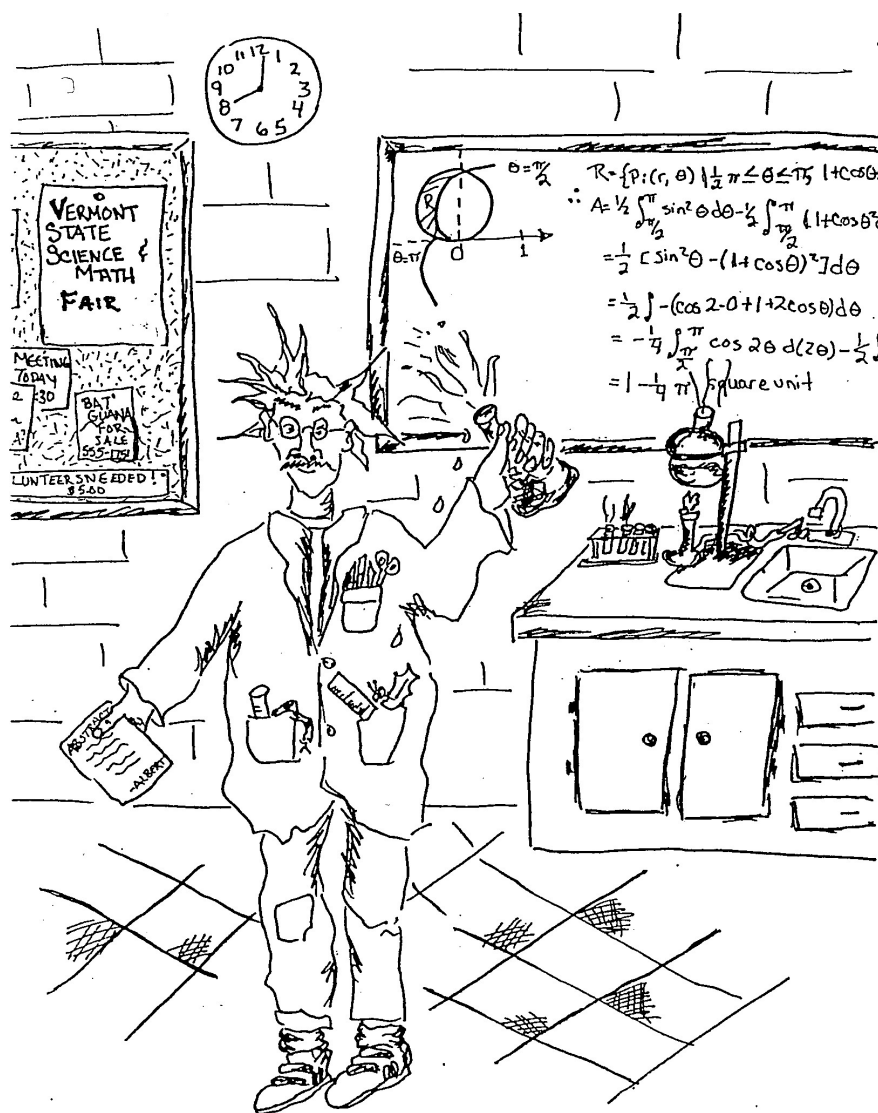


2011 Vermont State Science & Math Fair

"Inspire and reward Vermont middle and high school students doing high quality research"



Saturday April 2, 2001

Norwich University, Northfield, Vermont

51st Annual Vermont State Science and Mathematics Fair

Awards Ceremony Program

Opening words by Professor Scott Page, Norwich University

Presentation by Matthys Levy: "The four I's, "Ideas, Imagination, Inspiration and Invention"

Acknowledgements of people and organizations

Presentation of certificates of participation and recognition by Tricia Finkle

Presentation of VPA medals and scholarship by Tricia Finkle

Presentation of Next Generation Scholarships by college representatives and Carl Pinkham

Presentation of Vermont Sponsor Awards and national awards by Carl Pinkham

Presentation of ISEF Affiliation awards by Alan Giese

Presentation of US Government and US Military awards by Carl Pinkham and US Military representatives

ISEF Finalist announcement by Carl Pinkham and Alan Giese

Acknowledgement of organizations who made this event possible

In addition to the Vermont Principals' Association, organizations across Vermont partnered with us to provide the awards and scholarships presented at the Awards Ceremony. (see the next page) Many more companies and universities are represented by the volunteer judges we had this morning.

Acknowledgement of people who made this event possible -- Way too many to get them all, but,

Co-directors Tricia Finkle and Carlos Pinkham

Tamara Jones, responsible for facility arrangements, set up and signage, and student volunteers

Alan Giese, responsible for many aspects of ISEF, including SRB work and ISEF prizes

Cathy Frey and Elizabeth Mathai, responsible for scoring supervision and reporting

Chico Hernandez, Executive Aide and facilities assistant

Louisa Tripp, who hosts on line forms

Scott Page, the Award Ceremony MC and producer

Jon Scherbatskoy, fair day media support specialist

All the judges

And Bob Johnson, Wendy Scott and others at the Vermont Principals' Association

Awards Program, April 2nd , 2011

VPA 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
and Norwich University's NG Scholarship
winners
Norwich University - top 5 juniors

VSSMF Local Awards

American Chemical Society, Green Mountain
Section
Dufresne Group
Entergy Vermont Yankee
Ethical Science and Education Coalition
Green Mountain Water Environment
Association
GroSolar
Haematologic Technologies
Kalow Technologies
Nathaniel Group
New England Institute of Food Technologists
Northeast Branch, American Society of
Microbiology
NRG Systems
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
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
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 52 financial partners in Vermont who provide gifts or grants from \$50-\$1000. This year, these partners provided over \$14,000 in support. Money also comes from 25 award sponsors in Vermont who provide over \$6000 in prizes. In addition to the above money raised by VSSMF, four Vermont colleges provide Next Generation Scholarships totaling over \$800,000. Finally, our affiliation with competitions beyond Vermont provides another \$14,000 to Vermont students and their teachers.

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 PARTNERS

Abacus Automation Bennington	Environmental Compliance Services Brattleboro	Med-Associates St. Albans
All Cycle Waste, Inc. Williston	EWA Government Systems, Inc. Montpelier	New England Research White River Junction
Applied Research Associates Randolph	Fairbanks Scales St Johnsbury	Northfield Savings Bank Northfield
Ascension Technology Milton	FairPoint Communications South Burlington	Norwich University Northfield
ATC Associates Williston	General Dynamics Armament and Technical Products Burlington	Norwich University Applied Research Institute Northfield
Biomass Energy Resource Center Montpelier	Green Mountain Power Corporation Colchester	Phase Forward Montpelier
Castleton State College Castleton	Haematologic Technologies Essex Junction	PKC Corporation Charlotte
Chroma Technology Corp Rockingham	Hallam, ICS South Burlington	Plasan, Composites Bennington
Concepts NREC White River Junction	Husky Injection Molding Milton	Plasan, USA Bennington
DeWolf Engineering Montpelier	IVEK Corporation North Springfield	Resource Systems Group White River Junction
Dufresne Group Windsor	Johnson State College Johnson	Revision Military Essex Junction
EF Wall Barre	Kalow Technologies North Clarendon	Rock of Ages Graniteville
Engleberth Construction Colchester	Lyndon State College Lyndonville	Saint Michael's College Colchester
Entergy Vermont Yankee Vernon		Stantec South Burlington

TDS Telecom
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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
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Waterbury

VERMONT AWARD SPONSORS

Vermont Principals' Association
Montpelier

American Chemical Society, Green
Mountain Local Section
Burlington

Dufresne Group, Consulting Engineers
Windsor

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

New England Institute of Food
Technologists
Natick, MA

Northeast Branch, American Society for
Microbiology
Northfield

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 Organization of Nurse Leaders
Montpelier

Vermont State Science & Math Fair 2011 List of Participants

Avalon Triumvirate Academy - Amanda F. Gifford

TJ Beaumier	8	P03	Up, Up, and Away
Alexis Boyd	7	B54	Let the Music Play
Hunter Griffin-Barnes	8	C16	Snow White and The Seven Whiteners
Keagan McNamara	5	B65	Sleep On It
Kurt McNamara	8	P23	Get Through It!
Noah Spoth	5	C32	Pepsi V.S. Coke
Stephen Terry	11	G06	Electric Crystals
Alden Woodard	8	B30	Trophy Deer Antlers - Where Do They Grow?

Christ The King School - Amy Wright

Dominic Romano	6	M01	JavaScript Changes And Effects
Sara Romano	8	B21	The Nose Knows Smell but how about Taste?

Fair Haven Union High School - Shaun Ketcham, Michael Schwaner, Ben Worthing

Cassidy Auger	10	B01	Buffers
Celina Bronson	11	GP02	What Is In Your Mouth?
Maria Burt	11	GP03	"Wood" You Like Whiter Teeth?
Michael Gose	11	GP03	"Wood" You Like Whiter Teeth?
Dustin Lewis	11	GP02	What Is In Your Mouth?
Devin Paradis	9	P29	How Skateboard Bearings Affect Speed
Amanda Tucker	10	P38	A Better Way For Vermont's Wind Energy

Fredrick Tuttle Middle School - Amelia Lutz

Nevil Desai	7	C08	The Effect of Propane Gas Burning Rate on the Efficiency of Heating
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Green Mountain Union Middle High School - Allan Garvin, Karen Surma

Mary Anderson	8	GP11	How's the Weather Up There?
Al Ashe	7	GP05	The Stainbusters
Sarah Baker	7	P01	Baker's Ovens
Austin Barrows	8	GP06	Are Animals Colorblind?
Tessa Bushey	8	GP16	Optical Illusions
Louis Dufresne	7	GP05	The Stainbusters
Samantha Dulaney	8	GP06	Are Animals Colorblind?
Rylee Ewald	6	GP07	Counting Those Calories!
Maddie Fulkerson	8	GP09	Black and White vs. Color
Mariah Gray	8	GP09	Black and White vs. Color
Vanessa Griswold	8	GP10	Is It In You?
Abby Hart	8	GP11	How's the Weather Up There?
Taylor Hendee	8	GP17	Global Warming vs. Algae
Anna Huckins	6	GP07	Counting Those Calories!
Jared Jackson	7	P14	Bombs away
Ethan Lawrence	8	B42	Orchid Growth
Ian Martel	8	P22	The Forces of Flight
Sarah Martel	7	GP13	Acid Rain's Affects on Plants
Emily McNamara	8	GP15	Did You Remember That?
Kristie Palowski	8	GP16	Optical Illusions
Alecia Rokes	8	GP17	Global Warming vs. Algae
Hannah Sheere	7	GP13	Acid Rain's Affects on Plants
Courtney Sheldon	8	GP18	Sleep Deprivation
Jordan Stewart	8	GP10	Is It In You?
Breanna Vittum	8	GP18	Sleep Deprivation
Samantha Wood	8	GP15	Did You Remember That?

Hinesburg Community School - Maria Duryea, Stephanie Konowitz

Chelsea Aube'	8	C02	Paint Vs. Rust
Maia Bertrand	8	P04	Particles and Light Waves: The Blue Sky
Morgan Boss	8	B63	Flavor Savor
Marjorie Brown	6	S02	The Apple Doesn't Fall Far From the Tree
Emily Coffin	8	G02	A Breath of Fresh Air... or Not?
Jeremiah Cory	7	C06	Insulating Science
Lindsay Kimball	7	B59	Lenghy Lungs- The comparison of the capacities of lungs to age
Evelyn Needham	8	P26	Sunny Systems: the Effect of Solar Energy on Hot Water Systems
Tyler VanDyk	8	P39	Magnet Mayhem: The effect of Temperature on a magnets reach of potent strength.
Cooper Willsey	8	P41	

Homeschool - Christine Colella, Robert Stockett

Elise Huntley	11	GP12	The Comparison between E. coli concentrations to land uses in Vermont through GIS Analysis
Lexie Huntley	8	GP12	The Comparison between E. coli concentrations to land uses in Vermont through GIS Analysis
Jason Stockett	10	P36	Go Green with Magnetic Braking!

Main Street Middle School - Amy Kimball, Jesse Wolfe

Paige Brigham	8	GP01	How does deforestation affect temperature?
Jessica Collins	8	GP04	Microwaved Beans
Abigail Huntsman	7	B09	Which Burger is Better?
Beth Maguire	8	GP04	Microwaved Beans
Tomas Rogel	8	B62	What is the Difference in Eye Dilation Reaction Time Between Genders?
Christina Tang	8	GP01	How does deforestation affect temperature?

Mater Christi School- Michelle Donlon

Tara Gallagher	8	P11	The Power of Lightbulbs
Sally Hoerr	8	S06	Moved By Music
Abbe Kind	8	P18	Little Green Houses optimization of insulation
Miranda Orcutt	8	C26	Stomach Ache? Take a... Tums?
Molly Palmer	8	C27	Equation for Water
Liam Quinlan	6	B61	The Eggsperiment for Eggscellent Egg Laying
Marcus Roberge	6	P34	Floating Magnets
Matthew Sadler	7	S12	Psych My Tempo
Lena von Buren	6	P43	Shake 2 Break
Margaux von Buren	8	P44	Saving the Grid

Mill River Union High School - Carolyn Raiford

Anna Baker	10	B48	Effects of Radiation on Spirogyra
Morghan Charron	10	B56	"Digging Away"
Alexandra Dansereau	10	C07	A Bowl of Potato Chips
Abigail Elliott	9	P09	Gasification
Brad Fiske	11	B57	Making the Cut
ThomasHeffernan	10	B40	Hydroponics vs Soil
Ashley Johnson	10	B11	Beans Get a Boost
Sarah Socia	10	S15	The Science of Art

Northfield High School - Cynthia Tomczyk

Micaïla Baroffio	11	C03	The Effect of Temperature on the Amount of Vitamin C in Lemon Juice
Nathan Budgor	11	B03	The Effect of Different Amounts of Light on the Decay Rate of Bananas
Molly Clark	11	B37	Effect of Music on Plant Growth
Emily Dumas	12	C12	The Effect of Oxygen on the Oxidation of Apples

Northfield High School - Cynthia Tomczyk, Amy Urling (Continued)

Keri Giguere	11	P12	The Effect of Different Color Filters on the Amount of Energy Produced by a Photovoltaic S
Grace Hatch	11	B39	The Effects of Music on Plant Growth
Emily Herring	11	B41	The Effect of Different Amounts of Vinegar on Bean Plant Growth
Keegan Moynihan	11	B60	The Effect of Temperature on Mealworm Metamorphosis
JenniferNeedle	11	B52	The Effect of UV Light on Bacteria Growth
Logan Prior	11	B43	Effect of Different Concentrations of Salt Solution on Plant Growth
Kate Skinas	11	B44	The Effect of Acid Rain on Natural Plants
Jessica Slocum	11	B45	The Effect of Different Colored Light Sources on Plant Growth
Billy Whaley	11	B46	The Effect of Different Percentages of PowerAde in a Solution on the Height of Mung Bean P
Mallory Wright	11	B47	The Effect of Various Amounts of Coffee on the Hight of Bean Plants

Rutland High School - Dawn Adams, Tim Gilbert, Susan Ponto, Deborah Rodolfy

John Cahee	11	P06	Which Light Color Increases the Effectiveness of Night Vision Goggles
Kate Candon	11	C04	I Scream, You Scream, We All Scream For... Salt?: The Effect of Different Salts on Homemad
Reilly Candon	11	B55	Which Cleaning Substance is Best on Teeth?
Caroline Corsones	11	C05	Curly V. Straight: It's All About pH
Lindsey Cox	11	P07	The Height of the Bounce
Matthew Feiereisen	11	C13	Hand Warmers and Their Wonders
Morganne FitzGerald	10	B49	Bacteria of the Human Body
Samuel Fogg	11	P10	Insulation's Cost and Resistance to Convection and Conduction
Amanda Hill	11	S05	How Well Can You Multitask?
Danny Hogenkamp	11	P13	Where the Wind Blows

Rutland High School - Dawn Adams, Tim Gilbert, Susan Ponto, Deborah Rodolfy

(Continued)

Colomb John	11	C18	Dry Ice is Sublime
Kylie Keune	11	C19	Natural Remedies for Dry and Damaged Hair
Kathryn Kurchena	11	P19	Advantages of Hydrodynamic Swim Suits
Andrew Laird	11	C20	Check the Temp
Brentt Lamb	11	P20	Magnetic Effects on a Rail Gun
Alex Lynn	11	P21	Measuring Knee Tension
Michael McCarroll	10	C22	The Race For Relief
Kelsey McKay	11	C24	Krazy Ketchup
Ben Peacock	11	P30	Fluid Mechanics of Weirs
Erin-Kiernan Reilly	11	P31	Liar, Liar, Fabric on Fire!
Katie Reuther	11	P33	Structure and Function: How a Horse's Conformation Affects its Performance
Marie Schwalbe	11	B24	Phytoremediation
Cassie Smith	11	B25	Non-Antibiotic Defenses
Jacob Swane	12	B26	Effect of Salt on the Growth of Bacteria
Garth Vest	11	G07	Light Pollution in Rutland County
Jenna Wang	11	S17	Swim Science
Jessica Willman	11	C34	Paint Binders
Grace Wright	11	C35	Going for the Gold? Electrolytes Will Get You There
Kristina Zaloudek	11	B34	Bacteria of the Mouth

South Burlington High School - Curtis Belton

Aya AL-Namee	12	C01	Periodic trend in Dehydrocoupling Catalysis
Sam Barritt	10	B53	Hearing Loss in Teens
Noah Bugbee	10	B36	Which Plants to Root For?
Neel Desai	10	G03	The Wonders of Aeroponics
Olivia Ferro	10	C14	Surface Tension

South Burlington High School - Curtis Belton (Continued)

Matthew Gilmartin	10	B06	Examination of Water Quality in the Winooski River
Melissa Gingras	10	B07	A Study of Reaction Time and Brain Function in Relation to Sleep
William Gregoire	10	G04	The Effects of Elevation on pH Content of Precipitation and Waterways in the Champlain Val
Michael Guo	10	B51	Testing the Mutagenicity of Household Chemicals
Noah Hall-Potvin	9	B58	Effects of Sugar and Caffeine on Heart Rate
Katie Hango	10	B38	The Effects of Oil on Plants
Rebecca Janney	10	B10	Cleaning Out the Oil
Lejla Kelestura	10	B64	The Effect of Music on Memory
Raina Langevin	10	S07	The Effect of Stress on Memory
Theophila Lee	11	B13	The Effect of Constricting Prostanoids in PCOS- induced endothelial dysfunction of adult f
Caitlin Long	10	B14	Soggy Cheese
Jodie McMahon	10	B16	Environmental Toxins Impact on Thyroid Cancer Cell Characteristics
Jaffer Merali	9	S09	Do you Remember...
Katie Merrick	10	S10	Cat Psychology--Clicker Training vs. Compulsion Training
Avni Nahar	10	B17	The Allelopathic Effects of Marigolds on Beneficial Bacteria
Haley Newman	10	S11	How Color Affects Your Memory
Nikko Pasanen	10	G05	The Effects of Fertilizer in Turf Management
Riya Patel	10	B18	The Optimization of Bioremediation
Brandon Philbrick	10	C28	Commercial Water Filter's Effect on Tap Water
Jackson Pine	9	B19	The Relationship between Exercise and Lung Capacity
Vishnukumaar PremSankar	10	B20	The Effect of Synergy
Rajit Sachdeva	10	B22	soap vs hand sanitizer
Lena Sadler	10	C30	Break It Down - Breaking Down the BP Oil Spill

South Burlington High School - Curtis Belton (Continued)

Forrest Scharmer	10	B23	Efficiency and Effectiveness of Low-Tech Water Purification Methods
Sharon Schuppe	10	S13	Subliminal Stimuli
Miriam Stats	10	S16	Perception of Beauty: Facial Symmetry
Neira Valentic	10	B28	Effects Sunlight/Drier has on Bacteria Found on Clothing
Christa Weaver	11	S18	The Effects of Advertising through Technology on Vermont Students
Emma Wilkinson	10	B29	Effective Acne Medications
Samantha Wulfson	10	B31	The Effects of Nicotine and Galantamine on the Developing Nervous System of Chicken Embryo
Cody Yu	10	B32	Effects of Barley Straw on Algae Populations
Aleksandra Zakrzewska	10	B33	The Effect of Glucose Taste on Athletic Performance
Yaxin Zhang	10	B35	Fluffy Green Bread

St. Francis Xavier School - Mary Ellen Varhue

Justin Beaudoin	7	P02	The Pow in Power
Michelle Bolger	8	B02	Wreckless Runoff
Christian Brunelle	7	P05	Got Insulation?
Fleur Diambou	8	C10	Eggs On Break
Jenna Flint	8	B50	Microbe Heroes
Joseph Hester	7	B08	Investigate
Brent Jacobs	7	P16	Perception
Ben McCormick	7	B15	Blow 2 The Beat
Sam Myers	7	P24	On The Line
Elise Prehode	8	P32	Snap Shot
Marlynn Serwili	7	C31	Rotten...?
Ava Simonds	7	P35	Got Domes?
Viann Tran	7	B27	Hear It?

St. Francis Xavier School - Mary Ellen Varhue (Continued)

Alex Trudeau	7	P37	Clamation Station
Owen Wood	7	P42	Trusses

The Renaissance School - Eve Dubois

Matthew Andrew	6	S01	Chew to Remember? Walk Backwards to Sharpen Thinking?
Alexander Duchac	6	C11	Abating Phosphorus Runoff
Henry Harder	6	S04	Subtly Subliminal
Eliza Jackson	5	P15	Pushing to the Limit
Liam Lustberg	5	S08	How Music Affects Human Emotions
Tristan Nagiba	6	P25	Sailing Over Science

Twin Valley Middle School - Jessica Hammond

Wyatt Shippee	8	S14	Paid for Schoolwork?
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Weathersfield School - David Lambert

Nick Diak	8	C09	Accuracy of Potato Gun Propellents
Lingna Horton	8	C17	Stain Removal in Various Detergents
Abby Millard	8	C25	Do fluoride toothpastes, treatments, and rinses protect your tooth enamel?
Flynn Williams	8	C33	Absorbing Motor Oil

Windsor High School - Jennifer Townsend

Lucie Bodnar	11	G01	Effects of snow melting substances on grass growth
Danielle Dulac	11	P08	Mass and Surface Tension
Kellie French	11	C15	Which Household Product Best Prevents the Formation of Rust?
Gregory Kennett	12	P17	Exploring the Nature of Concrete
Sherrie McHugh	12	C23	Octane Accuracy
Thomas O'Neill	11	P27	Weight Distribution and Speed
Jacob Page	12	P28	Planes, Grains, and Alternatives
Nikki White	12	P40	Temperature and Surface Tension

Woodstock Union High School - Jen Stainton

Annie Arthur	9	GP19	Mercury in Leaf Litter
Marissa Farbman	9	GP08	Mercury Concentrations in Darner Dragonfly Nymphs vs. Soil
Annie Flower	9	B04	A Comparison of Mercury Concentration in Human Hair and Dragonfly Nymphs
Shelby Gault	9	B05	Mercury Levels in Dragonfly Nymphs from Maine vs. Vermont
Jane Goodwin	9	S03	The Power of Subliminal Messages
Elizabeth Kamb	9	B12	Are Mercury Levels Higher in the Hair of Omnivores or Vegetarians?
Sophia Leiter	10	C21	The Ethanol Experiment: Is Paper a Feasible Alternative to Corn in the Production of Ethanol
Finn McFarland	9	GP14	A Comparison of Mercury Concentration in Human Omnivore and Vegetarian Hair
Anna Ramsey	9	GP14	A Comparison of Mercury Concentration in Human Omnivore and Vegetarian Hair
Kathleen Sheppard	9	GP08	Mercury Concentrations in Darner Dragonfly Nymphs vs. Soil
Erin Wood	9	GP14	A Comparison of Mercury Concentration in Human Omnivore and Vegetarian Hair
Sam Zonay	9	GP19	Mercury in Leaf Litter