

ISEF - International Science and Engineering Fair

Pittsburg, PA - May 9-15 2015

Finalists

Twin Cities

1061T	Amrita Mohanty	Grade 12	Schwann Cell Differentiation from Stem Cells of Neurofibromatosis 1 Patients and Normal Controls
1121T	Max Ylitalo	Grade 11	Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol Production from Waste Paper
1063T	Aadarsh S Padiyath	Grade 11	Increasing Cancer-Specific Drug Delivery using Targeted Liposomes

Western Suburbs

1090W	Carolyn K Jons	Grade 11	Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2
1134W	Arush Jain	Grade 11	Improving Environmental Sustainability - Solid Waste To Biofuel Generation Using Pyrolysis

St. Paul

1178S	Emilia F Topp-Johnson	Grade 9	Behind the Kernels II: A Reevaluation of Fungal Endophytes as Biocontrol Agents Against the Common Maize Pathogen <i>Ustilago maydis</i>
1054S	Serena Jing	Grade 10	Advancements in Drug Delivery: the development and evaluation of ibuprofen loaded biodegradable hydrogels

Alternates

Twin Cities

1st Alternate

1002T	Nathaniel R Farmer	Grade 10	Light stimulated startle response in <i>Daphnia magna</i>
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2nd Alternate

1046T	Colton V Van Dorpe	Grade 12	Low-Density Polyethylene Biochemical Degredation
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3rd Alternate

1044T	Janani V Narayan	Grade 12	Nano-gene constructs for non-viral gene delivery
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Western Suburbs

1st Alternate

1103W	Moira Southern, Siddarth Eswarachari	Grade 11	Cleaner Water: Genomic analysis of the homogenisate catabolic pathway in <i>Pseudomonas putida</i> F1 for bioremediation of aromatic hydrocarbons
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2nd Alternate

1144W Wolfgang Ofstedal, Easton Grade 12 Engineering crystalline organic semiconducting thin
McChesney films for use in organic solar cells

3rd Alternate

1070W Prashant S Grade 11 The Next Step Towards a Cure for Diabetes: A Novel
Godishala, Brennan Protocol for Culturing Adult Porcine Islets for Transplantation
S Clark in Type 1 Diabetic Patients

St. Paul

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.

1103W Moira Southern, Grade 11 Cleaner Water: Genomic analysis of the homogentisate
Siddarth catabolic pathway in Pseudomonas putida F1 for
Eswarachari bioremediation of aromatic hydrocarbons

Alternate

Floret ribbon

1101W Darartu M Gamada, Grade 11 Molecular dynamics simulations of copolymers as molecular
Zhuang Miao band-aids against Duchenne muscular dystrophy
1091W Sofie Kim, Jacob Grade 12 Optimized syntheses of novel, medically applicable 1,2,3-
Levy triazole derivatives

Gold Level - Plaque

Ecolab Sponsor Award

Winner

Plaque & \$500

1178S Emilia F Grade 9 Behind the Kernels II: A Reevaluation of Fungal Endophytes as
Topp-Johnson Biocontrol Agents Against the Common Maize Pathogen Ustilago
maydis

Alternate

Floret ribbon

1118W Grant R Two Grade 12 Effects of early Mdewakanton Dakota settlement patterns on the
Bulls ecology of Lake Calhoun in Minneapolis, MN
1110T Abigail R Grade 10 Can We Foil Oiled Soil?
Herzog

Medtronic Sponsor Award

Winner

Plaque

1070W Prashant S Grade 11 The Next Step Towards a Cure for Diabetes: A Novel
 Godishala, Brennan Protocol for Culturing Adult Porcine Islets for Transplantation
 S Clark in Type 1 Diabetic Patients

Alternate

Floret ribbon

1124T Maitreya A Grade 11 Improving Total Energy Production of Photovoltaics Solar Panels
 Mujumdar using Wavelength Selective Filters and Broadband Mirrors

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

Plaque

8032S Ruby J Beckman Grade 8 Leavening Agents in Muffins

Alternate

Floret ribbon

8039S Hannah G Lender Grade 8 How Batteries' Voltages are Affected by Different Temperatures
 8035S Megan J Danley Grade 8 Saving Your Skin One Spray At A Time

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

Plaque

1110T Abigail R Herzog Grade 10 Can We Foil Oiled Soil?

Alternate

Floret ribbon

1115W Luke Grade 12 Protecting our water supplies: Impacts of biomagnification of the
 Onopa antibiotic triclosan by perfluorooctane sulfonate on the health of vital
 anaerobic digesters in wastewater

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

plaque

6051W Anna Medina Grade 6 Electrolyte Crazy

Alternate

Floret ribbon

7060W Callie Joy Ertel Grade 7 Climate Change Affects on Painted Lady Caterpillars

Isthmus Engineering & Manufacturing Sponsor Award**Winner**

Plaque

8079S Joe P Kennedy Grade 8 DIY vs Retail Computers

Alternate

Floret ribbon

7082W Kerui Yang Grade 7 How Icing on Wind Turbine Blades Affects Power Generation

Midway Party Rental Sponsor Award**Winner**

Plaque

7088S Elliot M Pham Grade 7 DIY: Solar Lighting for Refugees

Alternate

Floret ribbon

6041T Milan E Jostes Grade 6 The Mag Prop Train

6033S Isaac Foster Grade 6 Earthquake resistant buildings

Mintahoe Catering and Events Sponsor Award**Winner**

Plaque

1159W	Evelyn G McChesney, Madeline McCue	Grade 11	Novel alternatives to antibiotics: Genomic alteration of probiotic bacteria for production of antimicrobial peptides (AMPs) to target antibiotic-resistant pathogens
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Alternate

Floret ribbon

1149T	Maedin F Abegaz	Grade 11	Testing Wound Dressings with Light Activated Dye to Combat SSIs
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Contributing Level**Office Max Sponsor Award****Winner**

Floret ribbon

7073T	Maxwell J. Vogel	Grade 7	Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning Energy Efficient Fuel Additive?
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Alternate

Floret ribbon

6064S	Caroline E Weier, Lauren Hennessey	Grade 6	From Waste of Nature to Homemade Paper
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8087S	Valerie C. Bares	Grade 8	How do the anatomical structures of different plant species affect their ability to filter water?
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The Slattery Sales Group Sponsor Award

Winner

Floret ribbon

1117W Karsten E Salveson, Eve C Grade 12 Zebra mussel (*Dreissena polymorpha*) preference for
Zelickson colonization on macrophytes

Alternate

Floret ribbon

1111T Noelle M Hinrichs Grade 11 Testing Greenhouse Gas Absorption in Constructed Wetlands

Minnesota Academy of Science State Science and Engineering Fair

Projects selected to represent our region in state competition

1001W	Bridget A Carroll	Grade 11	Endangered Sea Turtle Nesting at Playa Cabuyal, Costa Rica and Tracking Telemetry to Support Effective Conservation Efforts
1002T	Nathaniel R Farmer	Grade 10	Light stimulated startle response in <i>Daphnia magna</i>
1005T	Benjamin Vallin	Grade 12	Effectiveness of Essential Oils in Repelling <i>Drosophila melanogaster</i>
1009T	Blake E Andert	Grade 10	Duly Noted
1012T	Olivia C Bien	Grade 10	The Effect Gender has in the Memorization of Gender Neutral Objects
1014T	Brian P Bowen	Grade 10	The Relationship Between Fine Motor Skills and Gender
1016T	Sabirina H Daud	Grade 10	Prejudice in Adolescents
1017T	Andrea M Delius	Grade 10	Undressing the Truth
1018T	Rachel L Dobrzynski	Grade 10	Tenth Grade Views on Whether Composite or Real Faces are More Beautiful
1021T	Charles H Green	Grade 10	What the Frack!: The Influence of Propaganda on Public Attitudes Towards Fracking
1023T	Amanda R Jackson	Grade 10	Mint Condition: How will you react?
1025T	Tyrese C Leverty	Grade 10	The Study of How Stereotypes Affect People's Judgments of Others
1026S	Maxine Lightfoot	Grade 11	How does existential angst affect insomnia?
1028T	Jenny M Mannila	Grade 10	Influence of Packaging on Children
1030T	Zachary F McGovern	Grade 10	Serious VS. Comedic Commercials
1033T	Josie L Nordgren	Grade 10	Gender Differences in Multitasking
1034T	Kara E Odom	Grade 10	A correlation of personality types, views on contemporary issues and animal preference
1041T	Jenna White, Summer Ettesvold, Natalie Anderson	Grade 12	Music and it's effects on studying.
1042W	Alicia L Wong	Grade 12	Analyses of Gaze Clusters Pertaining to Spatial Cognition

1044T	Janani V Narayan	Grade 12	Nano-gene constructs for non-viral gene delivery
1046T	Colton V Van Dorpe	Grade 12	Low-Density Polyethylene Biochemical Degredation
1049W	John N Chen, Jeffrey He	Grade 11	The Effects of Caffeinated and Sugared Soft Drinks on Youth Brain
1051T	Benjamin Cole Hensley	Grade 10	Electrolytes in Drinks
1053T	Taylor R Horner	Grade 10	The Effects of Timed Versus Untimed Tests on Students Performance
1054S	Serena Jing	Grade 10	Advancements in Drug Delivery: the development and evaluation of ibuprofen loaded biodegradable hydrogels
1055W	Ishita Kamboj	Grade 12	Methamphetamine Compromises the Phagocytic Activity of BV2 Murine Microglia without Compromising Cellular Viability
1057W	Arun Kethar	Grade 11	Biomechanics of Aortic and Pulmonary Valve: Implication in Ross Procedure
1059W	Annie J McFarland, Grace E Kirkpatrick	Grade 12	Food for thought: Long-term effects of hyperglycemia on dendrites in the CA1 region of the hippocampus
1061T	Amrita Mohanty	Grade 12	Schwann Cell Differentiation from Stem Cells of Neurofibromatosis 1 Patients and Normal Controls
1063T	Aadarsh S Padiyath	Grade 11	Increasing Cancer-Specific Drug Delivery using Targeted Liposomes
1069W	Sweta Bhoopatiraju	Grade 12	Relationship Between 5hmC and UHRF2 Expression in Normal and Tumor Tissue
1070W	Prashant S Godishala, Brennan S Clark	Grade 11	The Next Step Towards a Cure for Diabetes: A Novel Protocol for Culturing Adult Porcine Islets for Transplantation in Type 1 Diabetic Patients
1072W	Harini Kethar	Grade 10	Investigating Functions of Fanconi Anemia (FA) Proteins in Cellular Checkpoint Signaling: A Novel Role for the FANCD2 Protein
1079T	Andrew L Barton	Grade 9	Are BWCA Lakes Affected by Acid Rain and Can Acidic Lakes Be Restored Using Calcium Carbonate?
1082T	Aisha Cacique	Grade 12	The Effects of Ceremonial Smudging on Indoor Air Quality
1089T	Ian M Johnson	Grade 10	A Study of Electrolyte Content in Sports Drinks Versus Other Possible Recovery Drinks
1090W	Carolyn K Jons	Grade 11	Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2
1091W	Sofie Kim, Jacob Levy	Grade 12	Optimized syntheses of novel, medicinally applicable 1,2,3-triazole derivatives
1095T	Madeline G Strey	Grade 10	Effects of Boiling on Vitamin C Content in Vegetables
1098T	Hsin Wang	Grade 12	Making soap from used cooking oil
1099T	Jaylin S Wong	Grade 10	What is the Best Cleaner to Use for Removing Salt Stains from Suede Leather?
1101W	Darartu M Gamada, Zhuang Miao	Grade 11	Molecular dynamics simulations of copolymers as molecular band-aids against Duchenne muscular dystrophy
1103W	Moira Southern, Siddarth Eswarachari	Grade 11	Cleaner Water: Genomic analysis of the homogentisate catabolic pathway in Pseudomonas putida F1 for bioremediation of aromatic hydrocarbons

1105T	Jacob T Calhoon	Grade 10	How pH affects the rate at which steel corrodes
1108T	Emma C Hakanson	Grade 10	The Impact of Human Proximity to Lakes on Total Phosphate, Turbidity, and Dissolved Oxygen Levels
1110T	Abigail R Herzog	Grade 10	Can We Foil Oiled Soil?
1111T	Noelle M Hinrichs	Grade 11	Testing Greenhouse Gas Absorption in Constructed Wetlands
1113T	Sarah Jasa	Grade 10	The Effect Surface Condition Has on Atmospheric Temperature
1115W	Luke Onopa	Grade 12	Protecting our water supplies: Impacts of biomagnification of the antibiotic triclosan by perfluorooctane sulfonate on the health of vital anaerobic digesters in wastewater
1117W	Karsten E Salveson, Eve C Zelickson	Grade 12	Zebra mussel (<i>Dreissena polymorpha</i>) preference for colonization on macrophytes
1118W	Grant R Two Bulls	Grade 12	Effects of early Mdewakanton Dakota settlement patterns on the ecology of Lake Calhoun in Minneapolis, MN
1119T	AnneMarie R Wells	Grade 10	The Effect of Electromagnetic Radiation on <i>Lumbricus terrestris</i>
1120W	Rahul Parhi	Grade 12	Fault-Tolerant Arithmetic Computing using Partial Triple Modular Redundancy (PTMR)
1121T	Max Ylitalo	Grade 11	Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol Production from Waste Paper
1124T	Maitreya A Mujumdar	Grade 11	Improving Total Energy Production of Photovoltaics Solar Panels using Wavelength Selective Filters and Broadband Mirrors
1126T	Thomas G Berglund	Grade 12	Lift Assist Walker
1128T	Austin J Miller	Grade 10	Traction Action
1131S	Aimee Vang, Rebecca R Lindau, Browerti Koffah	Grade 11	Waterbender
1134W	Arush Jain	Grade 11	Improving Environmental Sustainability - Solid Waste To Biofuel Generation Using Pyrolysis
1136T	Braxton A Kukulka	Grade 10	The Degree of LED
1137W	Yun (Jeffrey) J Lee	Grade 11	The effectiveness of Benthic Microbial Fuel Cell in the waste water
1144W	Wolfgang Ofstedal, Easton McChesney	Grade 12	Engineering crystalline organic semiconducting thin films for use in organic solar cells
1147W	Daniel Qu	Grade 11	Development of a Portable MRI Machine
1149T	Maedin F Abegaz	Grade 11	Testing Wound Dressings with Light Activated Dye to Combat SSIs
1151T	Emily N Carlson	Grade 11	Effects of organic agricultural processes and grass feeding on the bacterial composition of raw ground beef
1155T	Krista L Holmstrom	Grade 10	The Effect of Bacterial Strains on the pH of Yogurt over time
1158T	Michelle Mao	Grade 11	The Effect of Storage Conditions on Milk Spoilage Due to Bacteria Growth

1159W	Evelyn G McChesney, Madeline McCue	Grade 11	Novel alternatives to antibiotics: Genomic alteration of probiotic bacteria for production of antimicrobial peptides (AMPs) to target antibiotic-resistant pathogens
1165T	Matthew R Baisch	Grade 10	Can Modifications On a Baseball Create More Movement?
1173T	Robin K Stauffer	Grade 10	A Comparison of Oak, Maple, and Hickory Drumstick Rebound Height
1174S	Asha Suvarna	Grade 9	Acoustics: The Study of Sound
1176W	Leighton Zhao	Grade 12	Normal Mode Analysis of a Seven-Particle Hexagonal Mini-Crystal System
1178S	Emilia F Topp-Johnson	Grade 9	Behind the Kernels II: A Reevaluation of Fungal Endophytes as Biocontrol Agents Against the Common Maize Pathogen <i>Ustilago maydis</i>
1180W	Rustam Kosherbay	Grade 12	Programming a flight simulator with a drone to generate energy-efficient paths over farm fields to monitor agricultural crops
1181T	Stephen J Mylabathula	Grade 12	Touch-Free Control of a Computer Using Combined Alternative Inputs, Visual and Auditory
1183W	Andrew D Sit, John E Dickinson	Grade 12	Engineering a spaceflight fabrication tracking system for manufacturing the James Webb Space Telescope and the Geostationary Operational Environmental Satellite Series-R
6001W	Joe M Gathje	Grade 6	Why Do Birds Fly in a V-formation?
6005W	Georgia N Dobbs	Grade 6	What Flavor Do You Favor?
6007W	Meghan M Murphy	Grade 6	Stroop Effect
6009W	Anne Stephan	Grade 6	Spot That Smile
6010S	Madeline Bagdade	Grade 6	Does sugar affect children's semantic memory?
6012S	Mani Chadaga	Grade 6	Fitness in the 'Palm' of Your Hand: Coconut Water as a Sports Drink
6016S	Anindita Rajamani	Grade 6	A Study of Artificial and Plant-Based Zero Calorie Sweeteners
6022S	Madelyn I Sinn	Grade 6	Which out of six fabrics is the best insulator to cold?
6027W	Eli Andrews	Grade 6	Is Horse Manure a Possible Energy Source
6035W	Harry C Gresser	Grade 6	Cement Strength
6043T	Alexander J Weigel	Grade 6	Safe Ice
6046S	Edie A Weinstein	Grade 6	Feelin' The Heat:How Do Different Household Materials Burn?
6054W	Genevieve E Ovsak	Grade 6	Softball Speedometer
6058W	Jack B Dougherty	Grade 6	The Science of Apple Preservation
6059W	Rose T Fesenmaier	Grade 6	How do Roots Grow When the Direction of Gravity Changes?
6062T	Hussein H Rmaile	Grade 6	How is the Growth of Bean Plants Affected by Different Starting Conditions?
6066W	Daniel Miller	Grade 6	Robo Race

7002W	Jennie Ehlert, Sam Detor	Grade 7	Squirrels On The Move
7004W	Mary O'Grady, Ellie Holt	Grade 7	Mammal Activity In A Winter World
7007T	Josephine L Ramirez	Grade 7	Temperatue Vs Dissolved Oxygen
7009T	Eleanor S Sand	Grade 7	Reducing Colony Collapse Disorder with Varroa Mite Treatments
7011S	Amira M Boler	Grade 7	Familiar Or Unfamiliar? That Is The Question
7012W	James Clinton, Declan Fries, Joe Ettawageshik	Grade 7	Be Swift With Swift Programming
7016S	Natalie Norquist, Anna Grundhoefer	Grade 7	A Rainbow of Remembrance
7022W	Abigail Roh	Grade 7	Saving The Earth One Bioplastic At A Time
7033T	Zachary Benson	Grade 7	Chemical Reaction
7034S	Solveig O Bjermeland	Grade 7	Oobleck is the New Black
7042T	Jack Miller	Grade 7	Does Salt Water or Tap Water Affect the Rust on an Iron Nail?
7046W	Jack Peterson	Grade 7	Coin Corrosion
7047S	Sophia A Rabins	Grade 7	Corn vs. Fire
7058W	Caden J Boike	Grade 7	Got Water..Fresh Water
7062W	Claire E Lorimor	Grade 7	Tsunamis: The Effect of Water Depth on Wave Velocity
7064S	Noah HL Rice	Grade 7	It's Easy Being Green
7070S	Maasia S Apet	Grade 7	Mud To Electricity
7073T	Maxwell J. Vogel	Grade 7	Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning Energy Efficient Fuel Additive?
7079T	Jack R Lowe	Grade 7	Aerodynamics
7082W	Kerui Yang	Grade 7	How Icing on Wind Turbine Blades Affects Power Generation
7084T	Hannah E Farmer	Grade 7	Crumb Catching Cereal Bag
7089W	Morgan Richter, Henry Koch	Grade 7	Toppling Buildings In A Single Blast
7090S	Lila T Seeba	Grade 7	Phosphate Problems
7091S	Raina E Sommer	Grade 7	Not A Drop To Drink: A study of which low cost, easily accessible water purification methods can effectively remove ammonia from water
7099W	Julia C Temple	Grade 7	Absorption of Sound
7101T	Savannah Allen	Grade 7	You Know What's Cool? Dog Drool! Does Dog Saliva Kill Bacteria?
7102S	Ainsley Cox	Grade 7	Factory vs. Home What Wins the Battle Against Contaminants?
7105S	Nathan D Omodt	Grade 7	Bacteria Growth in Mayonnaise at Four Different Temperatures
7112W	Clare Heaton	Grade 7	Various Soils and Their Effect on Lepidus Sativa

7113W	Lauren Hedman	Grade 7	The Effect of NaCl on Grass Seed Germination
7115S	Hannah E Omodt	Grade 7	Wheatgrass Growth Under Four Different Watering Conditions
7116T	Manashree S Padiyath	Grade 7	Greening Under the Evergreens: A biochar soil amendment study
7119S	James A Carlson	Grade 7	Hide and Seek
8002T	Haley C Jostes	Grade 8	Conserving an Endangered Species, The Monarch Butterfly
8007T	Chester J Hearne, Max Stauffer	Grade 8	What is the accuracy of an Eyewitness Testimony under these circumstances?
8012S	Celia J Olson	Grade 8	Does reading on kindle vs paper increase reading speed or recall?
8013S	William F Rachac III	Grade 8	Total Recall
8020W	Avni Jain	Grade 8	To Eat Or Not To Eat? An Innovation To Detect Food Spoilage
8022S	Eli S. Powell	Grade 8	Does The Color Of Human Hair
8025S	Katherine Grimm	Grade 8	Vitamin C in Action
8026S	Thomas A Heesch	Grade 8	Physical Activites Affects on Heart Rate
8028T	Ryan Miler	Grade 8	Does Gluten Affect the Quality of Cookies?
8031S	Ella Leta Vadnais	Grade 8	TheTruth of Taste Bud Maps
8040T	Stephen Mann	Grade 8	What Acid creates the best battery
8045S	Kathy Tang	Grade 8	Operation Fabric Blue
8060W	Karthik Papisetty	Grade 8	Global Environmental Performance and Threat Index
8063S	Audrey C Vidmar	Grade 8	Got Contaminants? Filter Them!
8065S	Zoe M Ward	Grade 8	How does the type of water affect the pH level of soil.
8068T	Anna M Wolff	Grade 8	The Effect of Fruit as a Battery
8070S	Adrian L Ali-Caccamo	Grade 8	Solar Ovens: A Simple, Sunny Solution
8073S	Nicholas R Martinez	Grade 8	Generating Electricity Using Sound and Mechanical Vibrations
8078S	William B Dusek	Grade 8	License to Launch
8087S	Valerie C. Bares	Grade 8	How do the anatomical structures of different plant species affect their ability to filter water?
8093S	Gavin Butterfield	Grade 8	Ping Pong Cannon
8095S	Justin T de Long-Hersh	Grade 8	Which Bridge Won't Fall Down?
8096S	Henrie P Friesen	Grade 8	Laser Bees - Planetary Defense
8104S	Isabel Dieperink	Grade 8	Excess Nutrients and Cyanobacteria:The Blue-Green Threat
8108S	Rajni L Schulz	Grade 8	The Grass isn't Always Greener on the Carbon Diox-Side
8110S	Lia J Wallace	Grade 8	Two Peas In a Pod?

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

7073T	Maxwell J. Vogel	Grade 7	Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning Energy Efficient Fuel Additive?
7116T	Manashree S Padiyath	Grade 7	Greening Under the Evergreens: A biochar soil amendment study
7101T	Savannah Allen	Grade 7	You Know What's Cool? Dog Drool! Does Dog Saliva Kill Bacteria?
6062T	Hussein H Rmaile	Grade 6	How is the Growth of Bean Plants Affected by Different Starting Conditions?
7079T	Jack R Lowe	Grade 7	Aerodynamics
8002T	Haley C Jostes	Grade 8	Conserving an Endangered Species, The Monarch Butterfly
8007T	Chester J Hearne, Max Stauffer	Grade 8	What is the accuracy of an Eyewitness Testimony under these circumstances?
8028T	Ryan Miler	Grade 8	Does Gluten Affect the Quality of Cookies?
8068T	Anna M Wolff	Grade 8	The Effect of Fruit as a Battery
7007T	Josephine L Ramirez	Grade 7	Temperatue Vs Dissolved Oxygen
7009T	Eleanor S Sand	Grade 7	Reducing Colony Collapse Disorder with Varroa Mite Treatments
8040T	Stephen Mann	Grade 8	What Acid creates the best battery
6043T	Alexander J Weigel	Grade 6	Safe Ice

Western Suburbs

7082W	Kerui Yang	Grade 7	How Icing on Wind Turbine Blades Affects Power Generation
6001W	Joe M Gathje	Grade 6	Why Do Birds Fly in a V-formation?
6005W	Georgia N Dobbs	Grade 6	What Flavor Do You Favor?
8020W	Avni Jain	Grade 8	To Eat Or Not To Eat? An Innovation To Detect Food Spoilage
7022W	Abigail Roh	Grade 7	Saving The Earth One Bioplastic At A Time
6058W	Jack B Dougherty	Grade 6	The Science of Apple Preservation
7058W	Caden J Boike	Grade 7	Got Water..Fresh Water
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7112W	Clare Heaton	Grade 7	Various Soils and Their Effect on Lepidus Sativa
6049W	Taylor C Williams	Grade 6	Is It Really Clean?
6054W	Genevieve E Ovsak	Grade 6	Softball Speedometer
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7113W	Lauren Hedman	Grade 7	The Effect of NaCl on Grass Seed Germination
6009W	Anne Stephan	Grade 6	Spot That Smile

St. Paul

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7102S	Ainsley Cox	Grade 7	Factory vs. Home What Wins the Battle Against Contaminants?
8108S	Rajni L Schulz	Grade 8	The Grass isn't Always Greener on the Carbon Diox-Side
6016S	Anindita Rajamani	Grade 6	A Study of Artificial and Plant-Based Zero Calorie Sweeteners
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6046S	Edie A Weinstein	Grade 6	Feelin' The Heat:How Do Different Household Materials Burn?
6010S	Madeline Bagdade	Grade 6	Does sugar affect children's semantic memory?
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8095S	Justin T de Long-Hersh	Grade 8	Which Bridge Won't Fall Down?
7034S	Solveig O Bjermeland	Grade 7	Oobleck is the New Black
8087S	Valerie C. Bares	Grade 8	How do the anatomical structures of different plant species affect their ability to filter water?
6022S	Madelyn I Sinn	Grade 6	Which out of six fabrics is the best insulator to cold?
8078S	William B Dusek	Grade 8	License to Launch

Top Ranking High School Papers

Grades 9-12

1st Place HS Research Paper Trophy

171	Rahul Parhi	Grade 12	Fault-Tolerant Arithmetic Computing using Partial Triple Modular Redundancy (PTMR)
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2nd Place HS Research Paper Trophy

265	Max Ylitalo	Grade 11	Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol Production from Waste Paper
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3rd Place HS Research Paper Trophy

116	Aadarsh S Padiyath	Grade 11	Increasing Cancer-Specific Drug Delivery using Targeted Liposomes
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High School Research Papers Selected for Competition at the Tri-State Junior Science and Humanities Symposium

North Central JSHS

108	Wolfgang Ofstedal, Easton McChesney	Grade 12	Engineering crystalline organic semiconducting thin films for use in organic solar cells
116	Aadarsh S Padiyath	Grade 11	Increasing Cancer-Specific Drug Delivery using Targeted Liposomes
121	Emily N Carlson	Grade 11	Effects of organic agricultural processes and grass feeding on the bacterial composition of raw ground beef
126	Steven M Gillen	Grade 10	The effect of temperature on aluminum corrosion
130	Luke Onopa	Grade 12	How safe are our water supplies? Impacts of biomagnification of the antibiotic triclosan by perfluorooctane sulfonate on the health of vital anaerobic digesters in wastewater
137	Grant R Two Bulls	Grade 12	Effects of early Mdewakanton Dakota settlement patterns on the ecology of Lake Calhoun in Minneapolis, MN
138	Moira Southern, Siddarth Eswarachari	Grade 11	Cleaner Water: Genomic analysis of the homogentisate catabolic pathway in <i>Pseudomonas putida</i> F1 for bioremediation of aromatic hydrocarbons
139	Karsten E Salveson, Eve C Zelickson	Grade 12	Zebra mussel (<i>Dreissena polymorpha</i>) preference for colonization on macrophytes in lake Minnetonka, MN
145	Ryan S Brunner	Grade 10	How do Magnets Affect the Growth of Plants
151	Lucas M Senta	Grade 10	The Effects of Bacteria Transfer from a Wet Versus a Dry Surface
157	Nathaniel R Farmer	Grade 10	Light stimulated startle response in <i>Daphnia magna</i>
158	Harini Kethar	Grade 10	Investigating Functions of Fanconi Anemia (FA) Proteins in Cellular Checkpoint Signaling: A Novel Role for the FANCD2 Protein
159	Emilia F Topp-Johnson	Grade 9	Behind the Kernels II: A Reevaluation of Fungal Endophytes as Biocontrol Agents Against the Common Maize Pathogen <i>Ustilago maydis</i>
164	Darartu M Gamada, Zhuang Miao	Grade 11	Molecular dynamics simulations of copolymers as molecular band-aids against Duchenne muscular dystrophy
168	Andrew D Sit, John E Dickinson	Grade 12	Engineering a spaceflight fabrication tracking system for manufacturing the James Webb Space Telescope and the Geostationary Operational Environmental Satellite Series-R
171	Rahul Parhi	Grade 12	Fault-Tolerant Arithmetic Computing using Partial Triple Modular Redundancy (PTMR)
175	Amrita Mohanty	Grade 12	Schwann Cell Differentiation from Stem Cells of Neurofibromatosis 1 Patients and Normal Controls
177	Krista L Holmstrom	Grade 10	The Effect of Bacterial Strains on the pH of Yogurt over time
179	Sweta Bhoopatiraju	Grade 12	The Effects of Betaine on Patients Intolerant to Maintenance Chemotherapy Due to Deficiency of S-Adenosyl Methionine
183	Emma R Fee	Grade 10	Nicotine Effects on Lung Cancer Cells
197	Benjamin Cole Hensley	Grade 10	Electrolytes in Drinks
204	Elizabeth M Tangney	Grade 10	Correlation Between Musical Training and Pitch Perception

206	Madison V Schwab	Grade 10	Which Colors of Paper are Most Conducive in Task Completion?
208	Paul V HoangLong	Grade 11	The Effects of Warfarin and Clopidogrel in Treating Occlusion
212	Nathaniel W Karr	Grade 10	Escherichia coli Production in the Presence of Antibacterial Agents
215	Kathleen A Kilinski	Grade 10	The Scoop on the Stroop
218	Annie J McFarland, Grace E Kirkpatrick	Grade 12	Long-term effects of hyperglycemia on dendrites in the CA1 region of the hippocampus
219	Prashant S Godishala, Brennan S Clark	Grade 11	A novel protocol for culturing adult porcine islets for transplantation in type 1 diabetic patients
224	Serena Jing	Grade 10	Advancements in Drug Delivery: the development and evaluation of ibuprofen loaded biodegradable hydrogels
226	Ishita Kamboj	Grade 12	Methamphetamine Compromises the Phagocytic Activity of BV2 Murine Microglia without Compromising Cellular Viability
229	Maxine Lightfoot	Grade 11	How does existential angst affect insomnia?
236	Jack F Bardwell	Grade 10	Can Sound Be Made Visible?
249	Leighton Zhao	Grade 12	Normal Mode Analysis of a Seven-Particle Hexagonal Mini-Crystal System
262	Ouafae Chahir	Grade 10	How the Strength of a Magnet Varies with Temperature
265	Max Ylitalo	Grade 11	Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol Production from Waste Paper
268	Carolyn K Jons	Grade 11	Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2
272	Maria S Berger	Grade 10	Cell Phone Radiation

Top Ranking Middle School Papers

Grades 6-8

1st Place MS Research Paper Trophy

529	Maxwell J. Vogel	Grade 7	Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning Energy Efficient Fuel Additive?
523	Valerie C. Bares	Grade 8	How do the anatomical structures of different plant species affect their ability to filter water?

2nd Place MS Research Paper Trophy

526	Avni Jain	Grade 8	To Eat Or Not To Eat? An Innovation To Detect Food Spoilage
503	Hannah E Farmer	Grade 7	Crumb Catching Cereal Bag

3rd Place MS Research Paper Trophy

513	Manashree S Padiyath	Grade 7	Greening Under the Evergreens: A biochar soil amendment study
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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	Hannah E Farmer	Grade 7	Crumb Catching Cereal Bag
504	Raina E Sommer	Grade 7	Not A Drop To Drink: A study of which low cost, easily accessible water purification methods can effectively remove ammonia from water
507	Kaia MJ Hilgendorf-Roost	Grade 7	Vials of Vile Water Comparing clarities of agricultural, urban, and natural lakes
508	Rajni L Schulz	Grade 8	The Grass isn't Always Greener on the Carbon Diox-Side
512	Audrey C Vidmar	Grade 8	Got Contaminants? Filter Them!
513	Manashree S Padiyath	Grade 7	Greening Under the Evergreens: A biochar soil amendment study
514	Lauren Hedman	Grade 7	The Effect of NaCl on Grass Seed Germination
516	Noah HL Rice	Grade 7	It's Easy Being Green
520	Isabel Dieperink	Grade 8	Excess Nutrients and Cyanobacteria: The Blue-Green Threat
523	Valerie C. Bares	Grade 8	How do the anatomical structures of different plant species affect their ability to filter water?
524	Henry J Neufeld	Grade 7	School BUGS Me
526	Avni Jain	Grade 8	To Eat Or Not To Eat? An Innovation To Detect Food Spoilage
529	Maxwell J. Vogel	Grade 7	Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning Energy Efficient Fuel Additive?
530	Solveig O Bjermeland	Grade 7	Oobleck is the New Black
534	Chinmay Sahu	Grade 8	Can household light bulbs be used to recharge batteries?
535	Adrian L Ali-Caccamo	Grade 8	Solar Ovens: A Simple, Sunny Solution
538	Kerui Yang	Grade 7	How Icing on Wind Turbine Blades Affects Power Generation

3M Renewable Energy Award

plaque and \$100.

High School

1144W	Wolfgang Ofstedal, Easton McChesney	Grade 12	Engineering crystalline organic semiconducting thin films for use in organic solar cells
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Middle School

8070S	Adrian L Ali-Caccamo	Grade 8	Solar Ovens: A Simple, Sunny Solution
7079T	Jack R Lowe	Grade 7	Aerodynamics
7082W	Kerui Yang	Grade 7	How Icing on Wind Turbine Blades Affects Power Generation

3M Aerospace Award

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

7079T	Jack R Lowe	Grade 7	Aerodynamics
7082W	Kerui Yang	Grade 7	How Icing on Wind Turbine Blades Affects Power Generation

1180W	Rustam Kosherbay	Grade 12	Programming a flight simulator with a drone to generate energy-efficient paths over farm fields to monitor agricultural crops
1183W	Andrew D Sit, John E Dickinson	Grade 12	Engineering a spaceflight fabrication tracking system for manufacturing the James Webb Space Telescope and the Geostationary Operational Environmental Satellite Series-R

3M Inventors Award

Invitation to a 3M Inventors event.

1144W	Wolfgang Ofstedal, Easton McChesney	Grade 12	Engineering crystalline organic semiconducting thin films for use in organic solar cells
8070S	Adrian L Ali-Caccamo	Grade 8	Solar Ovens: A Simple, Sunny Solution
1130T	Spencer C Robinson	Grade 10	Robotic Hand
7084T	Hannah E Farmer	Grade 7	Crumb Catching Cereal Bag
6043T	Alexander J Weigel	Grade 6	Safe Ice
6035W	Harry C Gresser	Grade 6	Cement Strength
6040W	Samantha Jane Thomas	Grade 6	A Helping Hand
6045W	Ani Tonoyan	Grade 6	Hey, Turn that Down: Finding the best sound insulation
6041T	Milan E Jostes	Grade 6	The Mag Prop Train
1121T	Max Ylitalo	Grade 11	Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol Production from Waste Paper
7093T	Joseph F D'Agostino	Grade 7	The Study of Retroreflectivity in road stripes
7034S	Solveig O Bjermeland	Grade 7	Oobleck is the New Black

Teacher Excellence Award

Stephen Moe, Friends School of Minnesota

American Chemical Society

- Certificate & \$50 cash

1090W	Carolyn K Jons	Grade 11	Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2
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American Chemical Society

- Certificate

1091W	Sofie Kim, Jacob Levy	Grade 12	Optimized syntheses of novel, medicinally applicable 1,2,3-triazole derivatives
1046T	Colton V Van Dorpe	Grade 12	Low-Density Polyethylene Biochemical Degredation

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

Twin Cities

- 8055T David J Gallagher Grade 8 Effects On Evaporation
- 1113T Sarah Jasa Grade 10 The Effect Surface Condition Has on Atmospheric Temperature

Western Suburbs

- 6025W Danny C McCoy Grade 6 Indoors or Outdoors; Which has more air pollution?

St. Paul

- 8056S Alexandra L Harris Grade 8 Meteorology in Minnesota
- 7036S Mariana Cournoyer Grade 7 The Dead Sea Explained

American Psychological Association Award

Certificate

Twin Cities

- 1028T Jenny M Mannila Grade 10 Influence of Packaging on Children

Western Suburbs

- 1042W Alicia L Wong Grade 12 Analyses of Gaze Clusters Pertaining to Spatial Cognition

St. Paul

- 1026S Maxine Lightfoot Grade 11 How does existential angst affect insomnia?

ASM International Materials Education Foundation Award

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

Twin Cities

- 6044T Julian A Byrne Grade 6 Brown Sugar Hardness Testing Optimization

Western Suburbs

- 7083W Jonah Paul Caldwell-Tautges Grade 7 Save the Earbuds!

St. Paul

- 6032S Jackson Adkins Grade 6 Do different brands of snowboard wax affect speed?

Association of Women Geoscientists

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

Twin Cities

- 1110T Abigail R Herzog Grade 10 Can We Foil Oiled Soil?

Western Suburbs

8107W Melanie M Roth Grade 8 Growing Grass Seeds in Different Environments

St. Paul

1178S Emilia F Grade 9 Behind the Kernels II: A Reevaluation of Fungal Endophytes as
Topp-Johnson Biocontrol Agents Against the Common Maize Pathogen *Ustilago maydis*

ASU Walton Sustainability Solutions Initiatives

Twin Cities

1151T Emily N Grade 11 Effects of organic agricultural processes and grass feeding on the
Carlson bacterial composition of raw ground beef

1126T Thomas G Grade 12 Lift Assist Walker
Berglund

Western Suburbs

1180W Rustam Grade 12 Programming a flight simulator with a drone to generate energy-
Kosherbay efficient paths over farm fields to monitor agricultural crops

1176W Leighton Zhao Grade 12 Normal Mode Analysis of a Seven-Particle Hexagonal Mini-Crystal
System

St. Paul

1054S Serena Jing Grade 10 Advancements in Drug Delivery: the development and evaluation
of ibuprofen loaded biodegradable hydrogels

1073S Pa Nhia Moua, Grade 11 Temperature and the cell membrane
Diane Yang

Bright Future Award

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

6059W Rose T Fesenmaier Grade 6 How do Roots Grow When the Direction of Gravity Changes?

East Side Science Club Alumni Award

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

6023T Lee M Younger Grade 7 Milk Rainbow

6011W Abigail R Grade 6 Does The Color of Your Eyes Affect How Well You See in Low
Casserly Light?

6046S Edie A Weinstein Grade 6 Feelin' The Heat:How Do Different Household Materials Burn?

7019S Eloise M Rein VIII Grade 7 Boys vs Girls: Who Has Better Short-term Memory

7101T Savannah Allen Grade 7 You Know What's Cool? Dog Drool! Does Dog Saliva Kill
Bacteria?

8023S Quncy D Altman Grade 8 Camo

Glen & Jacob Domeier Memorial Award

- 7009T Eleanor S Sand Grade 7 Reducing Colony Collapse Disorder with Varroa Mite Treatments
 8087S Valerie C. Bares Grade 8 How do the anatomical structures of different plant species affect their ability to filter water?

Intel Excellence in Computer Science Award

Certificate and \$200 (check in the mail)

Twin Cities

- 1181T Stephen J Grade 12 Touch-Free Control of a Computer Using Combined Alternative
 Mylabathula Inputs, Visual and Auditory

Western Suburbs

- 1120W Rahul Grade 12 Fault-Tolerant Arithmetic Computing using Partial Triple Modular
 Parhi Redundancy (PTMR)

St. Paul

ISEF Alumni Awards

Former ISEF Finalists recognizing up-and-coming young scientists

Sponsor: Michael Lohman, Jr

One hour in Flight Simulator

- 1180W Rustam Grade 12 Programming a flight simulator with a drone to generate energy-
 Kosherbay efficient paths over farm fields to monitor agricultural crops

Sponsor: Kyrstin Underbakke Ball

Certificate & \$25 cash

- 7082W Kerui Yang Grade 7 How Icing on Wind Turbine Blades Affects Power Generation

Sponsor: Kyra Underbakke

Certificate & \$25 cash

- 8087S Valerie C. Grade 8 How do the anatomical structures of different plant species affect
 Bares their ability to filter water?

Sponsor: Timara Underbakke

Certificate & \$25 cash

- 7073T Maxwell J. Grade 7 Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning
 Vogel Energy Efficient Fuel Additive?

Caffeinated Student Award Sponsor: Kyra Underbakke

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

- 7085S Zachary Glaser, Grade 7 Touche Trebuchet
 Oliver Paleen
 1176W Leighton Zhao Grade 12 Normal Mode Analysis of a Seven-Particle Hexagonal
 Mini-Crystal System
 7106T Julia J Bennett Grade 7 Spin to Win

1070W Prashant S Grade 11 The Next Step Towards a Cure for Diabetes: A Novel
Godishala, Brennan Protocol for Culturing Adult Porcine Islets for Transplantation
S Clark in Type 1 Diabetic Patients

ISWEEEP

Outstanding Projects to Participate in International Sustainable World (Energy, Engineering, & Environment) Project Olympiad; Houston, TX, May 7-11, 2015

ISWEEEP Finalists, May 7-11, 2015 in Houston, TX

These projects bypass the prequalification round of ISWEEEP.

1151T Emily N Grade 11 Effects of organic agricultural processes and grass feeding on the
Carlson bacterial composition of raw ground beef

1005T Benjamin Grade 12 Effectiveness of Essential Oils in Repelling Drosophila
Vallin melanogaster

1079T Andrew L Grade 9 Are BWCA Lakes Affected by Acid Rain and Can Acidic Lakes Be
Barton Restored Using Calcium Carbonate?

1137W Yun (Jeffrey) J Grade 11 The effectiveness of Benthic Microbial Fuel Cell in the waste water
Lee

1174S Asha Suvarna Grade 9 Acoustics: The Study of Sound

Joel Wagner Caring Bridge Award

best cancer research project

1063T Aadarsh S Grade 11 Increasing Cancer-Specific Drug Delivery using Targeted
Padiyath Liposomes

Killeen Memorial Award

Trophy to the student who best shows inspiration for their project

7050S Isabella Vazquez Grade 7 Eggsperiment

Leeward Space Foundation

Twin Cities Space Award

MARS CON

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

Minnesota Agriculture in the Classroom

Project Senior High

1110T Abigail R Herzog Grade 10 Can We Foil Oiled Soil?

Project Junior High

7113W Lauren Hedman Grade 7 The Effect of NaCl on Grass Seed Germination

Paper Senior High

159 Emilia F Grade 9 Behind the Kernels II: A Reevaluation of Fungal Endophytes as

Topp-Johnson

Biocontrol Agents Against the Common Maize Pathogen *Ustilago maydis***Paper Junior High**

508 Rajni L Schulz Grade 8 The Grass isn't Always Greener on the Carbon Diox-Side

Minnesota Astronomical Society

- certificate & prize packet

6011W Abigail R Casserly Grade 6 Does The Color of Your Eyes Affect How Well You See in Low Light?

1175S Ramona J White Grade 10 The Human Black Hole

Minnesota Chapter of American Fisheries Society**Senior High**

- Fishing Equipment

1117W Karsten E Salvesson, Eve C Zelickson Grade 12 Zebra mussel (*Dreissena polymorpha*) preference for colonization on macrophytes

Junior High

- Fishing equipment

7006S Deshanti D Phillips, Makayla Yang Grade 7 How Can a Fish Learn?

Minnesota Space Frontier Society Award

- certificate & prize packet

6059W Rose T Fesenmaier Grade 6 How do Roots Grow When the Direction of Gravity Changes?

7079T Jack R Lowe Grade 7 Aerodynamics

8096S Henrie P Friesen Grade 8 Laser Bees - Planetary Defense

1130T Spencer C Robinson Grade 10 Robotic Hand

1183W Andrew D Sit, John E Dickinson Grade 12 Engineering a spaceflight fabrication tracking system for manufacturing the James Webb Space Telescope and the Geostationary Operational Environmental Satellite Series-R

6053S Stephen M Olk Jr Grade 6 It Is Rocket Science

7071W Rajani Lamichhane Grade 7 How do Different Materials Affect the Burn Time of Rocket Fuel

Minnesota State Horticulture Award

1178S Emilia F Topp-Johnson Grade 9 Behind the Kernels II: A Reevaluation of Fungal Endophytes as Biocontrol Agents Against the Common Maize Pathogen *Ustilago maydis*

8104S Isabel Dieperink Grade 8 Excess Nutrients and Cyanobacteria: The Blue-Green Threat

7111T Gavin Burns Grade 7 Does WiFi Affect Plant Growth?

6062T Hussein H Grade 6 How is the Growth of Bean Plants Affected by Different Starting
Rmaile Conditions?

Mu Alpha Theta Award

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

Twin Cities

1182T Evan D Sand Grade 10 Steganographic Optimization

Western Suburbs

1147W Daniel Qu Grade 11 Development of a Portable MRI Machine

St. Paul

1142S Mackenzie Mazhari Grade 10 Light Speed Through Different Mediums

National Oceanic and Atmospheric Administration (NOAA)

"Taking the Pulse of the Planet"

- Certificate & medallion

Twin Cities

1108T Emma C Grade 10 The Impact of Human Proximity to Lakes on Total Phosphate,
Hakanson Turbidity, and Dissolved Oxygen Levels

Western Suburbs

1117W Karsten E Salveson, Eve C Grade 12 Zebra mussel (*Dreissena polymorpha*) preference for
Zelickson colonization on macrophytes

St. Paul

8063S Audrey C Vidmar Grade 8 Got Contaminants? Filter Them!

Outstanding Volunteerism Award (USS Nokomis Club)

2015 for their plaque and many, many, many thanks for their hard work!

Penny Lohman Memorial Award

Grand award

1149T Maedin F Grade 11 Testing Wound Dressings with Light Activated Dye to Combat
Abegaz SSIs

Radio City Award

- Awarded to Best Amateur Radio project

6028T Josh Biermaier Grade 6 That's Shocking!

6029S	Sean Corrie	Grade 6	Which type of cellphone charger is the most efficient? Which type of cellphone charger is the most versatile?
6038S	Akshay Nambudiripad	Grade 6	Permanent Magnets vs Electromagnets: Which is stronger?
1119T	AnneMarie R Wells	Grade 10	The Effect of Electromagnetic Radiation on Lumbricus terrestris

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

1021T	Charles H Green	Grade 10	What the Frack!: The Influence of Propaganda on Public Attitudes Towards Fracking
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Western Suburbs

1134W	Arush Jain	Grade 11	Improving Environmental Sustainability - Solid Waste To Biofuel Generation Using Pyrolysis
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St. Paul

8021S	Sophia A Nash	Grade 8	Environmental Effect of Tobacco
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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

Western Suburbs

1070W	Prashant S Godishala, Brennan S Clark	Grade 11	The Next Step Towards a Cure for Diabetes: A Novel Protocol for Culturing Adult Porcine Islets for Transplantation in Type 1 Diabetic Patients
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St. Paul

Stockholm Junior Water Prize (SJWP)

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

Twin Cities

1108T	Emma C Hakanson	Grade 10	The Impact of Human Proximity to Lakes on Total Phosphate, Turbidity, and Dissolved Oxygen Levels
1006T	Jaclyn Weiss	Grade 10	Ocean Acidification
1079T	Andrew L Barton	Grade 9	Are BWCA Lakes Affected by Acid Rain and Can Acidic Lakes Be Restored Using Calcium Carbonate?

Western Suburbs

1103W	Moira Southern, Siddarth Eswarachari	Grade 11	Cleaner Water: Genomic analysis of the homogentisate catabolic pathway in <i>Pseudomonas putida</i> F1 for bioremediation of aromatic hydrocarbons
1090W	Carolyn K Jons	Grade 11	Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2
1137W	Yun (Jeffrey) J Lee	Grade 11	The effectiveness of Benthic Microbial Fuel Cell in the waste water

St. Paul

Twin Cities Regional Science Fair Excellence Award

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

6014T	Andrea A Finholt	Grade 6	Organic vs. Processed
6016S	Anindita Rajamani	Grade 6	A Study of Artificial and Plant-Based Zero Calorie Sweeteners
6022S	Madelyn I Sinn	Grade 6	Which out of six fabrics is the best insulator to cold?
6027W	Eli Andrews	Grade 6	Is Horse Manure a Possible Energy Source
7022W	Abigail Roh	Grade 7	Saving The Earth One Bioplastic At A Time
6065W	Oriana G Sampson	Grade 6	Computer Vision for the Blind
7068S	Sarah J Swanson	Grade 7	Two Stills, One Job - Creating Safe, Clean Drinking Water
7103T	Owen Kray Fuls	Grade 7	Does Ultraviolet Radiation Kill Fungus?
7104S	Henry J Neufeld	Grade 7	School BUGS Me
7111T	Gavin Burns	Grade 7	Does WiFi Affect Plant Growth?
7116T	Manashree S Padiyath	Grade 7	Greening Under the Evergreens: A biochar soil amendment study
8078S	William B Dusek	Grade 8	License to Launch
1001W	Bridget A Carroll	Grade 11	Endangered Sea Turtle Nesting at Playa Cabuyal, Costa Rica and Tracking Telemetry to Support Effective Conservation Efforts
1005T	Benjamin Vallin	Grade 12	Effectiveness of Essential Oils in Repelling <i>Drosophila melanogaster</i>
1090W	Carolyn K Jons	Grade 11	Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2
1123T	Hailey E Malone	Grade 10	Sympathetic Vibrations on the Guitar
6001W	Joe M Gathje	Grade 6	Why Do Birds Fly in a V-formation?
6010S	Madeline Bagdade	Grade 6	Does sugar affect children's semantic memory?
6008W	Samuel R Pumarlo	Grade 6	Some Good Things Come To Gamers
6038S	Akshay Nambudiripad	Grade 6	Permanent Magnets vs Electromagnets: Which is stronger?
6030S	Anders Lien	Grade 6	The Secrets of Lightbulbs: What type of lightbulb uses the least power?
6041T	Milan E Jostes	Grade 6	The Mag Prop Train
7001W	Matthew J Banovetz	Grade 7	"Is it Handed or Pawed?"
7018T	Julie Diane Pliego-Cuevas	Grade 7	Memory vs. Music

7009T	Eleanor S Sand	Grade 7	Reducing Colony Collapse Disorder with Varroa Mite Treatments
7051T	Brittany Vega	Grade 7	Pop! Pop! Popcorn!
7047S	Sophia A Rabins	Grade 7	Corn vs. Fire
8015S	Luisa Lea Rubianes	Grade 8	The Ruler Drop Test
8008S	Rory King	Grade 8	The Effect of Time-of-Day on Test Performance Among Math Students
8043W	Devika L Narayan	Grade 8	The Effect of the Presence of Gas Stations on Soil Quality
1095T	Madeline G Strey	Grade 10	Effects of Boiling on Vitamin C Content in Vegetables
1133S	Seven James Armstrong, Shyanna H Carpenter	Grade 9	Does deet affect the nutrition in the soil

United States Air Force Awards

Commended Project

Twin Cities

7079T	Jack R Lowe	Grade 7	Aerodynamics
7106T	Julia J Bennett	Grade 7	Spin to Win
1169T	Tyler R.M. Ofstad	Grade 10	How is a Wing's Performance Affected by the Altering of It's Camber
1125T	Benjamin R Anderson	Grade 10	Propeller Efficiency
1130T	Spencer C Robinson	Grade 10	Robotic Hand
1113T	Sarah Jasa	Grade 10	The Effect Surface Condition Has on Atmospheric Temperature

Western Suburbs

7075W	Charlie F Erickson	Grade 7	How much Height to loop the loop
1183W	Andrew D Sit, John E Dickinson	Grade 12	Engineering a spaceflight fabrication tracking system for manufacturing the James Webb Space Telescope and the Geostationary Operational Environmental Satellite Series-R
1176W	Leighton Zhao	Grade 12	Normal Mode Analysis of a Seven-Particle Hexagonal Mini-Crystal System

St. Paul

8093S	Gavin Butterfield	Grade 8	Ping Pong Cannon
1086S	Erica Craddock	Grade 12	The Magnetic Attraction of Rust
1175S	Ramona J White	Grade 10	The Human Black Hole

United States Army Awards

Best Project

- Certificate, medal, wireless mouse

Twin Cities

1051T Benjamin Cole Hensley Grade 10 Electrolytes in Drinks

Western Suburbs

1134W Arush Grade 11 Improving Environmental Sustainability - Solid Waste To Biofuel
Jain Generation Using Pyrolysis

St. Paul

1038S Juan M Valencia Grade 12 Does Soccer knowledge equal geographic awareness

Commended Award

- Certificate & wireless mouse

Twin Cities

1006T Jaclyn Grade 10 Ocean Acidification
Weiss

1121T Max Grade 11 Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol
Ylitalo Production from Waste Paper

Western Suburbs

1180W Rustam Grade 12 Programming a flight simulator with a drone to generate energy-
Kosherbay efficient paths over farm fields to monitor agricultural crops

1118W Grant R Two Grade 12 Effects of early Mdewakanton Dakota settlement patterns on the
Bulls ecology of Lake Calhoun in Minneapolis, MN

St. Paul

1142S Mackenzie Mazhari Grade 10 Light Speed Through Different Mediums

1170S Gerardo Perales Jr. Grade 9 Electrolysis Conductivity

United States Department of Agricultural Research Award

- Certificate & books

Twin Cities

7111T Gavin Burns Grade 7 Does WiFi Affect Plant Growth?

Western Suburbs

6059W Rose T Grade 6 How do Roots Grow When the Direction of Gravity Changes?
Fesenmaier

1180W Rustam Grade 12 Programming a flight simulator with a drone to generate energy-
Kosherbay efficient paths over farm fields to monitor agricultural crops

St. Paul

8104S Isabel Dieperink Grade 8 Excess Nutrients and Cyanobacteria: The Blue-Green Threat

7110S Jillian M Brenner Grade 7 Does Fertilizer effect Soybean growth

8065S Zoe M Ward Grade 8 How does the type of water affect the pH level of soil.

United States Department of Health and Human Services

- Medal & Certificate Signed by the Surgeon General

Twin Cities

1095T Madeline G Strey Grade 10 Effects of Boiling on Vitamin C Content in Vegetables

Western Suburbs

1049W John N Chen, Jeffrey He Grade 11 The Effects of Caffeinated and Sugared Soft Drinks on Youth Brain

St. Paul

1054S Serena Jing Grade 10 Advancements in Drug Delivery: the development and evaluation of ibuprofen loaded biodegradable hydrogels

United States Metric Association

- Certificate

Twin Cities

1002T Nathaniel R Farmer Grade 10 Light stimulated startle response in Daphnia magna

Western Suburbs

1090W Carolyn K Jons Grade 11 Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2

St. Paul

1054S Serena Jing Grade 10 Advancements in Drug Delivery: the development and evaluation of ibuprofen loaded biodegradable hydrogels

United States Navy and Marine Corps ONR Office of Naval Research

High School Division

certificate & \$50 check (in the mail)

Twin Cities

1182T Evan D Sand Grade 10 Steganographic Optimization

Western Suburbs

1090W Carolyn K Jons Grade 11 Improved Efficiency of Steam Generation from Seawater Using Carbon Nanoparticles - Year 2

1183W Andrew D Sit, John E Dickinson Grade 12 Engineering a spaceflight fabrication tracking system for manufacturing the James Webb Space Telescope and the Geostationary Operational Environmental Satellite Series-R

1147W Daniel Qu Grade 11 Development of a Portable MRI Machine

St. Paul**Junior High Division**

certificate

Twin Cities

7073T	Maxwell J. Vogel	Grade 7	Got Gas: Does Ethanol Live up to its Reputation as a Clean Burning Energy Efficient Fuel Additive?
7079T	Jack R Lowe	Grade 7	Aerodynamics
7111T	Gavin Burns	Grade 7	Does WiFi Affect Plant Growth?
8040T	Stephen Mann	Grade 8	What Acid creates the best battery
8061T	Cecilia R Petruconis	Grade 8	Water from Arizona to Minnesota

Western Suburbs

7029W	Nathan M Amiot	Grade 7	Corrosion and It's Effects
7087W	Jack Mattera, Max McKoy, Nathan Rockafellow	Grade 7	Dam Efficiency
7082W	Kerui Yang	Grade 7	How Icing on Wind Turbine Blades Affects Power Generation

St. Paul

7053S	Sawyer E Wall	Grade 7	War of the Fuels
8039S	Hannah G Lender	Grade 8	How Batteries' Voltages are Affected by Different Temperatures
8023S	Quncy D Altman	Grade 8	Camo
8096S	Henrie P Friesen	Grade 8	Laser Bees - Planetary Defense

University of Minnesota School of Social Work Research for the Common Good Award

Award plaque for project that demonstrates excellence in applied social sciences

8014W	Sadie L Richardson	Grade 8	How Prevalent Is Gender Stereotyping?
1017T	Andrea M Delius	Grade 10	Undressing the Truth

Yale Science and Engineering Association, Inc.

- Certificate for an 11th grade student in computer science, engineering, physics, or chemistry

Twin Cities

1121T	Max Ylitalo	Grade 11	Landfill to Car Fuel: Using Surfactants to Increase Cellulosic Ethanol Production from Waste Paper
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Western Suburbs

1091W	Sofie Kim, Jacob Levy	Grade 12	Optimized syntheses of novel, medicinally applicable 1,2,3-triazole derivatives
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St. Paul

1054S Serena Grade 10 Advancements in Drug Delivery: the development and evaluation of
Jing ibuprofen loaded biodegradable hydrogels

Schools Trophies