

ISEF - International Science and Engineering Fair

Los Angeles, CA - May 10-16, 2014

Finalists

Twin Cities

1103	Amrita Mohanty	Grade 11	Schwann cell differentiation from stem cells of Neurofibromatosis patients and normal controls
1131	Aditi Das	Grade 12	Developing Transgenic Sugar Beet by Agrobacterium-mediated Gene Transfer
1136	Heather J Stone	Grade 12	Globally Utilizing Perennial Intermediate Wheatgrass

Western Suburbs

1050	Carolyn K Jons	Grade 10	Improved Efficiency of Steam Generation Using Carbon Nanoparticles
1082	Jason Sylvestre	Grade 12	VoltX 2.0, A Rescue Robot That Can Locate and Extract Victims
1052	Jacob W Levy, Sofie M Kim	Grade 11	Greener, more efficient synthesis of medicinally applicable 1,2,3-triazole derivatives

St. Paul

1056	Rosemary O Olatunbosun	Grade 12	Recycling Amberlyst-15 Beads
1135	Nicolina Mao	Grade 12	Sickly Spuds

Alternates

Twin Cities

1st Alternate

1071	Max Ylitalo	Grade 10	Garbage Reduction to Energy Production: Converting waste paper to cellulosic ethanol
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2nd Alternate

1107	Christopher M Santilli, Ryan J Kibler	Grade 12	Morphine's Effect on Macrophage's Ability to Perform Phagocytosis
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3rd Alternate

1111	Maedin F Abegaz	Grade 10	The Effects of UV Radiation, Vindicator +, and Hydrogen Peroxide on Escherichia coli, Bacillus subtilis, and Serratia marcescens: Phase I and Phase II
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Western Suburbs

1st Alternate

1024	Bhargavi Papisetty	Grade 12	Predictive Analytics for Agricultural Commodity Pricing in India using the ARIMA Model
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2nd Alternate

1058 Claire M Simpson Grade 12 Synthesis of cyclo-L-tryptophan-L-proline in anticancer drimentine C

3rd Alternate

1046 Claire M Drysdale Grade 12 Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy

St. Paul**1st Alternate**

1061 Brian W Yang Grade 12 Heterocyclics

2nd Alternate

1117 Serena Jing Grade 9 The Silver Bullet: using silver nano-particles to reduce bacteria in the kitchen

Sponsors Awards

Winners must be present at the awards ceremony & have photo taken at project with award or an alternate will receive the award

Platinum Level - Plaque**3M Sponsor Award****Winner**

Plaque & \$500.

1058 Claire M Simpson Grade 12 Synthesis of cyclo-L-tryptophan-L-proline in anticancer drimentine C

Alternate

Floret ribbon

1050 Carolyn K Jons Grade 10 Improved Efficiency of Steam Generation Using Carbon Nanoparticles

1046 Claire M Drysdale Grade 12 Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy

Gold Level - Plaque**Ecolab Sponsor Award****Winner**

Plaque & \$500

1087 Easton J McChesney, Wolfgang Ofstedal Grade 11 Protecting Streams, Lakes, and Rivers: Engineering a Breakthrough Filter to Remove Phosphates From Stormwater Runoff

Alternate

Floret ribbon

- 1135 Nicolina Mao Grade 12 Sickly Spuds
- 1131 Aditi Das Grade 12 Developing Transgenic Sugar Beet by Agrobacterium-mediated Gene Transfer

Medtronic Sponsor Award**Winner**

Plaque

- 1083 Kevin Zheng Grade 12 Creating a Cavity-Dumped Helium Neon Laser

Alternate

Floret ribbon

- 1078 Evelyn G McChesney, Zachary L Donahue Grade 10 Engineering a Hybrid Robotic Prototype: An Innovative use of Gravitational and Solar Energy
- 1070 Craig M Sanislo Grade 9 Stretching a Tank

City of St. Paul Youth Fund**Winner**

Plaque

- 8097 Emilia F Topp-Johnson Grade 8 Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen Ustilago maydis

Silver Level - Plaque**Dow Water and Process Solutions Sponsor Award****Winner**

Plaque

- 1096 Leighton Zhao Grade 11 Experimental Determination of the Wall Loss Rate of Fractal Agglomerate Aerosols

Alternate

Floret ribbon

- 1087 Easton J McChesney, Wolfgang Ofstedal Grade 11 Protecting Streams, Lakes, and Rivers: Engineering a Breakthrough Filter to Remove Phosphates From Stormwater Runoff
- 1046 Claire M Drysdale Grade 12 Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy

Bronze Level - Plaque**ATK Alliant Techsystems Sponsor Award****Winner**

plaque

1093 Yun J Lee Grade 10 The comparison of electricity levels related to the anode surface area of Microbial Fuel Cell using a benthic mud sample

Alternate

Floret ribbon

1073 Darartu M Gamada, Rustam Kosherbay Grade 10 Fabricating a Miniature Langmuir Trough to Facilitate Climate Change Studies

1040 Trevor J Larsen, Nath Samaratunga Grade 12 Using histology to investigate stem cells as a treatment for bronchiolitis obliterans

Isthmus Engineering & Manufacturing Sponsor Award

Winner

Plaque

1082 Jason Sylvestre Grade 12 VoltX 2.0, A Rescue Robot That Can Locate and Extract Victims

Alternate

Floret ribbon

1080 Christian P Peterson, Karl W Schmaltz Grade 12 Bedini SG Motor

1073 Darartu M Gamada, Rustam Kosherbay Grade 10 Fabricating a Miniature Langmuir Trough to Facilitate Climate Change Studies

Midway Party Rental Sponsor Award

Winner

Plaque

8042 Steven J Franklin Grade 8 Audio Game: Adapted Video Game for the Visually Impaired

Alternate

Floret ribbon

8048 David C Jaksha Grade 8 What type of water conducts electricity the best

8055 Bennett Poganski Grade 8 Substance that Breaches the Gap Between Liquid and Solid

Mintahoe Catering and Events Sponsor Award

Winner

Plaque

1110 Elliott C Weiler Grade 12 Correlations Between Genetic Markers and the Gum Disease Periodontitis

Alternate

Floret ribbon

1107 Christopher M Santilli, Ryan J Kibler Grade 12 Morphine's Effect on Macrophage's Ability to Perform Phagocytosis

1111 Maedin F Abegaz Grade 10 The Effects of UV Radiation, Vindicator +, and Hydrogen Peroxide on Escherichia coli, Bacillus subtilis, and Serratia marcescens: Phase I and Phase II

University of Minnesota Sponsor Award

Winner

Floret ribbon

1085 Radek Chlebicki Grade 11 Bringing Science into the Realm of Dishwashing Sponges

Alternate

Floret ribbon

1042 Aisha R Cacique Grade 11 The Four Sacred Medicines and Carcinogens

1062 Pedro Grade 11 Structural Analysis of Iterated Digit Sequences and Applications in Telecommunicative Theory
Angulo-Umana

Contributing Level

Office Max Sponsor Award

Winner

Floret ribbon

6061 Stephen Grade 6 Now is the Time! A Study to Improve Diagnosis and Evaluation of Mild
Betts Traumatic Brain Injuries (Concussions) for Children 5-12 years old

Alternate

Floret ribbon

7003 Anna-Liv K Fredrickson Grade 7 Eggstraordinary Eggsperiment

6028 Jack J Schutz Grade 6 Fruit Piano

The Slattery Sales Group Sponsor Award

Winner

Floret ribbon

6054 Aiden D Regan Grade 6 Water: Drinkable or Unthinkable

Alternate

Floret ribbon

6049 Jawein D Cosey-Richmond Grade 6 Biomass

6057 Julia R Snyder Grade 6 Which Roof

Minnesota Academy of Science State Science and Engineering Fair

Projects selected to represent our region in state competition

1002 Benjamin A Farmer Grade 9 Do Cats Recognize Their Owner's Voice?

1004 Natalie A Kauls Grade 10 Food Preference of Mealworms

1009 Courtney M Anderson Grade 10 Effects of Playing a Sport or Instrument on Self Esteem

1011	Emily M Berg	Grade 10	A Comparison Of Moral Development Stages In Third Graders Versus Tenth Graders
1014	Lauren M Campbell	Grade 10	Testing the Discrepancies in the Choice Blindness Phenomenon Caused by Age and Gender
1015	Erika B Cao	Grade 10	The Difference of Spatial Reasoning, Memory, and Direction-Following-Skills Depending on Gender
1018	Noelle M Hinrichs	Grade 10	The Categorical Perception of Voice Onset Time in Regional Accents of the United States
1019	Kayla A Johnson	Grade 10	The Correlation of Highlighting and Cognition
1021	Abhishek Nayar, Stephen Kim	Grade 12	Birth of a Revolution (Part II)
1023	Noah J Pahl	Grade 10	Effects of Conformity on Isolated Participants
1024	Bhargavi Papisetty	Grade 12	Predictive Analytics for Agricultural Commodity Pricing in India using the ARIMA Model
1026	Rohan Sinha	Grade 11	Mining Healthcare Data for Behavioral Factors Affecting Cost of Chronic Care
1029	Emma C Toomire	Grade 10	Facial Symmetry's Effect on How "Attractive" Someone is Perceived
1030	Johanna G Weber	Grade 10	The Effects of Color on the Fatigue Rate of Cone Cells in the Retina
1032	Sarah Young-Church	Grade 10	Does Age Affect the Ability to Read Emotions?
1034	Chinmaey K Kelkar	Grade 10	Urea Concentration Detection
1036	Priyanka R Narayan	Grade 12	Understanding the Mechanism Behind Nanoparticle Enhanced Oral Absorption of Chemotherapeutic Drugs
1039	Minxuan Gu, Jered W Everson	Grade 12	Misorientation of the nuclear-centrosomal axis during cell polarization is an underlying factor in the pathogenesis of the primary dystonias
1040	Trevor J Larsen, Nath Samaratunga	Grade 12	Using histology to investigate stem cells as a treatment for bronchiolitis obliterans
1042	Aisha R Cacique	Grade 11	The Four Sacred Medicines and Carcinogens
1044	Maren E Decker	Grade 10	Does the tree species and moisture content in firewood affect the longevity of the fire it will create?
1046	Claire M Drysdale	Grade 12	Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy
1050	Carolyn K Jons	Grade 10	Improved Efficiency of Steam Generation Using Carbon Nanoparticles
1052	Jacob W Levy, Sofie M Kim	Grade 11	Greener, more efficient synthesis of medicinally applicable 1,2,3-triazole derivatives
1056	Rosemary O Olatunbosun	Grade 12	Recycling Amberlyst-15 Beads
1057	Merrick Pierson Smela	Grade 11	Study of the Kinetics and Mechanism of the Production of Isopropyl Xanthic Anhydride
1058	Claire M Simpson	Grade 12	Synthesis of cyclo-L-tryptophan-L-proline in anticancer drimentine C
1061	Brian W Yang	Grade 12	Heterocyclics

1062	Pedro Angulo-Umana	Grade 11	Structural Analysis of Iterated Digit Sequences and Applications in Telecommunicative Theory
1063	Luis J Guzman, Julia Joern	Grade 12	The trick to a twenty-dollar utility bill: Engineering a solar hydronics residential heating and cooling system
1065	Apurv H Shekhar	Grade 12	A Scalable Pressure Equalization Approach to Contiguous Capacity-Constrained Network Voronoi Diagrams for Disaster and Emergency Response (Year Two)
1067	Jackson D Egert	Grade 12	Passive Reclamation of Unexploited Energy
1069	Matthew R McMillan, Peter J Metzger	Grade 12	Balancing power and safety in lithium-ion batteries by designing a protocol to study protective surface films
1070	Craig M Sanislo	Grade 9	Stretching a Tank
1071	Max Ylitalo	Grade 10	Garbage Reduction to Energy Production: Converting waste paper to cellulosic ethanol
1073	Darartu M Gamada, Rustam Kosherbay	Grade 10	Fabricating a Miniature Langmuir Trough to Facilitate Climate Change Studies
1078	Evelyn G McChesney, Zachary L Donahue	Grade 10	Engineering a Hybrid Robotic Prototype: An Innovative use of Gravitational and Solar Energy
1082	Jason Sylvestre	Grade 12	VoltX 2.0, A Rescue Robot That Can Locate and Extract Victims
1083	Kevin Zheng	Grade 12	Creating a Cavity-Dumped Helium Neon Laser
1084	Zishuai Zou, Zesun Yang	Grade 12	Study of Car Door Safety and the Prevention of Further Risk
1085	Radek Chlebicki	Grade 11	Bringing Science into the Realm of Dishwashing Sponges
1087	Easton J McChesney, Wolfgang Ofstedal	Grade 11	Protecting Streams, Lakes, and Rivers: Engineering a Breakthrough Filter to Remove Phosphates From Stormwater Runoff
1088	Katie L Carlson, Kate M Carithers	Grade 12	The Environmental Effects of Iron Fertilization on Marine Life
1090	Arun Kethar, Harini Kethar	Grade 10	Mushroom Enzyme Enhancement to Boost Biofuel Production
1093	Yun J Lee	Grade 10	The comparison of electricity levels related to the anode surface area of Microbial Fuel Cell using a benthic mud sample
1094	Imogene J Silver	Grade 9	Daphnia death by triclosan pollution
1095	Jason Ung	Grade 10	The Effects of New and Used Oil on Biodiesel
1096	Leighton Zhao	Grade 11	Experimental Determination of the Wall Loss Rate of Fractal Agglomerate Aerosols
1098	Kyra N Doyle	Grade 10	The Relation Of Gender And Height To Tidal Volume
1099	Nathaniel R Farmer	Grade 9	A STEM Study of Magnetically Disturbed Blood Flow
1101	Arush Jain	Grade 10	A Novel Cardio Vascular Stent Design Utilizing Multiple Materials
1103	Amrita Mohanty	Grade 11	Schwann cell differentiation from stem cells of Neurofibromatosis patients and normal controls
1104	Geeta Rajamani	Grade 9	The Use of Well-Timed Low Intensity Activity for Type 2 Diabetics
1107	Christopher M Santilli, Ryan J Kibler	Grade 12	Morphine's Effect on Macrophage's Ability to Perform Phagocytosis

1110	Elliott C Weiler	Grade 12	Correlations Between Genetic Markers and the Gum Disease Periodontitis
1111	Maedin F Abegaz	Grade 10	The Effects of UV Radiation, Vindicator +, and Hydrogen Peroxide on Escherichia coli, Bacillus subtilis, and Serratia marcescens: Phase I and Phase II
1112	Allie L. Anderson	Grade 10	Effects of Baking on Fresh Fruit's Bacterium Surface Content
1113	Brody Bien	Grade 10	The Effects of "Home Sterilizers" on Escherichia coli.
1114	Emily N Carlson	Grade 10	Effects of organic agriculture of bacterial content of raw beef
1117	Serena Jing	Grade 9	The Silver Bullet: using silver nano-particles to reduce bacteria in the kitchen
1118	April T Kim	Grade 10	Effects of Oil and Saltwater on Bacteria Growth
1120	Kristin M Robinson	Grade 10	Bacterial Contamination in School Departments
1123	Patricia Zhao, Madison K Ernst	Grade 12	Targeting toxic waste in soil and aquatic environments: Investigating chemotactic response of Pseudomonas putida F1
1126	Lauren C Bench	Grade 10	A Comparison of the Performance of Baseball and Softball Bats
1127	Kaley M Brault	Grade 10	A Correlation of Accuracy with a Change of Gender Lacrosse Sticks
1128	Tyme T. Enright	Grade 11	Determining Water Pollution through Refractive Indices
1131	Aditi Das	Grade 12	Developing Transgenic Sugar Beet by Agrobacterium-mediated Gene Transfer
1135	Nicolina Mao	Grade 12	Sickly Spuds
1136	Heather J Stone	Grade 12	Globally Utilizing Perennial Intermediate Wheatgrass
1137	Joseph Vallin, Sunghee Lee	Grade 12	Ethylene vs. Oxygen: Optimizing the Fastest Fruit Ripening Environment
1138	Elisa B Villafana	Grade 12	Save the honeybees: Stop using neonicotinoids: Effects of the pesticide thiamethoxam on vigor, growth and development of soybean (Glycine max) crops
6002	Emily Howell	Grade 6	DogToys; What Makes a Favorite or a Flop
6008	Jake C Miller	Grade 6	Cake-Eating Redshirts, What? The Redshirt Effect on State-Standardized Test Scores in Edina
6009	Claire T Rachac	Grade 6	How left-handed people adapt in a right handed world
6019	Cali Rivera	Grade 6	The Acid Test: Assessing the effectiveness of antacids
6021	Elise Trail -Johnson	Grade 6	Which Type of Storage Container Keeps Eggs Fresh the Longest?
6032	Yeukai Zimbwa	Grade 6	The Effect of Caffeine on Blood Pressure
6036	Savannah Allen	Grade 6	Wind + Windmill + Blade Angle = Energy (What's the Best Blade Angle?)
6040	Hannah E Farmer	Grade 6	Moving More Air with Less Energy
6048	Max J Vogel	Grade 6	Warm Fluff - Which Loose-Fill Insulation Insulates the Best?
6052	Riaz Kelly	Grade 6	Dangerous Drops: How does acid rain affect plant growth?
6054	Aiden D Regan	Grade 6	Water: Drinkable or Unthinkable

6061	Stephen Betts	Grade 6	Now is the Time! A Study to Improve Diagnosis and Evaluation of Mild Traumatic Brain Injuries (Concussions) for Children 5-12 years old
6068	Griffin J Olson	Grade 6	30 Grams of Sugar. What Happens Next?
6070	Maria Fay Rossman	Grade 6	Could your lipstick be killing you?
6077	Meghan Quinlan	Grade 6	Dogs VS. Humans: Which has a Filthier Mouth
6082	Kaya Jacobson	Grade 6	Technicolor Shadows
6087	Helaina E Sislo	Grade 6	Ski Goggles Impact on Peripheral Vision
6088	Elias L Sorenson Pearson	Grade 6	Spray Bottles: Hot or Cold?
6089	Parker A Adams	Grade 6	The Water War
6091	Elinor Glass	Grade 6	Ragdoll Germination
7004	Kate F Meadows	Grade 7	"Strike Out" Window Strikes
7011	Jack A Holthusen	Grade 7	Chew All Day, Get an A!
7013	Luke M Kolar	Grade 7	The Effect of Signs on Handwashing
7018	Celia J Olson	Grade 7	How does font size and digital media affect reading speed and comprehension
7030	Annie J Kuchenmeister	Grade 7	Lutefisk: The Science of Soaking Fish in Lye
7033	Caitlin M O'Donnell	Grade 7	Does a Lemon or Potato Produce more Voltage?
7040	Aidan C Zent	Grade 7	Which Metal is Most Rust Resistant?
7056	Hannah E Norman	Grade 7	Hydropower: Sometimes You Just Have To Go With The Flow
7062	Jackson W Lee	Grade 7	Propeller Pitch Explored!
7074	Keegan Mellema	Grade 7	Glass of Many Colors
7078	James Lukas Haugen	Grade 7	Waters Dramatic Effects on Beach Erosion
7080	Brittney Kuntz	Grade 7	The Effect of Chloride on a Water Supply
7083	Karthik Papisetty	Grade 7	Risk Model for Natural Geographic Hazards
7092	Avni Jain	Grade 7	Allergen Alert! An Innovation to assist people with finding the correct food
7094	Molly K McCollow	Grade 7	Does Running in Water Affect Heart Rate?
7097	Sadie L Richardson	Grade 7	When Looks Can Kill
7100	Valerie C. Bares	Grade 7	How do winter temperatures affect the growth and life cycle of the tar spot fungus
7102	Grace A Knoer	Grade 7	Heartrate in Daphnia
7106	Alex C Bloemendal	Grade 7	What Liquid Reduces Friction
7112	Peter T. Foley	Grade 7	Does the Air Pressure in a Basketball Affect the Made Shot Percentage?
7125	Jack Wold	Grade 7	That's the Way the Ball Bounces
7132	Henrie P. Friesen	Grade 7	Edamame Bean Seed Germination
7140	Sophia G Marcus	Grade 7	The Ratio of Worm Castings to Topsoil and It's Effect Upon the Growth of Purple Petra
7144	Sophia Michelle Tomlinson	Grade 7	Algae Alternatives
8001	Caroline G Bowen	Grade 8	The Effects of a Genetically Modified Vs. an Organic Papaya Diet on the Longevity and Fertility of Fruit Flies

8004	Bergen R Kobienia, Catherine E King	Grade 8	Do Magnets Affect Healing?
8006	Annie M Busch	Grade 8	Does Weather Really Affect Your Mood?
8018	Olivia J Liteky	Grade 8	Favorite Lightbulb Technology
8020	Beah V Mariano	Grade 8	Hello Gorgeous (What's in a Face?)
8021	Kellie M McKane	Grade 8	McCollough Effect
8025	Lily E Vanner	Grade 8	Lie Detection
8036	Molly C O'Laughlin	Grade 8	What Effect, If Any, Will Different Methods of Lifting Latent Fingerprints Have On the Clarity of the Print?
8041	Lily Xiong	Grade 8	How does the amount of ammonium nitrate affect the temperature of water?
8042	Steven J Franklin	Grade 8	Audio Game: Adapted Video Game for the Visually Impaired
8046	Forrest C Ahrens	Grade 8	How Does the Strength of the Permanent Magnetic Field of an Electric Motor Affect the Rotations Per Minute (RPM) of the Motors Armature?
8071	Emma M Meyer	Grade 8	Testing Effectiveness of Insulation
8073	Abigail R Moseman	Grade 8	The Carbon Dioxide effect
8075	David B Segelstrom III	Grade 8	Air Pollution
8081	Julia A Eubanks	Grade 8	Does eating GMO cause inflammation?
8085	Fiona E McKenna	Grade 8	Staining Blood Smears
8091	Morgan E Williams	Grade 8	Perioral Dermatitis: Prescription Vs. Natural Treatments
8092	Gayathri Dileepan	Grade 8	Preventing Food-borne Illnesses
8097	Emilia F Topp-Johnson	Grade 8	Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen <i>Ustilago maydis</i>
8099	Daniel B Ellis	Grade 8	How does the temperature of a tuning fork affect its frequency
8109	Melissa Teal	Grade 8	Up, Up and away
8116	Audrey V Gorman	Grade 8	Minimizing Nitrate Leaching from Fertilizer

The Broadcom MASTERS (Math, Applied Science, Technology and Engineering for Rising Stars), Society for Science & the Public

Top grade 6-8 students nominated to compete nationally online where they will explain their science project and demonstrate their use of STEM principles - science, technology, engineering and math - in the development and presentation of their project.

Twin Cities

6068	Griffin J Olson	Grade 6	30 Grams of Sugar. What Happens Next?
6040	Hannah E Farmer	Grade 6	Moving More Air with Less Energy
6048	Max J Vogel	Grade 6	Warm Fluff - Which Loose-Fill Insulation Insulates the Best?
6089	Parker A Adams	Grade 6	The Water War
7106	Alex C Bloemendal	Grade 7	What Liquid Reduces Friction

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6054	Aiden D Regan	Grade 6	Water: Drinkable or Unthinkable
8020	Beah V Mariano	Grade 8	Hello Gorgeous (What's in a Face?)
7040	Aidan C Zent	Grade 7	Which Metal is Most Rust Resistant?

Western Suburbs

7056	Hannah E Norman	Grade 7	Hydropower: Sometimes You Just Have To Go With The Flow
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7013	Luke M Kolar	Grade 7	The Effect of Signs on Handwashing
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7140	Sophia G Marcus	Grade 7	The Ratio of Worm Castings to Topsoil and It's Effect Upon the Growth of Purple Petra
6008	Jake C Miller	Grade 6	Cake-Eating Redshirts, What? The Redshirt Effect on State-Standardized Test Scores in Edina
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St. Paul

7018	Celia J Olson	Grade 7	How does font size and digital media affect reading speed and comprehension
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8097	Emilia F Topp-Johnson	Grade 8	Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen <i>Ustilago maydis</i>
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8046	Forrest C Ahrens	Grade 8	How Does the Strength of the Permanent Magnetic Field of an Electric Motor Affect the Rotations Per Minute (RPM) of the Motors Armature?
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7100	Valerie C. Bares	Grade 7	How do winter temperatures affect the growth and life cycle of the tar spot fungus
8073	Abigail R Moseman	Grade 8	The Carbon Dioxide effect
7062	Jackson W Lee	Grade 7	Propeller Pitch Explored!
6019	Cali Rivera	Grade 6	The Acid Test: Assessing the effectiveness of antacids
8041	Lily Xiong	Grade 8	How does the amount of ammonium nitrate affect the temperature of water?
6021	Elise Trail -Johnson	Grade 6	Which Type of Storage Container Keeps Eggs Fresh the Longest?
6009	Claire T Rachac	Grade 6	How left-handed people adapt in a right handed world
7132	Henrie P. Friesen	Grade 7	Edamame Bean Seed Germination
7020	Drew Strautman	Grade 7	Does the nose really know?

Top Ranking High School Papers

Grades 9-12

1st Place HS Research Paper Trophy

174	Apurv H Shekhar	Grade 12	A Pressure-Equalization Approach to Contiguous Capacity-Constrained Network Voronoi Diagrams for Disaster and Emergency Response
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2nd Place HS Research Paper Trophy

(Tie)			
252	Claire M Simpson	Grade 12	Synthesis of cyclo-L-tryptophan-L-proline in anticancer drimentine C
220	Nathaniel R Farmer	Grade 9	A STEM Study of Magnetically Disturbed Blood Flow

3rd Place HS Research Paper Trophy

262	Carolyn K Jons	Grade 10	Improved Efficiency of Steam Generation Using Carbon Nanoparticles
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High School Research Papers Selected for Competition at the

Tri-State Junior Science and Humanities Symposium

North Central JSHS

101	Darartu M Gamada, Rustam Kosherbay	Grade 10	Fabricating a Miniature Langmuir Trough to Facilitate Climate Change Studies
105	Kevin Zheng	Grade 12	Creating a Cavity-Dumped Helium Neon Laser
109	Evelyn G McChesney, Zachary L Donahue	Grade 10	Engineering a Hybrid Robotic Prototype: An Innovative use of Gravitational and Solar Energy
112	Radek Chlebicki	Grade 11	Pressure Versus Percent Compression Relationship of Polyurethane and Cellulose Dishwashing Sponges: Implications for Sponge Users
116	Patricia Zhao, Madison K Ernst	Grade 12	Targeting toxic waste in soil and aquatic environments: Investigating chemotactic response of <i>Pseudomonas putida</i> F1
120	Natalie S Kincs	Grade 10	Wind Turbine Efficiency
122	Cole M Dunlap	Grade 12	Reflection vs. Absorbance
123	Easton J McChesney, Wolfgang Ofstedal	Grade 11	Protecting Streams, Lakes, and Rivers: Engineering a Breakthrough Filter to Remove Phosphates From Stormwater Runoff
127	Arun Kethar, Harini Kethar	Grade 10	Mushroom Enzyme Enhancement to Boost Biofuel Production
129	Max Ylitalo	Grade 10	Garbage Reduction to Energy Production: Converting waste paper to cellulosic ethanol
142	Maedin F Abegaz	Grade 10	The Effects of UV Radiation, Vindicator +, and Hydrogen Peroxide on <i>Escherichia coli</i> , <i>Bacillus subtilis</i> , and <i>Serratia marcescens</i> : Phase I and Phase II
148	Olivia M Nelson	Grade 10	You Just Turn That Up? Which is Louder, Television Programming or Commercials?
158	Emily N Carlson	Grade 10	Effects of organic agriculture of bacterial content of raw beef
162	Shay Alwine	Grade 10	Does Sugar Water Affect Plant Water
165	Heather J Stone	Grade 12	Globally Utilizing Perennial Intermediate Wheatgrass
166	Aditi Das	Grade 12	Role of Cell Poles in <i>Agrobacterium</i> -mediated Genetic Transformation of Plants
168	Elisa B Villafana	Grade 12	Save the honeybees: Stop using neonicotinoids: Effects of the pesticide thiamethoxam on vigor, growth and development of soybean (<i>Glycine max</i>) crops
174	Apurv H Shekhar	Grade 12	A Pressure-Equalization Approach to Contiguous Capacity-Constrained Network Voronoi Diagrams for Disaster and Emergency Response
175	Sanjana Srivastava	Grade 12	A Machine Learning Based Approach to Diagnosing Executive Functioning Disorders and Providing Treatment Guidance
194	Priyanka R Narayan	Grade 12	Differences in Behavioral, Psychological, and Social Factors Associated with Positive Mental Health in Adolescents
195	Bhargavi Papisetty	Grade 12	Predictive Analytics for Agricultural Commodity Pricing in India using the ARIMA Model
197	Elliott C Weiler	Grade 12	Correlations Between Genetic Markers and the Gum Disease Periodontitis

198	Emily M Bollinger	Grade 10	The effect "choice blindness" has on everyday decision making
208	Amrita Mohanty	Grade 11	Schwann cell differentiation from stem cells of Neurofibromatosis patients and normal controls
211	Lauren M Campbell	Grade 10	Testing the Discrepancies in the Choice Blindness Phenomenon Caused by Age and Gender
220	Nathaniel R Farmer	Grade 9	A STEM Study of Magnetically Disturbed Blood Flow
221	Trevor J Larsen, Nath Samaratunga	Grade 12	Using histology to investigate stem cells as a treatment for bronchiolitis obliterans
222	Madeline R Mulcahy	Grade 10	Differences Between Male and Female Problem Solving Involving Morals and the Change Over Time
240	Merrick Pierson Smela	Grade 11	Study of the Kinetics and Mechanism of the Production of Isopropyl Xanthic Anhydride
249	Matthew R McMillan, Peter J Metzger	Grade 12	Balancing power and safety in lithium-ion batteries by designing a protocol to study protective surface films
250	Claire M Drysdale	Grade 12	Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy
252	Claire M Simpson	Grade 12	Synthesis of cyclo-L-tryptophan-L-proline in anticancer drimentine C
254	Solomon J Polansky	Grade 11	What's the Best Way to Wash Your Fencing Lamé?
256	Jacob W Levy, Sofie M Kim	Grade 11	Novel synthesis of medicinally applicable 1,2,3-triazole derivatives
262	Carolyn K Jons	Grade 10	Improved Efficiency of Steam Generation Using Carbon Nanoparticles

Top Ranking Middle School Papers

Grades 6-8

1st Place MS Research Paper Trophy

516	Emilia F Topp-Johnson	Grade 8	Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen Ustilago maydis
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2nd Place MS Research Paper Trophy

522	Stephen Betts	Grade 6	Now is the Time! A Study to Improve Diagnosis and Evaluation of Mild Traumatic Brain Injuries (Concussions) for Children 5-12 years old
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3rd Place MS Research Paper Trophy

527	Avni Jain	Grade 7	Allergen Alert! An Innovation to assist people with finding the correct food
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Middle School Research Papers Selected for Competition at the Minnesota State Science & Engineering Fair

Symposium style presentation of research papers grades 7-8 - March 20-22, 2011

503	Max J Vogel	Grade 6	Warm Fluff - Which Loose-Fill Insulation Insulates the Best?
505	Brittney Kuntz	Grade 7	The Effect of Chloride on a Water Supply

511	Valerie C. Bares	Grade 7	How do winter temperatures affect the growth and life cycle of the tar spot fungus
513	Isak J Stillwell-Jardine	Grade 7	Does the Flavor of Mint Affect the Amount of Mouth Bacteria?
516	Emilia F Topp-Johnson	Grade 8	Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen Ustilago maydis
519	Isabella Farah	Grade 6	Which Cleaning Agent Is The Best Disinfectant Against Bacteria On A Plastic Surface?
522	Stephen Betts	Grade 6	Now is the Time! A Study to Improve Diagnosis and Evaluation of Mild Traumatic Brain Injuries (Concussions) for Children 5-12 years old
525	Elise M Pearson	Grade 7	Do Females or Males Stop the Most at Crosswalks
527	Avni Jain	Grade 7	Allergen Alert! An Innovation to assist people with finding the correct food
529	Alice S. Lightfoot	Grade 8	How do Free Will Beliefs Affect Attitudes Toward High School Success?
537	Manashree Padiyath	Grade 6	Bread Dough DOE: Saving bread from extinction!

3M Renewable Energy Award

plaque and \$100.

High School - 3M Renewable Energy

1067	Jackson D Egert	Grade 12	Passive Reclamation of Unexploited Energy
1063	Luis J Guzman, Julia Joern	Grade 12	The trick to a twenty-dollar utility bill: Engineering a solar hydronics residential heating and cooling system

Middle School - 3M Renewable Energy

7060	Isaac James Harker	Grade 7	How Does Wind Turbine Rotor Shape Affect Power Output
8050	Helen F Leach	Grade 8	Wind Turbine Blade Design
6036	Savannah Allen	Grade 6	Wind + Windmill + Blade Angle = Energy (What's the Best Blade Angle?)

3M Aerospace Award

Certificate, \$50 Visa card, Invitation to present project at 3M

6036	Savannah Allen	Grade 6	Wind + Windmill + Blade Angle = Energy (What's the Best Blade Angle?)
6045	Joseph Westermeyer	Grade 6	Orville and Wilbur 2.0
8043	James (Neill) O Gunderson	Grade 8	Model Rocket Fuel
7048	Noah J Blohm	Grade 7	Does Size of a Hot Air Balloon Affect it's Flight

3M Inventors Award

Invitation to a 3M Inventors event.

8052	Brady T Solomon	Grade 8	An A-MAZE-ing Robot
6041	Kiara Herro	Grade 6	Popsicle Bridges
7068	Srivats M Srinivasa	Grade 7	Bio-Inspired Robot
6022	Zachary B Benson	Grade 6	Homade Plastic
7031	Jake Mangel	Grade 7	Organic or Not?
8036	Molly C O'Laughlin	Grade 8	What Effect, If Any, Will Different Methods of Lifting Latent Fingerprints Have On the Clarity of the Print?
7093	Haley C Jostes	Grade 7	The Popeye Challenge, Is spinach really the best food to increase your performance
6048	Max J Vogel	Grade 6	Warm Fluff - Which Loose-Fill Insulation Insulates the Best?
8001	Caroline G Bowen	Grade 8	The Effects of a Genetically Modified Vs. an Organic Papaya Diet on the Longevity and Fertility of Fruit Flies

Teacher Excellence Award

Katie Meier, Capitol Hill Magnet, St. Paul

American Chemical Society

- Certificate & \$50 cash

1050	Carolyn K Jons	Grade 10	Improved Efficiency of Steam Generation Using Carbon Nanoparticles
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American Chemical Society

- Certificate

1057	Merrick Pierson Smela	Grade 11	Study of the Kinetics and Mechanism of the Production of Isopropyl Xanthic Anhydride
1034	Chinmaey K Kelkar	Grade 10	Urea Concentration Detection
1046	Claire M Drysdale	Grade 12	Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy

American Meteorological Society Award

Certificates for outstanding achievements in Meteorological Science

American Meteorological Society Grand Award

Radio and certificate for outstanding achievements in meteorological science

8075	David B Segelstrom III	Grade 8	Air Pollution
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Twin Cities

6058	Alexandra Valencia, Ivon Solis, Christina Rache Castaneda	Grade 6	Science in snowflakes
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Western Suburbs

8075	David B Segelstrom III	Grade 8	Air Pollution
6033	Maggie J Anderson	Grade 6	The Greenhouse Effect

St. Paul

6052 Riaz Kelly Grade 6 Dangerous Drops: How does acid rain affect plant growth?

American Psychological Association Award

Certificate

Twin Cities

1023 Noah J Pahl Grade 10 Effects of Conformity on Isolated Participants

Western Suburbs

1021 Abhishek Nayar, Stephen Kim Grade 12 Birth of a Revolution (Part II)

St. Paul

1106 Juliet E Rohde, Maria V Meza-Ortiz Grade 10 You Eat Like A Pig

ASM International Materials Education Foundation Award

Certificate & medallion (In the mail) recognizing the best materials engineering project

Twin Cities

1080 Christian P Peterson, Karl W Schmaltz Grade 12 Bedini SG Motor

Western Suburbs

1067 Jackson D Egert Grade 12 Passive Reclamation of Unexploited Energy

St. Paul

1117 Serena Grade 9 The Silver Bullet: using silver nano-particles to reduce bacteria in the
Jing kitchen

Association of Women Geoscientists

Certificate to female whose project exemplifies high standards of innovativeness and scientific excellence in geosciences

Twin Cities

1088 Katie L Carlson, Kate M Grade 12 The Environmental Effects of Iron Fertilization on
Carithers Marine Life

Western Suburbs

8059 Cassidy Deng Grade 8 Salt Runoff

Bright Future Award

Certificate & gift to 6th grade excellent student - given by national winner Carolyn Jons

6008 Jake C Grade 6 Cake-Eating Redshirts, What? The Redshirt Effect on State-Standardized
Miller Test Scores in Edina

East Side Science Club Alumni Award

Medals are presented to outstanding youths that demonstrate innovation and creativeness in project development

6087	Helaina E Sislo	Grade 6	Ski Goggles Impact on Peripheral Vision
6014	Hanna Saveraid	Grade 6	Does being left or right handed affect handwriting legibility in girls?
6036	Savannah Allen	Grade 6	Wind + Windmill + Blade Angle = Energy (What's the Best Blade Angle?)
6049	Jawein D Cosey-Richmond	Grade 6	Biomass
7004	Kate F Meadows	Grade 7	"Strike Out" Window Strikes
7018	Celia J Olson	Grade 7	How does font size and digital media affect reading speed and comprehension
7092	Avni Jain	Grade 7	Allergen Alert! An Innovation to assist people with finding the correct food
7140	Sophia G Marcus	Grade 7	The Ratio of Worm Castings to Topsoil and It's Effect Upon the Growth of Purple Petra
8099	Daniel B Ellis	Grade 8	How does the temperature of a tuning fork affect its frequency
8097	Emilia F Topp-Johnson	Grade 8	Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen Ustilago maydis
8084	Ana G Kurzer-zlotnick	Grade 8	How does taster status affect food preference
8003	Eva M Hanson	Grade 8	Which Animal Repellent works Best When Protecting Pumpkins

Glen & Jacob Domeier Memorial Award

In memory of Glen & Jacob Domeier, \$50 & certificate, compass & instruction book to project that best demonstrates excellence in environmental science

1071	Max Ylitalo	Grade 10	Garbage Reduction to Energy Production: Converting waste paper to cellulosic ethanol
7083	Karthik Papisetty	Grade 7	Risk Model for Natural Geographic Hazards

Graduate Women In Science Projects Award

University of Minnesota Graduate Women in Science: Certificate and \$25 (in the mail) for projects

Grade 6

6036	Savannah Allen	Grade 6	Wind + Windmill + Blade Angle = Energy (What's the Best Blade Angle?)
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Grade 7

7080	Brittney Kuntz	Grade 7	The Effect of Chloride on a Water Supply
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Grade 8

8018	Olivia J Liteky	Grade 8	Favorite Lightbulb Technology
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Grade 9

1045 Elizabeth M Demitroff Grade 9 Electrolytes

Grade 10

1018 Noelle M Hinrichs Grade 10 The Categorical Perception of Voice Onset Time in Regional Accents of the United States

Grade 11

1003 Gabrielle Joyce Grade 11 Daphnia and Nicotine

Grade 12

1036 Priyanka R Narayan Grade 12 Understanding the Mechanism Behind Nanoparticle Enhanced Oral Absorption of Chemotherapeutic Drugs

Intel Excellence in Computer Science Award

Certificate and \$200 (check in the mail)

Twin Cities

1062 Pedro Angulo-Umana Grade 11 Structural Analysis of Iterated Digit Sequences and Applications in Telecommunicative Theory

Western Suburbs

1065 Apurv H Shekhar Grade 12 A Scalable Pressure Equalization Approach to Contiguous Capacity-Constrained Network Voronoi Diagrams for Disaster and Emergency Response (Year Two)

St. Paul

1075 Connor E Helseth, Matthew J Mordorski Grade 12 Consumer Livestream Analysis

ISEF Alumni Awards

Former ISEF Finalists recognizing up-and-coming young scientists

Sponsor: Michael Lohman, Jr

One hour in Flight Simulator

1046 Claire M Drysdale Grade 12 Combining Chemistry and Artistry: Synthesis and Identification of Artistic Patinas Using Raman Spectroscopy

Sponsor: Kyrstin Underbakke Ball

Certificate & \$25 cash

6061 Stephen Betts Grade 6 Now is the Time! A Study to Improve Diagnosis and Evaluation of Mild Traumatic Brain Injuries (Concussions) for Children 5-12 years old

8097 Emilia F Topp-Johnson Grade 8 Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen *Ustilago maydis*

Sponsor: Kyra Underbakke

Certificate & \$25 cash

8042 Steven J Franklin Grade 8 Audio Game: Adapted Video Game for the Visually Impaired

Sponsor: Timara Underbakke

Certificate & \$25 cash

8054 Vivian Obee Grade 8 Effectiveness of Insulation

Caffeinated Student Award Sponsor: Kyra Underbakke

Starbucks gift card for hard work, enthusiasm, & spent way "too much" time doing science!

1078 Evelyn G McChesney, Zachary L Donahue Grade 10 Engineering a Hybrid Robotic Prototype: An Innovative use of Gravitational and Solar Energy

8097 Emilia F Topp-Johnson Grade 8 Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen Ustilago maydis

ISWEEEP

Outstanding Projects to Participate in International Sustainable World (Energy, Engineering, & Environment) Project Olympiad; Houston, TX, May 8-13, 2013

ISWEEEP Finalists, April 30 - May 5, 2014 in Houston, TX

These projects bypass the prequalification round of ISWEEEP.

1067 Jackson D Egert Grade 12 Passive Reclamation of Unexploited Energy

1095 Jason Ung Grade 10 The Effects of New and Used Oil on Biodiesel

1071 Max Ylitalo Grade 10 Garbage Reduction to Energy Production: Converting waste paper to cellulosic ethanol

1094 Imogene J Silver Grade 9 Daphnia death by triclosan pollution

Joel Wagner Caring Bridge Award

Trophy & \$50 to the best cancer research project

1036 Priyanka R Narayan Grade 12 Understanding the Mechanism Behind Nanoparticle Enhanced Oral Absorption of Chemotherapeutic Drugs

Killeen Memorial Award

Trophy to the student who best shows inspiration for their project

7140 Sophia G Marcus Grade 7 The Ratio of Worm Castings to Topsoil and It's Effect Upon the Growth of Purple Petra

Kiwanis Circle K Club

certificate & bag

6022 Zachary B Benson Grade 6 Homade Plastic

6036 Savannah Allen Grade 6 Wind + Windmill + Blade Angle = Energy (What's the Best Blade Angle?)

- 6038 Molly S Silberhorn Grade 6 Illuminating Light On Energy Efficient Light Bulbs
- 7002 Chloe C Botten Grade 7 How does light Pollution Affect Nocturnal Animals?

MARS CON

NASA bag, a chance to display project at Marscon, 2 complementary passes to Marscon convention

- 6085 Cole W McQuinn Grade 6 Water clocks: a journey into viscosity
- 8009 Killian Dillner Grade 8 Clock Watching

Minnesota Agriculture in the Classroom

Certificate & \$75 check in the mail

Project Senior High

- 1024 Bhargavi Papisetty Grade 12 Predictive Analytics for Agricultural Commodity Pricing in India using the ARIMA Model

Project Junior High

- 7134 Olive Hart Grade 7 Plant Growth in Different Soils
- 8116 Audrey V Gorman Grade 8 Minimizing Nitrate Leaching from Fertilizer

Paper Senior High

- 168 Elisa B Villafana Grade 12 Save the honeybees: Stop using neonicotinoids: Effects of the pesticide thiamethoxam on vigor, growth and development of soybean (Glycine max) crops

Paper Junior High

- 516 Emilia F Topp-Johnson Grade 8 Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen Ustilago maydis

Minnesota Astronomical Society

- certificate & prize packet

- 8108 Alex A Payne Grade 8 Impact of a Meteorite

Minnesota Chapter of American Fisheries Society

Senior High

- Fishing Equipment

- 1094 Imogene J Silver Grade 9 Daphnia death by triclosan pollution

Junior High

- Fishing equipment

- 7080 Brittney Kuntz Grade 7 The Effect of Chloride on a Water Supply

Minnesota Space Frontier Society Award

- certificate & prize packet

6042	John D O'Connell	Grade 6	Hovercraft Science
6045	Joseph Westermeyer	Grade 6	Orville and Wilbur 2.0
6079	Elias Bier	Grade 6	Parachute Shapes and Sizes
7045	Maci J Shatirishvili	Grade 7	Clouds and Atmosphere
7048	Noah J Blohm	Grade 7	Does Size of a Hot Air Balloon Affect it's Flight
7061	Landon R Knipp	Grade 7	Efficiency of the Hovercraft
7115	Jacob E. Lexvold	Grade 7	Water Bottle Rockets
7122	Jaime Upton	Grade 7	Lenz's Field of Physics
8043	James (Neill) O Gunderson	Grade 8	Model Rocket Fuel
8044	Bernadette Lauber	Grade 8	Which Airplane Wing Shape Has the Most Lift?
8049	Addison R Keely	Grade 8	Rocket Fins
8107	Anthony M Palmer	Grade 8	Shoot! It's Trajectory
8109	Melissa Teal	Grade 8	Up, Up and away
1082	Jason Sylvestre	Grade 12	VoltX 2.0, A Rescue Robot That Can Locate and Extract Victims

Mu Alpha Theta Award

- Certificate for the project demonstrating the most challenging, original, thorough, and creative investigation of a problem involving mathematics

Western Suburbs

1083 Kevin Zheng Grade 12 Creating a Cavity-Dumped Helium Neon Laser

National Oceanic and Atmospheric Administration (NOAA) "Taking the Pulse of the Planet"

- Certificate & medallion

Twin Cities

1088 Katie L Carlson, Kate M Carithers Grade 12 The Environmental Effects of Iron Fertilization on Marine Life

Western Suburbs

1087 Easton J McChesney, Wolfgang Ofstedal Grade 11 Protecting Streams, Lakes, and Rivers: Engineering a Breakthrough Filter to Remove Phosphates From Stormwater Runoff

St. Paul

1094 Imogene J Silver Grade 9 Daphnia death by triclosan pollution

Outstanding Volunteerism Award (USS Nokomis Club) - 2014 for their plaque and many, many, many thanks for their hard work!

Penny Lohman Memorial Award

Grand award \$100 & trophy

7100 Valerie C. Bares Grade 7 How do winter temperatures affect the growth and life cycle of the tar spot fungus

Radio City Award

- Awarded to Best Amateur Radio project

6083 Jack T Kelly Grade 6 How Bright is Your Light

7042 Ben T Bogie Grade 7 How do daily changes in the atmosphere affect the travel of AM radio waves?

8051 Elijah C Nelson, James M Jurek Grade 8 Electromagnetic Interference

Ricoh Sustainable Development Award

- Certificate to the project whose principles & technical innovations offer the greatest potential for increasing our ability to grow environmentally friendly & socially responsible businesses

Twin Cities

1136 Heather J Stone Grade 12 Globally Utilizing Perennial Intermediate Wheatgrass

Western Suburbs

1123 Patricia Zhao, Madison K Ernst Grade 12 Targeting toxic waste in soil and aquatic environments: Investigating chemotactic response of *Pseudomonas putida* F1

St. Paul

1056 Rosemary O Olatunbosun Grade 12 Recycling Amberlyst-15 Beads

St. Catherine University Award for Scientific Achievement

6009 Claire T Rachac Grade 6 How left-handed people adapt in a right handed world

7088 Nealeigh G Carbone Grade 7 The Facts About Junk Food You May Not Have Known

8091 Morgan E Williams Grade 8 Perioral Dermatitis: Prescription Vs. Natural Treatments

1043 Erica P Craddock Grade 11 Oranges, or Something Better? : A Study Comparing Ascorbic Acid Concentrations in Different Citrus Fruits

1042 Aisha R Cacique Grade 11 The Four Sacred Medicines and Carcinogens

1109 Ashley J St. Aubin Grade 10 Extension of Knee Ligaments

Society for In Vitro Biology

- Certificate to the most outstanding 11th grade student in the area of plant or animal in vitro biology or tissue culture

Twin Cities

1114 Emily N Carlson Grade 10 Effects of organic agriculture of bacterial content of raw beef

Western Suburbs

1123 Patricia Zhao, Grade 12 Targeting toxic waste in soil and aquatic environments:
Madison K Ernst Investigating chemotactic response of *Pseudomonas putida* F1

St. Paul

1117 Serena Grade 9 The Silver Bullet: using silver nano-particles to reduce bacteria in the
Jing kitchen

Stockholm Junior Water Prize (SJWP)

- Certificate & eligible to enter the state SJWP competition by submitting their research paper

Twin Cities

1054 Michelle Mao Grade 10 Can hot water freeze faster than cold water? A search for
the Mpemba effect

1088 Katie L Carlson, Kate M Grade 12 The Environmental Effects of Iron Fertilization on Marine
Carithers Life

1118 April T Kim Grade 10 Effects of Oil and Saltwater on Bacteria Growth

Western Suburbs

1050 Carolyn K Jons Grade 10 Improved Efficiency of Steam Generation Using Carbon
Nanoparticles

1087 Easton J McChesney, Grade 11 Protecting Streams, Lakes, and Rivers: Engineering a
Wolfgang Ofstedal Breakthrough Filter to Remove Phosphates From
Stormwater Runoff

1073 Darartu M Gamada, Grade 10 Fabricating a Miniature Langmuir Trough to Facilitate
Rustam Kosherbay Climate Change Studies

St. Paul

1128 Tyme T. Enright Grade 11 Determining Water Pollution through Refractive Indices

1130 Ken Thao Grade 9 What's the fastest way to cool a soda?

1003 Gabrielle Joyce Grade 11 Daphnia and Nicotine

Students Achieving Volunteering Excellence (SAVE)

- Certificate & \$25 cash to students whose display best communicated their experiment

Middle School

6001 Amelia Ann Grade 6 Left or Right Paw
Gailloux

6002 Emily Howell Grade 6 DogToys; What Makes a Favorite or a Flop

6003 Marley G Webb Grade 6 Dogs and Music

8109 Melissa Teal Grade 8 Up, Up and away

8097	Emilia F Topp-Johnson	Grade 8	Behind the Kernels, A Study of 5 Fungal Endophytes and their use in Biocontrol Against the Common Maize Pathogen <i>Ustilago maydis</i>
8118	Declyn J Walters	Grade 8	Here We Grow!

Twin Cities Regional Science Fair Excellence Award

- Science Kit or Game (must be picked up at awards program)

1059	Terrell Sook	Grade 12	Genetically Modified Peas
1113	Brody Bien	Grade 10	The Effects of "Home Sterilizers" on <i>Escherichia coli</i> .
1034	Chinmaey K Kelkar	Grade 10	Urea Concentration Detection
8059	Cassidy Deng	Grade 8	Salt Runoff
8054	Vivian Obee	Grade 8	Effectiveness of Insulation
7130	Emma R DePape	Grade 7	The effects of using different substrates on the time of plant growth.
6087	Helaina E Sislo	Grade 6	Ski Goggles Impact on Peripheral Vision
6014	Hanna Saveraid	Grade 6	Does being left or right handed affect handwriting legibility in girls?
7083	Karthik Papisetty	Grade 7	Risk Model for Natural Geographic Hazards
8116	Audrey V Gorman	Grade 8	Minimizing Nitrate Leaching from Fertilizer
6015	Hteemoo Saw	Grade 6	Does screen time affect human brain function?
6003	Marley G Webb	Grade 6	Dogs and Music
6038	Molly S Silberhorn	Grade 6	illuminating Light On Energy Efficient Light Bulbs
6032	Yeukai Zimbwa	Grade 6	The Effect of Caffeine on Blood Pressure
6026	McKenna Reedquist	Grade 6	Oops! What laundry detergent works the best?
6022	Zachary B Benson	Grade 6	Homade Plastic
6076	Olivia Johnson	Grade 6	The Bread Mold Race
6093	Logan T Langham	Grade 6	Super Mario Distracted Driving
7006	Kristiana J. Adams	Grade 7	Do Scents Make Sense?
7037	Macreena M Stueve	Grade 7	Liquid Affects
7051	Katherine E Grimm	Grade 7	Angle of Heat
7084	Kadetra Smith, Ra'Eisah Clark, Carter Hobbs	Grade 7	Composting Worms Finding a Safe Place
7079	Ashay K Joseph	Grade 7	Does Trash Trash Water
7098	Margaret M Roberts	Grade 7	Prolonging Petals
7076	Eli S. Powell	Grade 7	What Fabrics Accumulate Body Odor More Than Others, And Why?
8010	Josh C Dolezal	Grade 8	Does Color Affect Perception?
8022	Caroline J Robinson	Grade 8	The Rate of Speed When Reading on a Traditional Book Versus an E-Book
8031	Alex J Coleman	Grade 8	Does honey affect bacterial growth
8086	Alaina R Portoghese	Grade 8	How Does Eye Color Affect the Occurrence of Red Eye in Photos?

United States Air Force Awards

Best Project

Certificate, Medal, & Air Force Hooded Sweatshirt

Twin Cities

1103 Amrita Mohanty Grade 11 Schwann cell differentiation from stem cells of Neurofibromatosis patients and normal controls

Western Suburbs

1082 Jason Sylvestre Grade 12 VoltX 2.0, A Rescue Robot That Can Locate and Extract Victims

St. Paul

6045 Joseph Westermeyer Grade 6 Orville and Wilbur 2.0

Commended Project

Certificate

Twin Cities

1080 Christian P Peterson, Karl W Schmaltz Grade 12 Bedini SG Motor

8043 James (Neill) O Gunderson Grade 8 Model Rocket Fuel

Western Suburbs

1078 Evelyn G McChesney, Zachary L Donahue Grade 10 Engineering a Hybrid Robotic Prototype: An Innovative use of Gravitational and Solar Energy

1101 Arush Jain Grade 10 A Novel Cardio Vascular Stent Design Utilizing Multiple Materials

1050 Carolyn K Jons Grade 10 Improved Efficiency of Steam Generation Using Carbon Nanoparticles

1090 Arun Kethar, Harini Kethar Grade 10 Mushroom Enzyme Enhancement to Boost Biofuel Production

St. Paul

8099 Daniel B Ellis Grade 8 How does the temperature of a tuning fork affect its frequency

8050 Helen F Leach Grade 8 Wind Turbine Blade Design

1128 Tyme T. Enright Grade 11 Determining Water Pollution through Refractive Indices

United States Army Awards

Best Project

- Certificate, medal, wireless mouse

Twin Cities

1010 Kayla M Beckel Grade 10 The Effectiveness of Post-exercise Cool-down Methods

Western Suburbs

1065 Apurv H Shekhar Grade 12 A Scalable Pressure Equalization Approach to Contiguous Capacity-Constrained Network Voronoi Diagrams for Disaster and Emergency

Response (Year Two)

St. Paul

1045 Elizabeth M Demitroff Grade 9 Electrolytes

Commended Award

- Certificate & wireless mouse

Twin Cities

1095 Jason Ung Grade 10 The Effects of New and Used Oil on Biodiesel

1102 Emma L Marko Grade 10 The Effects of Sounds on Blood Pressure

Western Suburbs

1082 Jason Sylvestre Grade 12 VoltX 2.0, A Rescue Robot That Can Locate and Extract Victims

1083 Kevin Zheng Grade 12 Creating a Cavity-Dumped Helium Neon Laser

St. Paul

1048 Hanan C Farah Grade 11 The Effects of Hydrolysis on Solution PH

United States Department of Agricultural Research Award

- Certificate & books

Twin Cities

1136 Heather J Stone Grade 12 Globally Utilizing Perennial Intermediate Wheatgrass

Western Suburbs

8115 Lauren M Copland Grade 8 Grow Green, Mycorrhizal Fungi and Rhizobium Bacteria Inoculation of Seeds and Soil

6091 Elinor Glass Grade 6 Ragdoll Germination

7080 Brittney Kuntz Grade 7 The Effect of Chloride on a Water Supply

7140 Sophia G Marcus Grade 7 The Ratio of Worm Castings to Topsoil and It's Effect Upon the Growth of Purple Petra

1087 Easton J McChesney, Wolfgang Ofstedal Grade 11 Protecting Streams, Lakes, and Rivers: Engineering a Breakthrough Filter to Remove Phosphates From Stormwater Runoff

United States Department of Health and Human Services

- Medal & Certificate Signed by the Surgeon General

Twin Cities

1120 Kristin M Robinson Grade 10 Bacterial Contamination in School Departments

Western Suburbs

1101 Arush Jain Grade 10 A Novel Cardio Vascular Stent Design Utilizing Multiple Materials

St. Paul

1104 Geeta Rajamani Grade 9 The Use of Well-Timed Low Intensity Activity for Type 2 Diabetics

United States Metric Association

- Certificate

Twin Cities

1098 Kyra N Doyle Grade 10 The Relation Of Gender And Height To Tidal Volume

Western Suburbs

1050 Carolyn K Grade 10 Improved Efficiency of Steam Generation Using Carbon
Jons Nanoparticles

St. Paul

1043 Erica P Grade 11 Oranges, or Something Better? : A Study Comparing Ascorbic Acid
Craddock Concentrations in Different Citrus Fruits

United States Navy and Marine Corps ONR Office of Naval Research

High School Division

certificate & \$50 check (in the mail)

Twin Cities

1071 Max Ylitalo Grade 10 Garbage Reduction to Energy Production: Converting waste paper to
cellulosic ethanol

1111 Maedin F Grade 10 The Effects of UV Radiation, Vindicator +, and Hydrogen Peroxide on
Abegaz Escherichia coli, Bacillus subtilis, and Serratia marcescens: Phase I
and Phase II

Western Suburbs

1101 Arush Grade 10 A Novel Cardio Vascular Stent Design Utilizing Multiple Materials
Jain

1093 Yun J Grade 10 The comparison of electricity levels related to the anode surface area of
Lee Microbial Fuel Cell using a benthic mud sample

United States Navy & Marine Corps

Best Project

Certificate & Medal

Twin Cities

1091 Natalie S Kincs Grade 10 Wind Turbine Efficiency

Western Suburbs

6087 Helaina E Sislo Grade 6 Ski Goggles Impact on Peripheral Vision

St. Paul

6079 Elias Bier Grade 6 Parachute Shapes and Sizes

Commended Project

Certificate

Twin Cities

7040 Aidan C Zent Grade 7 Which Metal is Most Rust Resistant?

8043 James (Neill) O Gunderson Grade 8 Model Rocket Fuel

Western Suburbs

1067 Jackson D Egert Grade 12 Passive Reclamation of Unexploited Energy

7056 Hannah E Norman Grade 7 Hydropower: Sometimes You Just Have To Go With The Flow

St. Paul

1060 Ying Vang Grade 9 pH Level of Ramsey County Lakes

7062 Jackson W Lee Grade 7 Propeller Pitch Explored!

University of Minnesota College of Science & Engineering

- Scholarship for the summer camp "Exploring Careers in Engineering and the Physical Sciences"

1042 Aisha R Cacique Grade 11 The Four Sacred Medicines and Carcinogens

1073 Darartu M Gamada, Rustam Grade 10 Fabricating a Miniature Langmuir Trough to Facilitate
Kosherbay Climate Change Studies1085 Radek Chlebicki Grade 11 Bringing Science into the Realm of Dishwashing
Sponges**University of Minnesota School of Social Work Research for the Common Good Award**

Award plaque for project that demonstrates excellence in applied social sciences

1023 Noah J Pahl Grade 10 Effects of Conformity on Isolated Participants

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