biosorption of Heavy Metals by <i>Pleurotus ostreatus</i> (Oyster Mushroom)	G14	Room 267
Samantha King	10	Effects of Microwaves on <i>Bacillus subtilis</i>	B14	Room 243
Andrew Levite	10	Amount of feeding on water nutrient levels	G16	Room 267
Rachel Lia	10	Water purification	G17	Room 267
Sean MacDonald	10	<i>Escherichia coli</i> from farms to waterways	G18	Room 267
Katherine McLane	10	Exercise and Memory Retention	B34	Room 239
Patrick McMackin	10	Road Salt's effect in South Burlington	G19	Room 267
Nadia Merali	10	Correlating Handedness to Side of Body Affected by a Stroke	B35	Room 239
David Mercier	10	The Effects of Temperature and Lux Microcystis <i>Aeruginosa</i>	B15	Room 243
Jane Merrick	10	Learning Comprehension through Auditory and Visual Presentation	S15	Room 176
Jamie Moore	10		B16	Room 243
Basundhara Mukherjee	11	The Effects of Aluminum Sulfate on the Aquatic Species <i>Ceriodaphnia dubia</i>	B17	Room 243
Patel Neerja	10	Disinfecting Water Using Clay	G22	Room 267
Keegan O'Hara	10	Water Quality of Different Parts of Lake Champlain	G23	Room 267
Yudai Ogawa	10	The Relationship Between Fingernail Growth and Nutrition or Age	B36	Room 239
Alexander Pasanen	10	Effect of Roofing Material on Water Quality	G25	Room 267
Courtney Peyko	10	Dog Behavior: Decoded	B47	Room 243
Jake Ploof	10	Effect of Worms on Plant Growth	B19	Room 243
Elijah Rachlin	10	Differences in Efficiencies of Biofuels	C17	Room 235
Kaleb Radford	10	Wind Car	P24	Room 165
Harpreet Rattu	10	Manipulation of Algae Lipid Composition to Provide an Alternate Source for Biofuel	B21	Room 243
Alyssa Schlenter	10	The Effects of Magnetism on Radish Plant Growth	B23	Room 243
Zoe Shamis	10	Unconjugated Bilirubin in Pediatric Acute Lymphoblastic Leukemia Patients	B39	Room 239
Ben Sievers	10	Comparing the difference in nutrient levels between large and clear lakes with small and m	G28	Room 267
Jacob Smith	10	What does Centrifugal Force do to Plants?	B24	Room 243
Adam Tobey	10	Effect of Storage Method on Coffee Freshness	B25	Room 243

**South Burlington High School – Continued**

Andy Tuttle	10	How the Arch of the Foot Affects Balance	B42	Room 239
Christopher Ubert	10	The Effect of pH on the Rate at Which Oleophilic Bacteria Consume Oil	G29	Room 267
Anna Wulfson	10	The Effects of different types of washing and drying methods on the cleanliness of laundry	B26	Room 243

**St. Mary's School**

Mr. Hill, Mrs. Eagan

Siobhan Eagan	5	What's in Your H <sub>2</sub> O?	GP08	Room 195
Olivia Morana	6	Veni, Vedi, Verdigris - I came, I saw, I oxidized!	C15	Room 235
Frederick Pohlen	5	The Sky is Falling! Predicting the Size of Craters	P22	Room 165
Olivia Rooney	5	What's in Your H <sub>2</sub> O?	GP08	Room 195

**The Renaissance School**

Caryn Shield

Ben Blackmore	6	Books and the Internet: Polar Opposites	S03	Room 160
David Melkumov	6	Strengthening Magnets	P20	Room 145
Caleb Morehouse	7	The Most Effective Grass for Biomass Energy	G21	Room 267
Caleb Oliveira	6	Renewable Energy Powered Water Filtration	G24	Room 267
Liam Strobeck	6	How do emotions affect water crystallization?	C21	Room 235

**Weathersfield School**

David E. Lambert

Emily Antonivich	8	Brand vs Damage	C01	Room 235
Jessica Selmer	8	Rotation vs Stationary	P28	Room 165
Sara Spencer	8	Drag vs. Shape of Helmet	P31	Room 165

**Windsor High School**

Jennifer Townsend

Roger Barraby	11	Comparing Calories in Different Food Groups	C03	Room 235
Casey Husband	9	The Spartan Project - Weight distribution for endurance in the military	B33	Room 239
Peter Jaarsma	10	Sheep and Color Patterns	B45	Room 243
Brittany LeBeau	12	Converting exhaust emissions into electricity	P17	Room 145
Rachel Meagher	12	Are fingerprints inherited?	GP01	Room 195
Abigail Millard	10	In Search of Fresh Water (Exploring Different Methods of Desalination)	G20	Room 267

**Windsor High School – Continued**

Annie Nelson	11	How does the concept of interference help explain the Stroop Effect	S17	Room 176
Jaime Nolan	12	Are fingerprints inherited?	GP01	Room 195
Caitlin Roberts	10	The affect of pH levels on blood glucose	B38	Room 239
Emma Saucier	10	Cell Phone Microscope	P27	Room 165
Rebecca Towne	12	The effect of age, years spent in music, and dissonance on the ability to hear high frequency	B41	Room 239
Taylor Tyminski	12	Beauty is in the eye of the beholder	S22	Room 176

**Windsor Jr/Sr High School**

Jennifer Townsend

Hannah Achilles	8	Natural Filters	GP11	Room 151
Jacob Curtis	7	Hydration Information	B30	Room 239
Grady Gilman	8	Parachute Madness	GP18	Room 151
Benjamin Meagher	7	Laser Amplification Modulation	GP16	Room 151
Vincent Moeykens	7	Laser Amplification Modulation	GP16	Room 151
Nicole Towne	8	Natural Filters	GP11	Room 151
Andrew Wood	8	Parachute Madness	GP18	Room 151