87th Twin Cities Regional Science Fairs Awards
33rd St. Paul Regional Science Fair
31st Western Suburbs Regional Science Fair February 28 - March 2, 2025
Research Papers February 8-17, 2025

Students selected to compete at the
2025 Regeneron International Science and Engineering Fair

Columbus, Ohio
May 10 -16, 2025

ISEF Finalist (St. Paul)

S-SOFT6902	Huxley Westemeier	Integrity: Generalized Artificial Image Classification with Noise Domain Localization
S-BMED5324	Maren Overgaard	The Impact of Hypohydration on Concussion Severity

ISEF 1st Alternate (St. Paul)

S-ENEV6107	Agustin Orezzoli Robinson	Mycofiltration: Using Pleurotus Ostreatus to Remove Pollutants from Residential Runoff

ISEF 2nd Alternate (St. Paul)

S-BCHM5105	Shefali Meagher	A Novel Analysis of Cosmetic Methylparaben in Artificial Amniotic Fluid

ISEF Finalist (Twin Cities)

T-CHEM5616   Alyssa Wang   Development of edible active coating films from agro-waste for produce preservation

T-BEHA5204   Bersy Yonas   CALM-R: Evaluating and Optimizing the Impact of a Multisensory Mental Wellness Space

T-BMED5307   Riddhi Singhvi   Decoding Diabetes: Harnessing AI to Accurately Predict Real-Time and Future Blood Glucose Levels For Diabetes Management Using Diet, Exercise, Insulin Intake, and Heart Rate Variability

T-ROBO6811   Ethan Finch   Coding AI to Enhance Speech Therapy

ISEF 1st Alternate (Twin Cities)

T-ENEV6106   John Liu   Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals

ISEF 2nd Alternate (Twin Cities)

T-ANIM5001   Isabella Wang   Hive Health: Characterizing Recapping and Hygienic Behavior in Honey Bees as a Natural Defense Mechanisms Against Varroa Mites and Viruses Using Real-Time PCR to Quantify Viral Levels

ISEF 3rd Alternate (Twin Cities)

T-PHYS6622   Grant Pilgrim   Impossible Car

ISEF 4th Alternate (Twin Cities)

T-BEHA5233   Lynne Hu   Emotion and Risk: Exploring the Link Between Emotional Intensity and Risk Tolerance

ISEF Finalist (Western Suburbs)

W-CHEM5607 Tyler Clair

Silver nanoparticles from food waste: An innovative green synthesis to remove synthetic dyes for applications in water treatment

W-MATS6411 Vick Tan

A Reusable Teabag for Bioremediation of Arsenic from Drinking Water

W-PLNT6706   Quinn Hughes

FULL MOON A Novel and Economical Method for Sustainable Agriculture on the Moon

W-ENBM6004 Mira Jayant

HOPE: A Novel Automated Device for Hemorrhage Control in Pediatric Firearm Emergencies

W-ROBO6807 Razeen Abdul-Field

Evolving neural networks to exploit problem processing regularities

ISEF 1st Alternate (Western Suburbs)

W-EBED5805   Shagun Shrivastava

In Search of Sound: Creating Solutions for Sound Localization Challenges Using BCI and ESB 32 to Aid Spatial Hearing Loss - Year 2

ISEF 2nd Alternate (Western Suburbs)

W-ROBO6804 Alexander Weimer

Error-corrected deep learning approach to handwritten text recognition of Gregg shorthand

ISEF 3rd Alternate (Western Suburbs)

W-CBIO5402   Milan Darji

Custom Enzymes to Custom Care: Ushering in the Era of Personalized Medicine Using a Novel Approach for Engineering Enzyme Specificity

ISEF 4th Alternate (Western Suburbs)

W-ETSD6220   Maximus Ren

Protecting Critical Grid Infrastructure: An Automation Tool to Help Utility Companies Assess the Impact of Residential Electric Vehicle Charging on Distribution Transformers

ISEF 5th Alternate (Western Suburbs)

W-SOFT6906   Lucas Granucci

Cross-lingual transfer and pseudo-labeling for multilingual named entity recognition

3Mgives Sponsor Award
Plaque and $500

T-CHEM5616 Alyssa Wang   Development of edible active coating films from agro-waste for produce preservation

Ecolab Sponsor Award
Plaque and $500

W-MATS6411 Vick Tan   A Reusable Teabag for Bioremediation of Arsenic from Drinking Water

DuPont Water Solutions Sponsor Award
Plaque and $250

T-ENEV6106 John Liu   Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals

Northrop Grumman Sponsor Award
Plaque and $100

S-SOFT6902 Huxley Westemeier   Integrity: Generalized Artificial Image Classification with Noise Domain Localization

Office Depot Sponsor Award
Plaque & $100 gift card

W-ETSD6202 Sam McHugh   Design of wearable robotic arms for climbing

Premier Banks Sponsor Award
Floret Ribbon

W-EBED1803 Anchit Kumar   Complete C Computer Using Python

Mintahoe Catering and Events Sponsor Award
Plaque

W-CELL5514 Dmitry Bluvshtein   Effect of Food Matrices on Yeast Health in Long-Term Stressful Environments

3M Display and Electronics Product Platform
Certificate + $100 gift card + invitation to 3M Inventor Event

S-ETSD6213	Jack Gao	Human Factors and Technology Enables Safe and Autonomous Driving
W-EGSD5902	Amelia Klemme	Optimizing bioelectricity production efficiency in algal fuel cells
W-EGSD1918	Suraj Jayant	Press to Power
W-EGSD1917	Kinley Kuhlmann	Which Battery is Best?
W-ROBO2810	Kaila Kurien	Car vs. Road

3M Aerospace and Defense Vertical
Certificate + $100 gift card + invitation to 3M Inventor Event

W-ETSD6203	Yosan Asbu	Gas Guard: Creating a Multi-Sensor Natural Gas Alert System for Homes
T-ENEV6106	John Liu	Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals
T-CHEM1630	Kimberly Montes Hernandez	The Muffin War: Baking Powder vs. Baking Soda
S-MATS2407	Charlie Sandvik	How Do Different Materials and Volume of Water Bottles Affect the Temperature Over Time?
W-MATS2413	Easton Graber	Salt Wars The Freeze Awakens

3M Specialty Materials Development Lab
Certificate + $100 gift card + invitation to 3M Inventor Event

S-ENEV6107	Agustin Orezzoli Robinson	Mycofiltration: Using Pleurotus Ostreatus to Remove Pollutants from Residential Runoff
W-MATS6403	Nicholas Joseph	Design and construction of a filament extruder to improve the flow rate of 3D printed PLA after multiple recyclings Design and construction of a filament extruder to improve the flow rate of 3D printed PLA after multiple recyclings
W-EBED1803	Anchit Kumar	Complete C Computer Using Python
W-EAEV1718	Joshua Mills	Big Waves and Shifting Sands - How Waves Impact Water Quality
W-MATS2414	Jacob Scholtz	Under Pressure

3M Personal Safety Division
Certificate + $100 gift card + invitation to 3M Inventor Event

W-ETSD2219	Phoebe Cho	Wait What! That Device Creates EMF?
W-ETSD2209	Joel Abbring	Stopping the Shake: How Bracing and Damper Weight Affects the Resistance of a Building to an Earthquake
S-EAEV1736T	Soedear Wah, Edwin Martin Cumes	How Clean are School Water Sources
W-EBED5805	Shagun Shrivastava	In Search of Sound: Creating Solutions for Sound Localization Challenges Using BCI and ESB 32 to Aid Spatial Hearing Loss - Year 2
S-ENEV6102T	Avital Coleman, Sophie Nguyen	Solar Drip: Water Efficient Sun-Powered Irrigation
W-EAEV5719	Graham Bennett	Investigating Inequality from New Heights: Using Drone-Mounted PM2.5 Sensors to Characterize Air Pollution Sources, Pollutant Dispersion, and Socioeconomic Status
W-CBIO5401	Carmen Papp	Modeling COVID-19 in the Za'atari refugee camp after the release of the COVID-19 vaccine

3M Young Inventor Recognition
Certificate + $100 gift card + invitation to 3M Inventor Event

T-MCRO2513	Angelina Agustin	Does the 5 Second Rule Affect the Growth of Bacteria?
W-MATS2416	Henry Sonntag	Sound of Silence: Does the shape of acoustic panels affect the Sound levels
W-ETSD6210T	Rayann Ehsan, Yahya Khan	Clearing potential risk from maglev train tracks
W-ENEV6109	Tvisha Talwar	Seeding Smarter: Utilizing a CNN to Assist in Optimizing the Planting of Cotton using Remote-Sensing Data and Forecasted Canopy Coverage
T-MATS6412	Isaac Ness	Electrobleck™ Armor: Integrating Piezoelectricity into Oobleck Armor for Improved Impact Protection and Energy Generation
T-CHEM1633	Elizabeth Mader	How Fast Do Electrolytes Present in Hydration and Energy Beverages Diffuse Through Membranes?
W-CHEM1641	Leo Belde	Race to Rust Iron VS Water,Vinegar, and Bleach
W-CHEM5614	Mehreen Najeeb	3D printing a tooth cap that effectively releases flouride in a controlled manner to reduce cavities.
W-MATS6411	Vick Tan	A Reusable Teabag for Bioremediation of Arsenic from Drinking Water
S-CHEM5610	Inga Wing	Impact of PFAs Degradation on Fluorinated and Non-Fluorinated Ski Waxes

Inspiring Excellence Project
Certificate, $50 check and letter

T-BEHA1206	Laura Hansen	Surfing the Waves: Using Electroencephalography to Measure the Effectiveness of Binaural Beats on Brainwave Synchronization
T-BEHA5204	Bersy Yonas	CALM-R: Evaluating and Optimizing the Impact of a Multisensory Mental Wellness Space
W-BMED5308	Juniper Setterberg	Scrutinizing Sam's Split Structure: Characterizing novel methylation and cleavage pathways in borosin natural product precursor SamA1
T-CHEM5616	Alyssa Wang	Development of edible active coating films from agro-waste for produce preservation
W-ENBM6004	Mira Jayant	HOPE: A Novel Automated Device for Hemorrhage Control in Pediatric Firearm Emergencies
W-EGSD1918	Suraj Jayant	Press to Power

Inspiring Excellence Teacher
Certificate, $100 check and letter

Brian Stock (Blessed Trinity Catholic School, Richfield)

Integrated Science Award
certificate and $50

W-BCHM1110	Arika Kundu	CRISP — Complete Real Time Intelligent Spoilage Prevention
W-MATS2415	Simon Bosch	Nailed It
S-BEHA1225	Clara Polcari	The Effect of Social Media on the Number and Type of Skincare Products in Preteen Girls
S-ENEV6104	Allan Wang	Understanding the effect of Calcium Chloride road salt on tires.

American Chemical Society Honorable Mention
Subscription to Chem Matters (send information to receive)

S-BCHM5105 Shefali Meagher

A Novel Analysis of Cosmetic Methylparaben in Artificial Amniotic Fluid

W-CHEM5607 Tyler Clair

Silver nanoparticles from food waste: An innovative green synthesis to remove synthetic dyes for applications in water treatment

T-CHEM5616 Alyssa Wang

Development of edible active coating films from agro-waste for produce preservation

S-CHEM1613 Tommy Skrypek

Which Snow and Ice Treatment is the Most Effective for the Safety of the Roads and the Environment.

W-CHEM1618 Anjola Bamigboye

The sweet science of sugar and yeast

W-CHEM1636 Lila Foster

Effective Treatment of Menstrual Blood Stains

American Chemical Society
HS $150, MS $75 (send information to receive)

S-CHEM5610 Inga Wing

Impact of PFAs Degradation on Fluorinated and Non-Fluorinated Ski Waxes

T-CHEM1633 Elizabeth Mader

How Fast Do Electrolytes Present in Hydration and Energy Beverages Diffuse Through Membranes?

Aquatic Sciences Excellence Award, presented by the MN Chapter of American Fisheries Society
Certificate and Books

T-EAEV1730	Wyatt Parham	Studying the Function of gypsum Crystals in the Freshwater Algae Closterium using Light
W-EAEV1718	Joshua Mills	Big Waves and Shifting Sands - How Waves Impact Water Quality
T-EAEV1731	Samuel Pellegrini	Do Levels of Phosphates and Pollution Differ in Different Cities Water in Hennepin County?
S-EAEV1710	Jameson Johnston	How Different Types of Buffer Zone Protect Shorelines
S-ENEV6107	Agustin Orezzoli Robinson	Mycofiltration: Using Pleurotus Ostreatus to Remove Pollutants from Residential Runoff
S-EAEV5733	Nina Georgeson	Local Waters, Global Impact: Phytoplankton and the Climate Crisis
W-EAEV5707	Audra Unglaub	Effects of levels of environmental pollutants on pond snail Lymnaea stagnalis
T-ENEV6106	John Liu	Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals
W-EAEV5708	Gustav Davidson	Analyzing and measuring the potency of several removal methods of glyphosate within water

ASM Material Award
Certificate and $150 gift card

W-MATS6401	Maxwell Kaung	Analysis of bio-polymeric wet-end paper additives in the context of origami folding applications
W-MATS6402	Matthias Murdych	A mathematical and experimental analysis of the ablative properties of several types of wood
W-MATS6403	Nicholas Joseph	Design and construction of a filament extruder to improve the flow rate of 3D printed PLA after multiple recyclings Design and construction of a filament extruder to improve the flow rate of 3D printed PLA after multiple recyclings
S-MATS2405	Kaia Wieneke	What Wire Material Generates the Greatest Amount of Electromagnetic Force?

Lily W Science and Communications Award
Certificate and $150 gift card

W-EGSD5911T	Yasmine Sagrasse, Zaynab Elkhamlichi	From Battery Drain, to Hydrogen Gain: Utilizing Graphite Derived from Spent Zinc-Carbon Batteries to Perform Electrolysis
T-PHYS6609	Najma Mohumad	How the Number of Blades Affects a Windmill

University of Minnesota College of Pharmacy Award
Certificate and trophy

W-BMED5316 Alexandra Boeckmann	Effects of levodopa and melatonin on paraquat induced Parkinson's symptoms on Drosophila melanogaster

Dr Victor Bedros Memorial Prize for Excellence in the Medical Sciences
Certificate and $100 gift card

W-CELL5515 Dhruv Mundhra	Unlocking the Blood Code: Evaluating Dual Therapy Approaches for Targeting JAK2-Mutant Polycythemia Vera

Minnesota Space Frontier Society
Certificate of Merit

W-MATS2414	Jacob Scholtz	Under Pressure
W-PHYS2610	Breckon Sand	3 2 1 Balloon's Blast off
W-PHYS2615	Raymond Fru-Mambo Jr	Far Flyers: Wingspan and distance
W-PHYS2623	Tatem Stiller	The Rocket Powered Baseball Bat
S-EGSD5901T	Monserrath Sanchez-Torres, Champa Lee Somphavanh	Does temperature effect Solar panels voltage?
W-PLNT6703	Nicole Gromova	Examination of Martian regolith and Earth soil as plant growth mediums for Lepidium sativum
W-PLNT6706	Quinn Hughes	FULL MOON A Novel and Economical Method for Sustainable Agriculture on the Moon
W-PLNT6707	Jon-Paul Merry	The effects of adding Bacillus subtilis to Martian regolith on plant growth/vitamin content
W-ROBO6801T	Benny Marmor, Allie Sigmond	Health Evaluation Robot for Basil – HERB: A modular robotic system for detecting nutrient deficiency in greenhouse basil

Minnesota Astronomical Society
Certificate of Achievement

S-EAEV1728T	Nirantar Regmi, Keh Doh	How Does Air Quality Rating Affect The Ability To Observe The Northern Lights?
W-PHYS6607	Anirudh Pulavarthi	Simulation of binary asteroid light curves

MarsCon Award
Certificate of Merit

W-PHYS6606	Lux Bodell	Next steps for spacetime engineering: advanced warp drive concepts for near-future accelerated space travel

US Air Force (St. Paul)
US Air Force Sling pack, Power Bank, USB Flash Memory Drive, USB Car Charger, and Official AF Certificate

S-CBIO5405	Anika Fokken	From '-ase' to Action: Mapping enzyme sequences for nutritional efficiency
S-EAEV5727	Kyle Chang	Food your Food!
S-CHEM5610	Inga Wing	Impact of PFAs Degradation on Fluorinated and Non-Fluorinated Ski Waxes
S-CHEM5609	Andrew Evens	Improving Polyvinyl Alcohol as a Flame Retardant on Corrugated Cardboard Using Resveratrol and Tannic Acid

US Air Force (Twin Cities)
US Air Force Sling pack, Power Bank, USB Flash Memory Drive, USB Car Charger, and Official AF Certificate

T-ENEV6108	Ilsa Lemke	The Economic and Environmental Efficacy of Drainage Water Recycling
T-BMED5314	Iman Aliye	Protecting your skin: UV beads and the importance of sunscreen
T-PHYS6622	Grant Pilgrim	Impossible Car
T-ETSD6216	Everett Bye	On the Viability of Civil War Landships

US Air Force (Western Suburbs)
US Air Force Sling pack, Power Bank, USB Flash Memory Drive, USB Car Charger, and Official AF Certificate

W-ENBM6008T	Mohammad Atoui, Mohammad Alkateb	Titanium: A Lighter Alternative to Lead Aprons
W-EBED5805	Shagun Shrivastava	In Search of Sound: Creating Solutions for Sound Localization Challenges Using BCI and ESB 32 to Aid Spatial Hearing Loss - Year 2
W-BMED5331	Ameya Bhaskar	Preventing Pain: Investigating Ascorbic Acid's Potential to Mitigate Intervertebral Disk Degeneration

Office of Naval Research HS School
Certificate, medal, $50 gift card (send form this month)

T-BEHA5204	Bersy Yonas	CALM-R: Evaluating and Optimizing the Impact of a Multisensory Mental Wellness Space
T-BEHA5233	Lynne Hu	Emotion and Risk: Exploring the Link Between Emotional Intensity and Risk Tolerance
W-MATS6411	Vick Tan	A Reusable Teabag for Bioremediation of Arsenic from Drinking Water
S-ETSD6213	Jack Gao	Human Factors and Technology Enables Safe and Autonomous Driving
W-EBED5805	Shagun Shrivastava	In Search of Sound: Creating Solutions for Sound Localization Challenges Using BCI and ESB 32 to Aid Spatial Hearing Loss - Year 2
W-PLNT6706	Quinn Hughes	FULL MOON A Novel and Economical Method for Sustainable Agriculture on the Moon

Office of Naval Research MS School
Certificate, medal

T-BEHA1206	Laura Hansen	Surfing the Waves: Using Electroencephalography to Measure the Effectiveness of Binaural Beats on Brainwave Synchronization
W-EAEV1718	Joshua Mills	Big Waves and Shifting Sands - How Waves Impact Water Quality
T-ETSD2218	Charlotte Schnell	Trebuchet Project
W-MATS2415	Simon Bosch	Nailed It
W-EGSD1918	Suraj Jayant	Press to Power

Teacher Excellence
Trophy - Caitlin McWhirter - Minnetonka HS

Caitlin McWhirter	Minnetonka HS

ISEF Alumni Award - Timara Underbakke
$50 and a certificate

W-CHEM1636 Lila Foster   Effective Treatment of Menstrual Blood Stains

Twin Cities Meteorological Society
Weather radio or a Digital Anemometer

W-EAEV5719   Graham Bennett   Investigating Inequality from New Heights: Using Drone-Mounted PM2.5 Sensors to Characterize Air Pollution Sources, Pollutant Dispersion, and Socioeconomic Status

S-EAEV1709   Sam Honsa   How Do Different Types of Materials Affect the Temperature in Urban Areas

American Psychological Association (St. Paul)
Certificate & 1 Year Complimentary Student Membership (fill out form)

S-BMED5325	Amanda Hsu	The effect of capsaicin on the heart rate of Daphnia magna under induced photoperiod stress
S-BEHA5239	Quinn Walsh	Tuned Out: How does visual overstimulation cause a transition of neural activation from the prefrontal cortex to the parietal lobe?

American Psychological Association (Twin Cities)
Certificate & 1 Year Complimentary Student Membership (fill out form)

T-BEHA5233	Lynne Hu	Emotion and Risk: Exploring the Link Between Emotional Intensity and Risk Tolerance
T-BEHA5204	Bersy Yonas	CALM-R: Evaluating and Optimizing the Impact of a Multisensory Mental Wellness Space

American Psychological Association (Western Suburbs)
Certificate & 1 Year Complimentary Student Membership (fill out form)

W-BEHA5224	Simran Kaur	New approaches to assistive technology in individuals with autism spectrum disorder and its effects
W-BEHA5223	Sophia Shokatz	Politics and Psychology: The effect of Demographics on political ideology

Association of Women Geoscientists (St. Paul)
Certificate

S-EAEV5712   Mariam Malik   The Effects of Polypropylene and Polyethylene on
                                          Dugesia Tigrina Cell Regeneration

Association of Women Geoscientists (Twin Cities)
Certificate

T-EAEV5711   Ramla Liban   Water Quality
T-ANIM5001   Isabella Wang   Hive Health: Characterizing Recapping and
                                          Hygienic Behavior in Honey Bees as a Natural
                                          Defense Mechanisms Against Varroa Mites and
                                          Viruses Using Real-Time PCR to Quantify Viral
                                          Levels

Association of Women Geoscientists (Western Suburbs)
Certificate

W-EAEV5706 Lucy Snow   Role of the Western Redcedar tree in environments
                                          of the Pacific Northwest in ecosystem durability and
                                          wildfire impacts

W-PLNT6706 Quinn Hughes   FULL MOON A Novel and Economical Method for
                                          Sustainable Agriculture on the Moon

DoD STEM Leadership Prize
Certificate, $100 (split evenly if team) Fill out form to receive.

T-BEHA1206	Laura Hansen	Surfing the Waves: Using Electroencephalography to Measure the Effectiveness of Binaural Beats on Brainwave Synchronization

GeniusOlympiad
Certificate, international competition opportunity

T-ENEV6106	John Liu	Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals
T-EAEV5734	Sriram Sureshkumar	From Carbon to Kilowatts - Biochar-Enhanced Electrochemical Systems for Simultaneous Carbon Sequestration and Power Generation in Martian and Terrestrial environments
S-EAEV5733	Nina Georgeson	Local Waters, Global Impact: Phytoplankton and the Climate Crisis
S-ENEV6102T	Avital Coleman, Sophie Nguyen	Solar Drip: Water Efficient Sun-Powered Irrigation
S-ENEV6107	Agustin Orezzoli Robinson	Mycofiltration: Using Pleurotus Ostreatus to Remove Pollutants from Residential Runoff
W-EBED5805	Shagun Shrivastava	In Search of Sound: Creating Solutions for Sound Localization Challenges Using BCI and ESB 32 to Aid Spatial Hearing Loss - Year 2

Lemelson Early Inventor Prize (St. Paul)
$100 (shared equally if team) send in form to claim

S-EAEV1710   Jameson Johnston   How Different Types of Buffer Zone Protect Shorelines

Lemelson Early Inventor Prize (Twin Cities)
$100 (shared equally if team) send in form to claim

T-ETSD2218   Charlotte Schnell   Trebuchet Project

Lemelson Early Inventor Prize (Western Suburbs)
$100 (shared equally if team) send in form to claim

W-MATS2415 Simon Bosch   Nailed It

NASA Earth System Science Award (St. Paul)
Certificate & Invitation to Webinar

S-EAEV5714T Alita Antunez-Ramirez,   Ice core baby
                  Ehry Win

NASA Earth System Science Award (Twin Cities)
Certificate & Invitation to Webinar

T-EAEV5734   Sriram Sureshkumar   From Carbon to Kilowatts - Biochar-Enhanced Electrochemical Systems for Simultaneous Carbon Sequestration and Power Generation in Martian and Terrestrial environments

NASA Earth System Science Award (Western Suburbs)
Certificate & Invitation to Webinar

W-ROBO6805 Olivia Liu   KRO (Keep Reef Oasis):An Innovative Online Tool For Coral Bleaching Analysis

W-PLNT6706 Quinn Hughes   FULL MOON A Novel and Economical Method for Sustainable Agriculture on the Moon

National Oceanic and Atmospheric Administration
NOAA Taking the Pulse of the Planet (St. Paul)
Certificate and Letter

S-EAEV5703T Chit Noe, Las Wan   Can a bird feeder increase biodiversity activity

National Oceanic and Atmospheric Administration
NOAA Taking the Pulse of the Planet (Twin Cities)
Certificate and Letter

T-ENEV6108   Ilsa Lemke   The Economic and Environmental Efficacy of Drainage Water Recycling

T-ANIM5001   Isabella Wang   Hive Health: Characterizing Recapping and Hygienic Behavior in Honey Bees as a Natural Defense Mechanisms Against Varroa Mites and Viruses Using Real-Time PCR to Quantify Viral Levels

National Oceanic and Atmospheric Administration
NOAA Taking the Pulse of the Planet (Western Suburbs)
Certificate and Letter

W-EAEV5719   Graham Bennett   Investigating Inequality from New Heights: Using Drone-Mounted PM2.5 Sensors to Characterize Air Pollution Sources, Pollutant Dispersion, and Socioeconomic Status

W-ENEV6101   Ellie Stroh   Improving climate-resilience of the Lake Cliff dam in Dallas, Texas

Regeneron Biomedical Science Award
Certificate and $375 (if you send in the info)

S-BCHM5105 Shefali Meagher   A Novel Analysis of Cosmetic Methylparaben in Artificial Amniotic Fluid

Regeneron Biomedical Science Award
Certificate and $375 (if you send in the info)

T-BMED5307 Riddhi Singhvi   Decoding Diabetes: Harnessing AI to Accurately Predict Real-Time and Future Blood Glucose Levels For Diabetes Management Using Diet, Exercise, Insulin Intake, and Heart Rate Variability

Regeneron Biomedical Science Award
Certificate and $375 (if you send in the info)

W-MATS6411 Vick Tan   A Reusable Teabag for Bioremediation of Arsenic from Drinking Water

Ricoh Sustainable Development Award (St. Paul)
Certificate and letter

S-EGSD5915   Maximilian Johnson   Ergometer Generator Retrofit for Sustainable Energy

Ricoh Sustainable Development Award (Twin Cities)
Certificate and letter

T-ENEV6108   Ilsa Lemke   The Economic and Environmental Efficacy of Drainage Water Recycling

T-ENEV6106   John Liu   Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals

Ricoh Sustainable Development Award (Western Suburbs)
Certificate and letter

W-EGSD5911T   Yasmine Sagrasse, Zaynab Elkhamlichi   From Battery Drain, to Hydrogen Gain: Utilizing Graphite Derived from Spent Zinc-Carbon Batteries to Perform Electrolysis

W-ENEV6101   Ellie Stroh   Improving climate-resilience of the Lake Cliff dam in Dallas, Texas

Society for In Vitro Biology (St. Paul)
Certificate and Membership in SIVB

S-BCHM5105 Shefali Meagher   A Novel Analysis of Cosmetic Methylparaben in
                                     Artificial Amniotic Fluid

Society for In Vitro Biology (Twin Cities)
Certificate and Membership in SIVB

T-BMED5307 Riddhi Singhvi   Decoding Diabetes: Harnessing AI to Accurately
                                    Predict Real-Time and Future Blood Glucose
                                    Levels For Diabetes Management Using Diet,
                                    Exercise, Insulin Intake, and Heart Rate Variability

T-BCHM5101 Ahmed Ali   The Whitening Power of Toothpaste and the
                                    Chemical Effects of our Day-to-Day Brush

Society for In Vitro Biology (Western Suburbs)
Certificate and Membership in SIVB

W-MCRO6507 Lily Schupp   Quorum sensing inhibition and the reduction of
                                    antimicrobial resistance

W-MCRO6508 Shivam Srivastava   From Tradition to Treatment: Rediscovering
                                    Turmeric as a Natural Antibiotic for E. coli K-12

USAID - US Agency for International Development (St. Paul)
Certificate, Letter, and webinar with USAID's Chief Scientist

S-CHEM5609 Andrew Evens   Improving Polyvinyl Alcohol as a Flame Retardant on Corrugated Cardboard Using Resveratrol and Tannic Acid

USAID - US Agency for International Development (Twin Cities)
Certificate, Letter, and webinar with USAID's Chief Scientist

T-ANIM5001   Isabella Wang   Hive Health: Characterizing Recapping and Hygienic Behavior in Honey Bees as a Natural Defense Mechanisms Against Varroa Mites and Viruses Using Real-Time PCR to Quantify Viral Levels

T-CHEM5616 Alyssa Wang   Development of edible active coating films from agro-waste for produce preservation

USAID - US Agency for International Development (Western Suburbs)
Certificate, Letter,and webinar with USAID's Chief Scientist

W-ETSD6202 Sam McHugh   Design of wearable robotic arms for climbing

W-ENEV6109 Tvisha Talwar   Seeding Smarter: Utilizing a CNN to Assist in Optimizing the Planting of Cotton using Remote-Sensing Data and Forecasted Canopy Coverage

US Metric Association (Twin Cities)
Certificate + 1 Year of Membership

T-CHEM5617   Anh Tran   Water Filtration and Salinity of Water
T-BMED5337   Emma Cook   How Much Electromagnetic Waves are Emitted by
                                           Household Objects?

US Metric Association (Western Suburbs)
Certificate + 1 Year of Membership

W-PLNT2714   Isabel Bandstra   Caffeination Vegetation
W-EAEV5719   Graham Bennett   Investigating Inequality from New Heights: Using
                                           Drone-Mounted PM2.5 Sensors to Characterize Air
                                           Pollution Sources, Pollutant Dispersion, and
                                           Socioeconomic Status

Yale Science and Engineering Association Inc. (St. Paul)
Certificate

S-SOFT6902   Huxley Westemeier   Integrity: Generalized Artificial Image Classification with Noise Domain Localization

Yale Science and Engineering Association Inc. (Twin Cities)
Certificate

T-ENEV6106   John Liu   Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals

Yale Science and Engineering Association Inc. (Western Suburbs)
Certificate

W-ENEV6109 Tvisha Talwar   Seeding Smarter: Utilizing a CNN to Assist in Optimizing the Planting of Cotton using Remote-Sensing Data and Forecasted Canopy Coverage

Stockholm Junior Water Prize (St. Paul)
Certificate, opportunity for further competition

S-EAEV5733	Nina Georgeson	Local Waters, Global Impact: Phytoplankton and the Climate Crisis
S-PLNT6702T	P'htoo Paw, Gay Soe Paw	Does Plant Food Affect CO2 Absorption in Aquatic Plants?
S-ENEV6102T	Avital Coleman, Sophie Nguyen	Solar Drip: Water Efficient Sun-Powered Irrigation

Stockholm Junior Water Prize (Twin Cities)
Certificate, opportunity for further competition

T-EAEV5711	Ramla Liban	Water Quality
T-CHEM5617	Anh Tran	Water Filtration and Salinity of Water
T-ENEV6106	John Liu	Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals
T-ENEV6108	Ilsa Lemke	The Economic and Environmental Efficacy of Drainage Water Recycling

Stockholm Junior Water Prize (Western Suburbs)
Certificate, opportunity for further competition

W-MATS6411	Vick Tan	A Reusable Teabag for Bioremediation of Arsenic from Drinking Water
W-CHEM5607	Tyler Clair	Silver nanoparticles from food waste: An innovative green synthesis to remove synthetic dyes for applications in water treatment
W-ROBO6805	Olivia Liu	KRO (Keep Reef Oasis):An Innovative Online Tool For Coral Bleaching Analysis
W-ENEV6101	Ellie Stroh	Improving climate-resilience of the Lake Cliff dam in Dallas, Texas

Research Papers MS First Place
Trophy and purple ribbon

PMS-LIFE065 Laura Hansen   Surfing the Waves: Using Electroencephalography to Measure the Effectiveness of Binaural Beats on Brainwave Synchronization

Research Papers MS Second Place
Trophy and purple ribbon

PMS-ENGT465   Kate Gao   Status and Potential of Tesla Self-Driving Capability

Research Papers MS Third Place
Trophy and purple ribbon

PMS-ENVI402 Wyatt Parham   Studying the Function of Barium Sulfate Crystals in the Freshwater Algae Closterium Using Light

Research Papers HS First Place
Trophy and purple ribbon

PHS-PCMS304   Alyssa Wang   Development of edible active coating films from agro-waste for produce preservation

Research Papers HS Second Place
Trophy and purple ribbon

PHS-LIFE143   Quinn Hughes   FULL MOON A Novel and Economical Method for Sustainable Agriculture on the Moon

Research Papers HS Third Place
Trophy and purple ribbon

PHS-LIFE027T   Abigail Endres, Selena Qiao   Turf Trouble: Does the DEET in bug repellent really kill grass? Year II

Thermo Fisher Jr Innovators' Challenge (St. Paul)

S-ANIM1002	Olive Keefe	Natural versus Chemical: Evaluating the Effectiveness of Cricket Control Methods
S-BEHA1225	Clara Polcari	The Effect of Social Media on the Number and Type of Skincare Products in Preteen Girls
S-ETSD2214	Kate Gao	Status and Potential of Tesla Self-Driving Capability
S-BEHA1229	Georgia Gibbons	Do Different Colors Affect Your Score When Test Taking
S-MCRO2510	Kate Waud	How Does the Frequency of Washing Your Water Bottle Affect How Much Bacteria Grows?

Thermo Fisher Jr Innovators' Challenge (Twin Cities)

T-BEHA1206	Laura Hansen	Surfing the Waves: Using Electroencephalography to Measure the Effectiveness of Binaural Beats on Brainwave Synchronization
T-EAEV1730	Wyatt Parham	Studying the Function of gypsum Crystals in the Freshwater Algae Closterium using Light
T-CHEM1633	Elizabeth Mader	How Fast Do Electrolytes Present in Hydration and Energy Beverages Diffuse Through Membranes?

Thermo Fisher Jr Innovators' Challenge (Western Suburbs)

W-CHEM1636	Lila Foster	Effective Treatment of Menstrual Blood Stains
W-ROBO2810	Kaila Kurien	Car vs. Road
W-BMED1348	Arnav Bahl	Antibiotic Overuse : Emergence of Resistant Bacterial Strains
W-PHYS2621	Aldric Schotanus	Amps to the Rescue! Defeating Gravity with Magnetism
W-MATS2417	Anne Zechmeister	YUCK! Warm Water!
W-EGSD1918	Suraj Jayant	Press to Power
W-EGSD1917	Kinley Kuhlmann	Which Battery is Best?
W-BCHM1110	Arika Kundu	CRISP — Complete Real Time Intelligent Spoilage Prevention
W-CHEM1631	Steven Koutroupas	Icy Roads: A Study of Salt Deicers

State Science Fair MS

ID	Name	Title
S-ANIM1002	Olive Keefe	Natural versus Chemical: Evaluating the Effectiveness of Cricket Control Methods
S-BEHA1225	Clara Polcari	The Effect of Social Media on the Number and Type of Skincare Products in Preteen Girls
S-BEHA1226	Lorelei Kessel	Does Birth Order Affect Personality?
S-BEHA1229	Georgia Gibbons	Do Different Colors Affect Your Score When Test Taking
S-BEHA1242	Hnoujia Xiong	Optical illusions
S-BMED1321	Luca Opack	How the Different pH and Sugar Content of a liquid Affects Tooth Enamel
S-CHEM1613	Tommy Skrypek	Which Snow and Ice Treatment is the Most Effective for the Safety of the Roads and the Environment.
S-CHEM1640T	Indigo Trimmer, Ada Bicking	How Does the Surface Affect the Quality of a Fingerprint?
S-EAEV1709	Sam Honsa	How Do Different Types of Materials Affect the Temperature in Urban Areas
S-EAEV1710	Jameson Johnston	How Different Types of Buffer Zone Protect Shorelines
S-EAEV1737	Jackson Cech	How Does Road Salt Affect Soil Composition and the Growth of a Plant
S-EAEV1739	Lucia Benjamin	City vs. Residential: How Much Salt Do they Use?
S-ENEV2110T	Benjamin Zolli, Isaac Bezada-Kerr	Fuel Efficiency of Boat Hulls
S-ETSD2214	Kate Gao	Status and Potential of Tesla Self-Driving Capability
S-ETSD2217T	Quin Dalzell, Edwin Bratulich	How Different Terrains Affect Hovercrafts
S-MATS2405	Kaia Wieneke	What Wire Material Generates the Greatest Amount of Electromagnetic Force?
S-MATS2406	Olivia Struve	Does The Color of Your Clothing Affect Your Comfort on a Summer Day?
S-MATS2407	Charlie Sandvik	How Do Different Materials and Volume of Water Bottles Affect the Temperature Over Time?
S-MATS2408	Sam Van Gemert	Does the Type of Field Affect the Game of Softball?
S-MCRO2510	Kate Waud	How Does the Frequency of Washing Your Water Bottle Affect How Much Bacteria Grows?
S-PHYS2624	Søren Larsen	How the size of an object affects pull force
S-PHYS2627	Isaac Ruhland	Do different shape fires burn differently?
S-PLNT2715T	Brissa Marquez Diaz, Emma Kue	How Nitrogen Affects Plant Growth
S-PLNT2720T	Kennedi Ousley, Jinia Wheeler	How does starch content vary across different types of apples?
S-SOFT2908	Peter Gillen-O'Neel	Effects of Chord Progressions on Song Popularity
T-BEHA1206	Laura Hansen	Surfing the Waves: Using Electroencephalography to Measure the Effectiveness of Binaural Beats on Brainwave Synchronization
T-BEHA1234	Hannah Gardner	Energy Boost or Bust? Does Caffeine Affect How Fast You Do Things?

T-BEHA1236	Katherine Miranda Caudana	Does Peppermint Improve Reaction Time?
T-BEHA1237	Leah Carlson	How Good is Your Memory?
T-BEHA1238	Laryssa Jimenez Marin	Peppermints: Do They Really Increase Your Reaction Time?
T-BEHA1240	Elena Ludwig	Bam, Bam, Did I Hit Your Hand?
T-BMED1347	Sofia Rise	How Far Can You Go?
T-CHEM1627	Eleanor Langfeldt	Does Temperature Affect the Amount of Time Glow Sticks Will Glow For?
T-CHEM1628	Yailine Rosas Landa	Does Fragrance of a Candle Impact Flame Height?
T-CHEM1629	Francesca Martin	How do Different Types of Sugar Feed the Yeast in Bagels?
T-CHEM1630	Kimberly Montes Hernandez	The Muffin War: Baking Powder vs. Baking Soda
T-CHEM1633	Elizabeth Mader	How Fast Do Electrolytes Present in Hydration and Energy Beverages Diffuse Through Membranes?
T-CHEM1637	Jesus Garcia	Chemical Reaction Rate of Alka-Seltzer
T-EAEV1730	Wyatt Parham	Studying the Function of gypsum Crystals in the Freshwater Algae Closterium using Light
T-EAEV1731	Samuel Pellegrini	Do Levels of Phosphates and Pollution Differ in Different Cities Water in Hennepin County?
T-ETSD2218	Charlotte Schnell	Trebuchet Project
T-MCRO2513	Angelina Agustin	Does the 5 Second Rule Affect the Growth of Bacteria?
W-ANIM1004	Autumn Debroux	Drosophila Eradication Activity - Toxins and Household Traps --The DEATH Trap Study
W-ANIM1005	Grace Schmitz	Does Temperature affect the amount of times a cricket chirps
W-BCHM1103T	Kinaari Shah, Lily Sabo, Audrey Jones	Teenage skincare Fiasco
W-BCHM1107T	Sarah Voigt, Lola Pratt	Bacterial Colonies vs Filtration Material
W-BCHM1109	Bianca Bolos	How does the time a stain is left to sit affect how much of the stain is removed?
W-BCHM1110	Arika Kundu	CRISP — Complete Real Time Intelligent Spoilage Prevention
W-BEHA1211T	Mari Loya, Scarlett Umanah	If we do something for 66 consecutive days, will it become a habit?
W-BMED1304	Mena Severt	Does heal-all tincture actually heal all?
W-BMED1348	Arnav Bahl	Antibiotic Overuse : Emergence of Resistant Bacterial Strains
W-CELL1502	Claire Carlson	How well do different cleaning agents halt the anaerobic fermentation process of yeast and its carbon dioxide output?
W-CHEM1618	Anjola Bamigboye	The sweet science of sugar and yeast
W-CHEM1619	Kenzie Hackenmueller	Liquid + Batter = Fluffiness?
W-CHEM1621T	Hunter Smith, Pierce Hill	Crazy for Cookies
W-CHEM1622	Bailey Blum	The Cookie Monster

W-CHEM1623	Audrey Strehler	Magnificent Muffins: How Baking Powder Totals Impact The Rise of Muffins
W-CHEM1624	Eleanor Schafer	Crazy Cookie Creations
W-CHEM1631	Steven Koutroupas	Icy Roads: A Study of Salt Deicers
W-CHEM1635	Alia Eiler	Sugary Drinks Can Save Your Life
W-CHEM1636	Lila Foster	Effective Treatment of Menstrual Blood Stains
W-CHEM1639	Kanyinsola Aladedunye	How does flour impact the weight of cookies
W-CHEM1641	Leo Belde	Race to Rust Iron VS Water,Vinegar, and Bleach
W-EAEV1718	Joshua Mills	Big Waves and Shifting Sands - How Waves Impact Water Quality
W-EBED1803	Anchit Kumar	Complete C Computer Using Python
W-EGSD1908	Jonathan Schoonveld	Cold Magnitizem
W-EGSD1910	Grace Munkeby	Burning Daylight: How Does a Homemade Solar Air Heater Affect the Temperature of a Room?
W-EGSD1917	Kinley Kuhlmann	Which Battery is Best?
W-EGSD1918	Suraj Jayant	Press to Power
W-ENEV2103	Mira Byers	Trees: A Breath of Fresh Air
W-ETSD2209	Joel Abbring	Stopping the Shake: How Bracing and Damper Weight Affects the Resistance of a Building to an Earthquake
W-ETSD2221	Rosalie Reed	Beam Blocker
W-MATS2413	Easton Graber	Salt Wars The Freeze Awakens
W-MATS2415	Simon Bosch	Nailed It
W-MATS2416	Henry Sonntag	Sound of Silence: Does the shape of acoustic panels affect the Sound levels
W-MATS2417	Anne Zechmeister	YUCK! Warm Water!
W-MCRO2504T	Kimaya Shah, Autumn Lin	Leftover Bacteria; How long can we leave leftovers out before it is unsafe to eat?
W-PHYS2610	Breckon Sand	3 2 1 Balloon's Blast off
W-PHYS2612T	Benjamin Blomquist, Max Mcfarland	PSI On A Basketball
W-PHYS2614T	Jackson Busch, Greyson Hake	Kicking off for science
W-PHYS2616	Ian Farley	Boom And Bust
W-PHYS2617	Henry Bruin	Tennis Temperature
W-PHYS2621	Aldric Schotanus	Amps to the Rescue! Defeating Gravity with Magnetism
W-PHYS2623	Tatem Stiller	The Rocket Powered Baseball Bat
W-PHYS2629	Connor Malsam	The Effects of Light and Color on Heat
W-PLNT2704T	Sumana Mangipudi, Violet Holmes, Sophia Iordanoglou	Plant vs. Microplastics: Microplastic Contamination in Soil
W-PLNT2709	Alex Samba	Can Plants Survive Drought Conditions Through Hydrogels?
W-PLNT2712	Mariah Jones	Feeling Salty The Impact of Salt on Plants
W-PLNT2714	Isabel Bandstra	Caffeination Vegetation
W-PLNT2716	Tabitha Bell	Let the Sunshine In! :The Effect of Light on Plant Growth
W-PLNT2721	Miles Beckering	Reaching for the Light

W-PLNT2722	Olivia Zhou	Magnetized Miracle: How Invisible Fields Nurture Seeds
W-PLNT2723	Siya Srivastava	What is the effect of saltwater on plant growth, and how does the concentration change the outcome?
W-PLNT2725	Gabriella Tenboer	Blooming with Beethoven the impact of music on plants growth
W-ROBO2810	Kaila Kurien	Car vs. Road
W-TMED3102	Katherine Vande Glind	Thickened Throughout

State Science Fair HS

S-ANIM5006	Lam Le	Urban Ants and Heat Waves: A Test on T. immigrans
S-BCHM5105	Shefali Meagher	A Novel Analysis of Cosmetic Methylparaben in Artificial Amniotic Fluid
S-BMED5301	Morgan Johnson	You Are What You Eat: DNA Contents in Fruits
S-BMED5324	Maren Overgaard	The Impact of Hypohydration on Concussion Severity
S-BMED5325	Amanda Hsu	The effect of capsaicin on the heart rate of Daphnia magna under induced photoperiod stress
S-BMED5336	Charlotte Talbot	The effect of 3-hydroxybutanone (acetoin) found in vapes/e-cigarettes on calcium mass
S-CBIO5403	Deling Chen	An Artificial Intelligence-Electrocardiogram Model for Prediction of Dementia—the Atherosclerosis Risk in Communities (ARIC) study
S-CELL5511	Evan Morris	A Novel Approach to Enhancing Treatments for Neurodegenerative Diseases: Frequency-Dependent Optogenetics in C. elegans
S-CHEM5609	Andrew Evens	Improving Polyvinyl Alcohol as a Flame Retardant on Corrugated Cardboard Using Resveratrol and Tannic Acid
S-CHEM5610	Inga Wing	Impact of PFAs Degradation on Fluorinated and Non-Fluorinated Ski Waxes
S-EAEV5712	Mariam Malik	The Effects of Polypropylene and Polyethylene on Dugesia Tigrina Cell Regeneration
S-EAEV5733	Nina Georgeson	Local Waters, Global Impact: Phytoplankton and the Climate Crisis
S-ENEV6107	Agustin Orezzoli Robinson	Mycofiltration: Using Pleurotus Ostreatus to Remove Pollutants from Residential Runoff
S-ETSD6213	Jack Gao	Human Factors and Technology Enables Safe and Autonomous Driving
S-SOFT6902	Huxley Westemeier	Integrity: Generalized Artificial Image Classification with Noise Domain Localization
T-ANIM5001	Isabella Wang	Hive Health: Characterizing Recapping and Hygienic Behavior in Honey Bees as a Natural Defense Mechanisms Against Varroa Mites and Viruses Using Real-Time PCR to Quantify Viral Levels
T-BCHM5101	Ahmed Ali	The Whitening Power of Toothpaste and the Chemical Effects of our Day-to-Day Brush
T-BEHA5204	Bersy Yonas	CALM-R: Evaluating and Optimizing the Impact of a Multisensory Mental Wellness Space
T-BEHA5233	Lynne Hu	Emotion and Risk: Exploring the Link Between Emotional Intensity and Risk Tolerance
T-BMED5305	Payton Medeiros	What type of nut has the least amount of calories?
T-BMED5307	Riddhi Singhvi	Decoding Diabetes: Harnessing AI to Accurately Predict Real-Time and Future Blood Glucose Levels For Diabetes Management Using Diet, Exercise, Insulin Intake, and Heart Rate Variability

T-CBIO5404	Linnaea Dillner	The Gut Microbe Effects on Mental Health
T-CHEM5616	Alyssa Wang	Development of edible active coating films from agro-waste for produce preservation
T-EAEV5734	Sriram Sureshkumar	From Carbon to Kilowatts - Biochar-Enhanced Electrochemical Systems for Simultaneous Carbon Sequestration and Power Generation in Martian and Terrestrial environments
T-ENEV6106	John Liu	Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals
T-MATS6412	Isaac Ness	Electrobleck™ Armor: Integrating Piezoelectricity into Oobleck Armor for Improved Impact Protection and Energy Generation
T-PHYS6603	Everett Dick	The Backboard of a Basketball Hoop and the Chances of Making three-pointers
T-PHYS6604	Ian Lange	The Effect of String Material Type on a Tennis Ball Bounce
T-PHYS6605	Lorena Cortes Vasquez	Soundproofing
T-PHYS6622	Grant Pilgrim	Impossible Car
T-ROBO6811	Ethan Finch	Coding AI to Enhance Speech Therapy
W-BCHM5102	Archibald Haddley-Morris	An analysis of algae-based bioplastics for use in self-replicating machines.
W-BEHA5203	Yuchen Shi	Does Caffeine Help You Study? Investigating the effects of caffeine on adolescents' long-term memory and sustained attention
W-BEHA5213	Aizada Yernar	15-HETE
W-BEHA5215	Eowyn Duan-Porter	Effect of reward on intellectual challenge in high school students as based on EEG test results
W-BEHA5217	Abigail Hudson	The effects of English/Mandarin and English/Spanish bilingualism on cognitive performance, processing speed, and electroencephalography
W-BEHA5222	Marty Marshall	Rhythms of Success: Exploring the Impact of Per3 Polymorphisms on Sleep Patterns and Academic Performance
W-BEHA5223	Sophia Shokatz	Politics and Psychology: The effect of Demographics on political ideology
W-BEHA5224	Simran Kaur	New approaches to assistive technology in individuals with autism spectrum disorder and its effects
W-BMED5302T	Graham Bailey, Samantha Dvorak	Pulling the Pressure Piece: Defining the Role of Piezo1 in a Mouse Model With Rheumatoid Arthritis
W-BMED5306T	Kelan McKay, Abigail Getnick	Immune Interference: Is aberrant DUX4 expression responsible for the downregulation of MHC class I genes stimulated by INF- (gamma)?
W-BMED5308	Juniper Setterberg	Scrutinizing Sam's Split Structure: Characterizing novel methylation and cleavage pathways in borosin natural product precursor SamA1
W-BMED5311	Samantha Rogers	Investigating the biological basis of agitation and therapeutic potential of ascorbic acid in Alzheimer's Disease

W-BMED5322	Saloni Siddavatam	Investigating the Effects of Lactobacillus rhamnosus on Stress Response and Gut Microbial Health in C. elegans as a Model for Adolescent Mental Health
W-BMED5323	Nikhita Natraj	Extracting E.coli K12 outer membrane vesicles to deliver through transdermal dissolvable microneedle patch as an immunization model
W-BMED5327	Sophia Parmele	The development of ovalbumin mRNA lipid nanoparticles to induce immune tolerance for severe immune reactions
W-BMED5330	Surya Subramaniam	Unlocking the Key to Autoreactive B Cells: What Insights Can Tonsil and Synovium Gene Datasets Reveal About Rheumatoid Arthritis?
W-BMED5335	Zeal Kuku	Experimentation of Ecdysterone on Faxonius virilis to determine the impact of hormone doping
W-BMED5349	Surya Hariharan	Quantification of Background Parenchymal Enhancement (BPE) with Staging Estimation
W-CBIO5401	Carmen Papp	Modeling COVID-19 in the Za'atari refugee camp after the release of the COVID-19 vaccine
W-CBIO5402	Milan Darji	Custom Enzymes to Custom Care: Ushering in the Era of Personalized Medicine Using a Novel Approach for Engineering Enzyme Specificity
W-CELL5504	Graysen Lee	The unfolded protein response as a novel therapeutic target in the Alzheimer's blood-brain barrier
W-CELL5505	Nicholas Labadie	Analysis of stressed Planarian neoblasts & HSP70 response to heightened electrical fields
W-CELL5512	Eric Soltau	Functional validation of evolutionarily shared gene regulatory networks in S. mediterranea
W-CELL5514	Dmitry Bluvshtein	Effect of Food Matrices on Yeast Health in Long-Term Stressful Environments
W-CHEM5604T	Caleb Li, Dawson Miller	Farewell Forever: Degradation of Pentadecafluorooctanoic Acid Using UV-C Light and Titanium Dioxide
W-CHEM5607	Tyler Clair	Silver nanoparticles from food waste: An innovative green synthesis to remove synthetic dyes for applications in water treatment
W-CHEM5614	Mehreen Najeeb	3D printing a tooth cap that effectively releases flouride in a controlled manner to reduce cavities.
W-EAEV5704T	Savanna Larson, Jos Buffington	Paleoecological niche changes in mid-Cretaceous phytoplankton under greenhouse climate forcing
W-EAEV5707	Audra Unglaub	Effects of levels of environmental pollutants on pond snail Lymnaea stagnalis
W-EAEV5708	Gustav Davidson	Analyzing and measuring the potency of several removal methods of glyphosate within water
W-EAEV5719	Graham Bennett	Investigating Inequality from New Heights: Using Drone-Mounted PM2.5 Sensors to Characterize Air Pollution Sources, Pollutant Dispersion, and Socioeconomic Status
W-EBED5802T	Nyel Uffa, Aarav Puri	Smoke Hunters: Engineering a low-cost, fixed-wing autonomous drone for low-altitude forest fire detection

W-EBED5804	Kevin Qiu	Touch Sensor for Enhancing Robotic Elderly Care
W-EBED5805	Shagun Shrivastava	In Search of Sound: Creating Solutions for Sound Localization Challenges Using BCI and ESB 32 to Aid Spatial Hearing Loss - Year 2
W-EGSD5902	Amelia Klemme	Optimizing bioelectricity production efficiency in algal fuel cells
W-EGSD5911T	Yasmine Sagrasse, Zaynab Elkhamlichi	From Battery Drain, to Hydrogen Gain: Utilizing Graphite Derived from Spent Zinc-Carbon Batteries to Perform Electrolysis
W-EGSD5916	Vladimir Ditta	Effect of Twist Angle on Savonius Turbine Efficiency
W-ENBM6002	Daniel Crocker	Hybrid brain-computer interface with continuous learning and eye-tracking for adaptive mental command control
W-ENBM6003T	Adeline Lovaas, Pranika Kumar	Computationally Conquering Cancer: Engineering enzymes for pain-free cancer treatment
W-ENBM6004	Mira Jayant	HOPE: A Novel Automated Device for Hemorrhage Control in Pediatric Firearm Emergencies
W-ENBM6005	Riyan Mohamed	BreathEasy: An Innovative Solution for Asthma Management
W-ENBM6007	Warren Wang	A Low-Cost Custom Device to Facilitate Precise Transcranial Magnetic Stimulation
W-ENEV6101	Ellie Stroh	Improving climate-resilience of the Lake Cliff dam in Dallas, Texas
W-ENEV6109	Tvisha Talwar	Seeding Smarter: Utilizing a CNN to Assist in Optimizing the Planting of Cotton using Remote-Sensing Data and Forecasted Canopy Coverage
W-ETSD6201T	Henry Sabo, Patrick Eyres	Memory Maze: Creating a modified T-maze to allow investigation of spatial navigation in mouse cerebral cortex
W-ETSD6202	Sam McHugh	Design of wearable robotic arms for climbing
W-ETSD6220	Maximus Ren	Protecting Critical Grid Infrastructure: An Automation Tool to Help Utility Companies Assess the Impact of Residential Electric Vehicle Charging on Distribution Transformers
W-MATH6302	Bryce Budijono	Redistricting the congressional districts of Wisconsin via Markov Chain Monte Carlo algorithm
W-MATS6401	Maxwell Kaung	Analysis of bio-polymeric wet-end paper additives in the context of origami folding applications
W-MATS6403	Nicholas Joseph	Design and construction of a filament extruder to improve the flow rate of 3D printed PLA after multiple recyclings Design and construction of a filament extruder to improve the flow rate of 3D printed PLA after multiple recyclings
W-MATS6411	Vick Tan	A Reusable Teabag for Bioremediation of Arsenic from Drinking Water
W-MCRO6501	Jason Windels	Determining the cancer selective apoptotic capabilities and immunogenic properties of a plasmid expressing the recombinant protein combining Secrecon, Nona-arginine, and Apoptin on Human Breast Cancer cells

W-MCRO6502	Ayla Pak	Extraction of antimicrobial peptides from Capsicum annuum
W-MCRO6503	Madison Ambrose	The effects of an artificial microbial consortium of B. Subtilis and transformed E. Coli on PET plastic degradation.
W-MCRO6511	Surjosnato Dhar	CRISPR Gene Editing: Removing Antimicrobial Resistance in Bacteria
W-PHYS6606	Lux Bodell	Next steps for spacetime engineering: advanced warp drive concepts for near-future accelerated space travel
W-PHYS6607	Anirudh Pulavarthi	Simulation of binary asteroid light curves
W-PHYS6608	Annie Tan	Computational Fluid Dynamics analysis of aerodynamic drag on fuel efficiency of passenger cars
W-PLNT6701T	Abigail Endres, Selena Qiao	Turf Trouble: Does the DEET in bug repellent really kill grass? Year II
W-PLNT6703	Nicole Gromova	Examination of Martian regolith and Earth soil as plant growth mediums for Lepidium sativum
W-PLNT6706	Quinn Hughes	FULL MOON A Novel and Economical Method for Sustainable Agriculture on the Moon
W-PLNT6707	Jon-Paul Merry	The effects of adding Bacillus subtilis to Martian regolith on plant growth/vitamin content
W-ROBO6801T	Benny Marmor, Allie Sigmond	Health Evaluation Robot for Basil – HERB: A modular robotic system for detecting nutrient deficiency in greenhouse basil
W-ROBO6804	Alexander Weimer	Error-corrected deep learning approach to handwritten text recognition of Gregg shorthand
W-ROBO6805	Olivia Liu	KRO (Keep Reef Oasis):An Innovative Online Tool For Coral Bleaching Analysis
W-ROBO6807	Razeen Abdul-Field	Evolving neural networks to exploit problem processing regularities
W-ROBO6814T	Parth Rana, Joseph David	Implementation of Machine Learning Approach to Early Plant Disease Detection
W-SOFT6901	Liam Sullivan	Lexical extraction model for automatic text dating
W-SOFT6903	Keona Laurence	Leveraging Predictive Modeling to Identify Effective Policies for Enhancing Mental Health Outcomes in Children Affected by Conflict
W-SOFT6906	Lucas Granucci	Cross-lingual transfer and pseudo-labeling for multilingual named entity recognition
W-TECA7004	Aman Goud	Riding the Virtual Rails: Tackling Cybersickness through Motion Anticipation
W-TECA7005	Aryan Dutta	Artificial Intelligence or Artistic Intelligence? Exploring the Complexity, Adoption, and Public Perception of AI-Generated Music
W-TMED7101	Owen Wherry	Synergistic Anti-Aging Drug Combinations in Yeast: Insights into Human Longevity Enhancement

Schools Represented 2025

Al-Amal School
Avail Academy (Blaine)
Avail Academy (Edina)
Blaine High School – Center for Engineering, Mathematics, and Science
Blessed Trinity Catholic School
Breck School
Burnsville High School
Carondelet Catholic School
Concordia Academy--Roseville
DaVinci Academy of Arts Science
East Ridge High School
Eden Prairie Central Middle School
Eden Prairie High School
Edina High School
Highland Park High School
International School of Minnesota
Lake Middle School
Lake Nokomis Community-Keewaydin Campus
Lakeville North High
Magnuson Christian School
Mahtomedi Senior High
Maple Grove Senior High School
Math and Science Academy
Minnehaha Academy North Campus
Minnetonka East Middle School
Minnetonka High School
Minnetonka Middle School West
Mounds View High School
Murray Middle School
Nativity of Our Lord
New Life Academy
PT Homeschool
Rosemount High School
Salk Middle School
Scandia Elementary IB World School
St. Croix Preparatory Academy
St. Paul Academy Summit School
St. Peter Catholic School in Forest Lake
St. Thomas More Catholic School
Stillwater Area High School
Stillwater Middle School
Wayzata High School
Wayzata West Middle School