

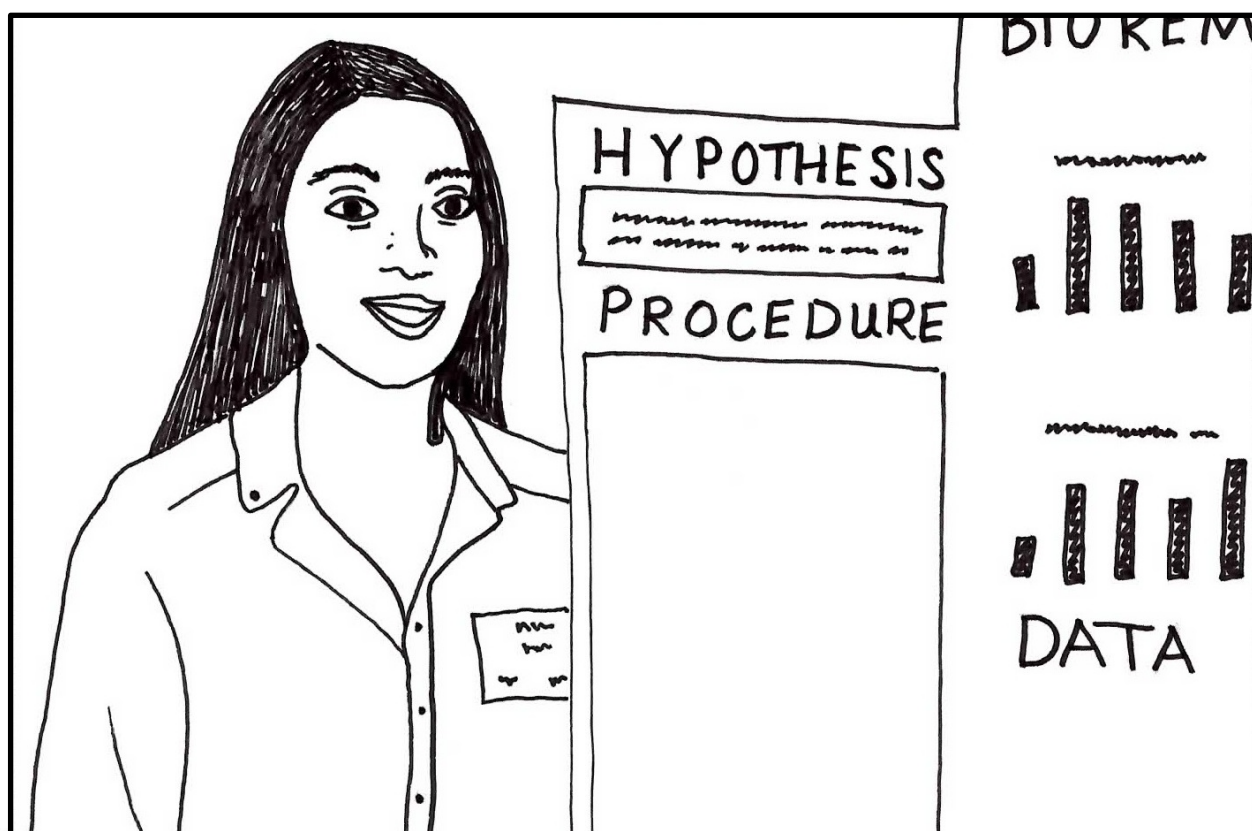
# The Vermont State Science & Math Fair

## 2012 Awards Ceremony Speaker

**Riya Patel**

presents

**"Science Without Limits"**



### Riya's 2011 International Awards

**International Sustainable World Energy, Engineering, & Environment Project Olympiad (I-SWEEEP) 2011, Houston, Texas, May 4-9, 2011** -Bronze Medal -\$400, "Special Award:" Prairie View A&M University -"Physics of The Future" book by Michio Kaku, -Blind Spot documentary,

**Intel International Science and Engineering Fair (ISEF), Los Angeles, California, May 8-14,2011** "Special Award:" MAWHIBA-King's Foundation for Creativity and Giftedness in Science Education (Kingdom of Saudi Arabia) -3<sup>rd</sup> place for the Award for "Innovations in Potable Water Technology" -Medal -\$2,000 cash

## 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.

# 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
- 
- 10:00 - 1:30    **University and Museum Exhibits**, 2nd floor  
Lobby, Wise Campus Center and Lobby of the Sullivan Museum  
and History Center

## **Room Assignments**

Room	Project Numbers	Topic area
145	P31-P41 & GP08-GP09	Physics/GP
151	P01-P30	Physics
165	M01-M06 & G01-G09	Math & Geology
235	S01-S18 & GP10	Social Science/GP
239	C01-C21 & GP07	Chemistry/GP
243	B01-B40 bio	
267	B41-B60 & GP01-GP06	Biology/GP

## **Lounges**

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

It is inappropriate to eat in the science labs. Please limit food consumption to the lounges. Only bottled water is allowed in the project rooms. Thank you.



**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**

## Awards Program, March 31st , 2012

### 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  
Cabot Creamery Cooperative  
Dufresne Group  
Eagle Hill Naturalist  
Entergy Vermont Yankee  
Ethical Science and Education Coalition  
Green Mountain Water Environment  
Association  
GroSolar  
Haematologic Technologies  
Kalow Technologies  
Nathaniel Group  
Northeast Branch, American Society of  
Microbiology  
Northeast Section Institute of Food  
Technologists  
NRG Systems  
Polhemus  
Society of Manufacturing Engineers, Green  
Mountain Chapter  
Society of Women Engineers  
Sovernet  
Stockholm Junior Water Prize  
Tau Beta Pi  
Tcorp  
Ted Marsden Memorial Award  
Vermont Academy of Arts and Sciences

### VSSMF Local Awards, Cont'd.

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

### National Awards

Grades 5-8  
Broadcom Masters  
Grades 9-12  
I-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  
Department of Health & Human Services  
U.S. Military Awards  
U.S. Army  
U.S. Navy  
U.S. Air Force  
ISEF Finalists

The VSSMF is an all-volunteer organization. Over 80% of the money raised goes to students and their teachers. The remainder goes to operating costs. The money raised comes from 56 financial partners in Vermont who provide gifts or grants from \$50-\$1000. This year, these partners provided over \$13,000 for student and teacher trips to competitions beyond Vermont and expenses. Money also comes from 28 award sponsors in Vermont who provide over \$8000 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 38 STEM partners in academia, industry, and professional organizations.

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

Abacus Automation Bennington	EWA Government Systems, Inc. Montpelier	Med-Associates St. Albans
Applied Research Associates Randolph	Fairbanks Scales St Johnsbury	Mylan Technologies St Albans
ATC Associates Williston	FairPoint Communications South Burlington	New England Research White River Junction
Biomass Energy Resource Center Montpelier	First Wind Sheffield	Northfield Savings Bank Northfield
BioTek Winooski	General Dynamics Armament and Technical Products Burlington	Norwich University Northfield
Castleton State College Castleton	Green Mountain Antibodies Burlington	Norwich University Applied Research Institute Northfield
Cabot Cooperative Creamery Cabot	Haematologic Technologies Essex Junction	Omya, Inc. Proctor
Chroma Technology Corp Rockingham	Hallam, ICS South Burlington	PC Construction South Burlington
Concepts NREC White River Junction	Husky Injection Molding Milton	Phoenix Chemical Services North Ferrisburg
Dufresne Group Windsor	IVEK Corporation North Springfield	Physician's Computer Company Winooski
EF Wall Barre	Johnson State College Johnson	PKC Corporation Charlotte
Engleberth Construction Colchester	Kalow Technologies North Clarendon	Plasan Carbon Composites Bennington
Entergy Vermont Yankee Vernon	Lyndon State College Lyndonville	Resource Systems Group White River Junction
Environmental Compliance Services Brattleboro		



Revision Military  
Essex Junction

Rock of Ages  
Graniteville

Saint Michael's College  
Colchester

Stantec  
South Burlington

TelJet Longhaul  
Williston,  
The American Precision Museum  
Windsor

University of Vermont  
Burlington

Vermont EPSCoR  
Burlington

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

Weston and Sampson  
Waterbury

Wright & Morrissey  
South Burlington

## VERMONT AWARD SPONSORS

Vermont Principals' Association  
Montpelier

AllEarth Renewables  
Williston

American Chemical Society, Green  
Mountain Local Section  
Burlington

Cabot Creamery Cooperative  
Cabot

Dufresne Group, Consulting Engineers  
Windsor

Eagle Hill Foundation  
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

Kalow Technologies  
North Clarendon

Nathaniel Group Inc.  
Vergennes

Northeast Branch, American Society for  
Microbiology  
Northfield

Northeast Section, Institute of Food  
Technologists  
Natick, MA

NRG Systems  
Hinesburg

Polhemus  
Colchester

Society of Manufacturing Engineers  
Green Mountain Chapter  
Grand Isle

Society of Women Engineers, North  
Country Section  
South Burlington

Sovernet  
Bellows Falls

Stockholm Junior Water Prize  
Montpelier

Tau Beta Pi, Norwich University Chapter  
Northfield

Tcorp, Inc.  
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

Norwich University  
Northfield

University of Vermont, College of  
Engineering and Mathematical Sciences  
Burlington

Saint Michael's College  
Colchester

Vermont Technical College  
East Randolph

Middlebury College  
Middlebury

Dartmouth College  
Hanover, New Hampshire

### Vermont STEM Professional Partners

American Chemical Society, Green  
Mountain Local Section

Society of Manufacturing Engineers,  
Green Mountain Chapter

Vermont Chapter of Sigma Xi

Vermont Entergy Women in Nuclear

Society of Women Engineers, North  
Country Section

Vermont Organization of Nurse Leaders

Green Mountain Water Environment  
Association

Tau Beta Pi, Engineering Honor Society,  
Norwich University Chapter

Vermont Academy of Science and  
Engineering

Northeast Branch, American Society for  
Microbiology

Vermont Academy of Arts and Sciences

Vermont Astronomical Society

### Vermont STEM State Government Partners

Fish & Wildlife/Agency of Natural Resources  
Waterbury

### Vermont STEM Industry Partners

BioTek  
Winooski

IBM (International Business Machines)  
Essex Junction

Small Dog Electronics  
Waitsfield

DuBois & King Inc.  
Randolph

Liquid Measurement Systems  
Georgia

Resource Systems Group  
White River Junction

ecs Consulting  
Waterbury

Microprocessor Designs Inc.  
Shelburne

Transcendev - Heightened Innovation,  
Gaysville

Enpro  
Williston

Nathaniel Group  
Vergennes

Velco  
Rutland

Goodrich  
Vergennes

National Life Group  
Montpelier

Vermont Energy Education Program,  
Burlington

Green Mountain Power  
Colchester

Neagley & Chase Construction, Inc.,  
Burlington

Weston and Sampson Engineers, Inc.  
Waterbury

Polhemus  
Colchester

## Vermont State Science & Math Fair Participants 2012

### Avalon Triumvirate Academy, Fairfax

Amanda Gifford

Sabrina Allain	10	GP10	Sleep Deprivation
T.J. Beaumier	8	GP08	Helicopter blade shape
Alexis Boyd	8	GP01	Are fingerprints inherited?
Gordon Clark	5	B12	Effects of sugar on plant growth
Hunter Griffin-Barnes	9	GP04	Effects of household chemicals on radish growth
Dustin Hargy	11	G01	Star light intensity
Corina Lawrence	11	GP08	Helicopter blade shape
Jocelyn Lawrence	9	GP01	Are fingerprints inherited?
Keagan McNamara	5	GP10	Sleep Deprivation
Kurt McNamara	9	GP02	Common toxins from vehicles get tested on plants.
Matilda Plumb	9	GP04	Effects of household chemicals on radish growth
Stephen Terry	12	G08	Eclipses
Maggie Wheel	9	GP02	Common toxins from vehicles get tested on plants.
Alden Woodard	9	GP02	Common toxins from vehicles get tested on plants.

### Christ the King School, Rutland

Amy Wright

Sophia Moore-Smith	6	B39	Does What You Eat For Breakfast Affect School Performance?
Turner Ramsay	6	P40	Which Angle is Best?
Jillian Childs	6	B60	Music for Plant Growth
Andrew Robertello	6	P41	Hovercraft and Friction

### Essex High School, Essex Junction

Mark Paul

Alison Cook	12	GP03	Conducting Electricity Using a Microbial Fuel Cell
Hyun Jung (Sally) Kim	12	GP03	Conducting Electricity Using a Microbial Fuel Cell
Vignesh Rajendran	9	B49	Comparisons of the Growth of Pink Oyster Mushrooms on a Straw Medium or a Cow Bio-Digest Medium
Markie Palermo	11	B45	Genetic Analysis of Brown, Brook, and Tiger Trout Populations in the Lake Champlain Basin

### Fair Haven Union High School, Fair Haven

Nate Morris

Alex Jakubowski	9	B32	Do Plants Grow Better In Organic or Fertilized Soil and All Light, No Light, or Natural Light
Lindsey Marcy	9	M04	You've got a friend in me??

Shaun Ketcham

Amanda Clement	10	B14	Can Buying Organic Prevent Sickness?
Amanda Tucker	11	C19	Non- renewable vs. Renewable Oil for the Future

## Vermont State Science & Math Fair Participants 2012

### Folsom Community Education Center, South Hero

Paul Fitzgerald

Ellery Bock	7	S03	PBIS and the Star System
Gabby Fionda	8	P10	Bridges Under Pressure
Maria Pierson	7	P25	Building A Better Wheelchair
Spencer Sochin	8	GP09	Solar Power Hour
Josh Webster Heenan	7	GP09	Solar Power Hour

### Fredrick H. Tuttle Middle School, South Burlington

Amelia Lutz

Nevil Desai	8	P06	Energy Conservation: The most Efficient Home Insulator
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Greg Wolf

Mehul Shah	7	P28	Wind Turbines: Number Of Blades and Energy Production
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### Grand Isle School, Grand Isle

Paul Sacca

Emma Bell	6	B09	Comparison of bacteria: Human vs Canine
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### Hinesburg Community School, Hinesburg

Stephanie Konowitz

Jordan Ayer	8	S01	The Dangers of Texting
Lia Gagliuso	8	S08	In Your Face! What Your Expression Says to Another
Will Solow	7	S18	Subconscious Sublimation
Camden Willsey	7	C21	Pyro Pellets
Savannah Zigic	7	B59	The Spice Test

### Homeschools

Christine Colella

Elise Huntley	11	G02	Are Macroinvertebrates Vermont Strong? Monitoring One Stream's Recovery and Water Quality
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Gina Sweet

Katya Brown	7	GP07	Natural Fragrances by Us
Brooke Slocum	7	GP07	Natural Fragrances by Us
Katie Sweet	8	GP07	Natural Fragrances by Us
Luke Sweet	9	P31	Refract Cool

## Vermont State Science & Math Fair Participants 2012

### Mater Christi School, Burlington

Mark Pendergrass

Carolyn Cutting	7	S05	Memorizing Primary Colors
Paige Inslee	7	S09	You Break It You Buy It!
Emily Lyman	8	S12	Guilty?
Chris Neimeth	6	S15	Age and Accuracy Change?
Connor Plante	8	B48	DOES VIDEO GAMING INFLUENCE ONES SURGICAL SKILLSET?
Beatrice Shlansky	6	G07	Is This A Stick-Up?

### Millers Run School, Sheffield

Phillip Heinz

Issac Surridge	8	P30	Fun with Insulation
Brendon Utley	7	P35	Isul-mania

### Northfield Middle High School, Northfield

Amy Urling

Emily Fish	11	B23	The Effect of Pharmaceuticals on the Activity and Movement of Bacteria in Wastewater
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Cynthia Tomczyk

Morgan Vaudrien	11	C20	The Effect of Salinity on the Solar Heating of Water
Ian Albee	11	B03	The Effect of Heat on the Chirping Frequency of Acheta Domestica
Kristina Bennett	11	B10	The Effect of Varying pH on Bacterial Growth
Luke Farley	11	C05	The Effect of Different Concentrations of Sulfuric Acid on the Strength of Pine Wood
Mehgan McMullen	11	S13	The Effect of Age on Memory
Emmalee Osborne	11	B44	The Effect of different concentrations of Methylparaben (Mold Inhibitor) on the Growth of
Pearl Weggler	11	B57	The Effect of Inulin on the pH Change in Fermenting Whole Milk and Lactaid Milk

### Rice Memorial High School, South Burlington

Sharon Boardman

Alayna Hauke	12	GP06	Weather and Water Quality
Basa Zvarova	12	GP06	Weather and Water Quality

### Rutland High School, Rutland

Ann Marie Mahar

Brittany Alvarez	11	B04	Winning By a Neck
Emily Andrulat	11	B05	Soak Up the Sun? How UV Light Affects Cellular Growth

## Vermont State Science & Math Fair Participants 2012

Lena Cohen	11	B15	Fertilizer is Bad
Dylan Conboy	11	B17	Salts and Saliva
Shane Duboff	11	B21	The Disappearing Tooth
Eric Godzik	11	C06	Acidic Snow Around Vermont
Jenna Keith	11	C10	Temperature's Effect on Battery Life
Lisa Ogorzalek	11	P20	Musical Water Glasses
Sara Ogorzalek	11	P21	Radiating Cell Phones?
Cameron Pierce	11	C13	The Effect of Temperature on Primary-Cell Battery Duration
Olivia Towne	11	B54	Is It Really Clean?
Dominic Wysolmerski	11	P39	Does String Really Matter?

### Dawn Adams

Sean Babcock	10	M01	Computer Power Usage
Jonah Bissell	11	P02	"How High?"
Annika Conway	11	P05	Gettin' into the Spin of Things
Austin Cozzens	11	B18	Water to Fuel
Renee Cruise	11	B19	The Curliest Curl
Hannah Franzoni	11	B24	Orange or Orange Juice?
Sara Henni	11	C08	Fabric Meets Dryer
Zachary Phelps	11	P24	Crazy Craters
Lauren Phillips	11	C12	Fabric Frenzy
Dawn Rauch	11	S16	Just Clowning Around
Aaron Rhodes	11	P27	Bunt Ballin'
Danielle Walters	11	B56	What Does Your Cleanser Do?
Josh Wight	11	M06	AutomatiCraft
Dakota Wright	11	P38	Helicopter Speed Trials

### Debra Hathaway

Shannon Alexander	11	C01	Dawn to the Rescue
JR Densmore	11	C04	Acid Strength and Electrical Conduction
Carly Ferro	11	P09	The Traveling Golf B
Taylor Hough	11	C09	Which Brand of Makeup Lasts the Longest all
Sara Roundy	11	C14	Reactions of different metals used to make jewelry
Cody Rankin	10	P26	The Velocity of Waves

### Jody Sabataseo

Kevin Dalglish	11	C02	Bounce Height of Penn
Ira Earle	11	P08	Aluminum Bat vs. Wood Bat
Josh Pendleton	11	P23	Shutter Speed
Zack Stevens	11	C18	Compounds of Sports Drinks

### Susan N Ponto

Nicholas Sweet	10	P32	Rate of oxidation in different metals
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## Vermont State Science & Math Fair Participants 2012

### South Burlington High School, South Burlington

Curtis Belton

Deema AL Namee	9	B01	Minimizing Bacteria in Thawing Of Meats
Ahmet Akgul	10	B02	Subliminal Messaging
Mrinal Asthana	9	B06	Optimizing Bioremediation
Matt Baechle	10	B07	SODIS Water Disinfection
Jack Barron	10	B08	The Practicality of Bottled Water
Ronak Bhagat	10	B11	Leaching Water Bottles
Hadley Clark	10	B13	Swim to Breathe
Eliana Cohen	10	B16	The Accumulation of Bacteria on Cloth Wrist Bands
Sierra Cooper	10	S04	Subliminal Messages
Michael Dickout	10	B20	Does Dirt Accumulation on Leaves Affect Crop Growth
Samantha Donovan	10	S06	Can Gestures Persuade?
Sarah Ferry	10	B22	Liquid Calories in Relation to Body Mass Index
Eric Goodman	10	B26	Effects of Not Bathing on Bacterial Growth
Alexandra Groen	10	B27	Decomposing Plastics
Quentin Heinzer	10	B28	Coliform Bacteria in Vermont rivers and Streams
Daniel Hellen	10	B29	Zebra Mussels' Effect on Phosphorus Levels
Benjamin Jewkes	10	S10	Teaching Humans
Raihan Kabir	10	B33	The Effectiveness and Viability of Arsenic Bioaccumulation
Sabina Latifovic	10	S11	Perception of Beauty in Regard to Facial Symmetry
Maraika Lumholdt	10	B34	Music Preference and Emotional Activity (Heart Rate)
Aiden McGrath	10	B36	Garlic's Effect on Tomato Blight
Connor McLenithan	10	G04	The Effects of Rising Acidity in Rain Water on Soil Erosion
Sonny Monteiro	10	B38	How Earthworm Affect Growth of Plants Through Non-point Source Pollution?
Basundhara Mukherjee	10	B42	The Effectiveness of BioSand Filters on Filtration and Disinfection of Drinking Water
Tristan Ohlson	10	B43	The Inhibitory Effects of Allium vineale (Garlic) on Oscillatoria (Cyanobacteria)
Zach Piper	10	B47	How Sound Affects Plant Growth
Hunter Riehle	10	G06	Ski Area Run off and Water Quality
Max Robbins	10	B50	Food Preservation: Preserving Inside of the Fridge
Sara Ruch	10	B51	The Likelihood of Genetic Mutations of Drosophila Melanogaster Upon Exposure to Cigarette
Gunther Schuler	10	C15	The Energy Densities of Various Biofuels
Yuki Soga	10	S17	Media and Memory
Talia Solomon	10	B52	The Effects of CO2 On Fruit Preservation
Moritz Thali	9	B53	The effect of the freezing point on grass growth
Chatham Wilkings	10	B58	Can Oyster Mushrooms Reduce Hydrocarbons in Urban Run-Off?
Courtney Wright	10	G09	Biodegradability of Packaging Materials

## Vermont State Science & Math Fair Participants 2012

### Saint Mary's School

Michelle Eagan

Ciara Eagan	6	GP05	Germ Invasion
Maryann Pohlen	6	GP05	Germ Invasion

Melissa Caligiuri

Olivia Morana	5	B40	To Dine or Not To Dine?
Andrea Boe	6	P03	Attraction & Repulsion
Brian Kiernan	6	P15	Catapults

### St. Francis Xavier School, Winooski

Mary Ellen Varhue

Justin Beaudoin	8	P01	Son of the Sun
Christian Brunelle	8	P04	Got Fabric?
Joey Hester	8	P11	Juicy Fruit
Ryan Hester	7	P12	Windy Washers
Curtis Ianni	7	P13	Super Panels
Brent Jacobs	8	P14	Spinning Out
Ben McCormick	8	C11	Zip Zap Soil
Robinson McCormick	7	P16	Flash
Sam Myers	8	P19	Green Roof
Marlynn Serwili	8	C16	Chemically Bright
Nathalie Simo	7	C17	Stain Be Gone
Ava Simonds	8	P29	Give Bricks a Chance
Viann Tran	8	B55	Feathers
Alex Trudeau	8	P34	Burn Baby Burn
Owen Wood	8	P37	Expansion

### The Renaissance School, Shelburne

Eve R. S. Dubois

Ben Blackmore	5	S02	Renewable Vermont
Eliza Jackson	6	B30	Natural vs. Artificial Flavors
Abigail Jacunski	5	B31	How the Human Ear Affects Your Center of Balance
Liam Lustberg	6	B35	Fun Foods
Regan MacKay	5	G03	Snowflakes!
David Melcumov	5	P18	Magnetic Strength in Heat and Cold
Caleb Morehouse	6	S14	Smiles: real or fake?
Caleb Oliveira	5	G05	Dissolved Oxygen in the Lake
Stella Pappas	5	P22	Whatever Floats Your Boat



## Vermont State Science & Math Fair Participants 2012

### **Weathersfield School, Ascutney**

David E. Lambert

Amber DeBartolo	8	C03	Do Chemicals Affect the Rate of Water Evaporation?
Samuel Hall	8	C07	Producing the Fuel of the Future: Hydrogen
Madeleine Morse	8	B41	The effects of different amounts of carbon dioxide on plants

### **Windsor High School, Windsor**

Catherine Engwall

Abby Millard	9	B37	Plants and Acid Rain: Exploring the use of fertilizer to reduce negative effects
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Jennifer Townsend

Nicole Dulac	11	P07	Effect of shape on flow rate
Kellie French	12	B25	Methods of Filtering Water in Third World Countries
Nathaniel Furman	12	S07	Family Structure and its Effects
Tucker Gilman	11	M02	Per Battery Efficiency of Various CPU Clock Speeds
Rachel Meagher	11	P17	How Surfaces Affect the Flow Rate of Water
Gailin Pease	10	B46	The Effect of Aspirin on Cellular Respiration in Yeast
Winthrop Townsend	12	P33	Airfoil Surface Textures
Matthew Tufts	12	M05	Percentage of Runs Prevented: An Alternative Baseball Statistic
Daniel Wierzbicki	12	P36	How Colors of the Light Spectrum Affect Temperature

### **Woodstock Union High School, Woodstock**

Patricia Murray

Jane Goodwin	10	M03	Exotic Spheres in 4-dimensional Hyperspace
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