

METROPOLITAN SCIENCE & ENGINEERING FAIR 2024

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NJAS
Nebraska Junior
Academy of Sciences



WELCOME

TO THE METROPOLITAN SCIENCE AND ENGINEERING FAIR 2024

We thank you for your interest in this year's Fair.

Founded in 1980 as the Metropolitan Omaha Regional Science Fair, MSEF provides an annual opportunity for students in Grades 6-12 to present findings from their science, engineering and mathematical investigations. MSEF is open to all students who attend school (public, private or home school) in Washington, Douglas and Sarpy Counties. MSEF serves as a regional qualifier for the Nebraska Junior Academy of Sciences' (NJAS) Science Fair. The top performing senior division projects at the NJAS Science Fair are invited to present their research nationally at the National Association of Academies of Science (NAAS) Science Poster Session in conjunction with the American Association for the Advancement of Science (AAAS) annual meeting in February.

MSEF, Inc. is a 501(c)3 non-profit organization consisting of an entirely volunteer staff representing educators, scientists, businesses and institutions.

Senior Division

Wild Kingdom Pavilion

8:30-10:00
Round 1

10:00-10:15
Break

10:15-11:45
Round 2

11:45-12:15
Lunch

12:00-12:30
Public Viewing and
Senior Final Judging

Junior Division

Scott Aquarium Conference Center

9:00-10:15
Round 1

10:15-10:30
Break

10:30-11:45
Round 2

11:45-12:15
Lunch

12:00-12:30
Public Viewing and
Junior Final Judging





KEYNOTE SPEAKER

Dr. Jason Herrick

Vice President of Conservation and Animal Health-Omaha's Henry Doorly Zoo & Aquarium

Jason Herrick, PhD is originally from East Grand Rapids, Michigan, but his interest in zoos and conservation was the result of frequent trips to the Cincinnati Zoo and Botanical Garden while visiting his grandparents. Between his junior and senior years of college, Jason was an intern at the Cincinnati Zoo, providing his first experiences with wildlife, and specifically cats. He earned a B.S. in Zoology at Michigan State University, and an M.S. at Ohio State University, where he studied the endocrinology (hormones) of red howler monkeys. Another internship at Cincinnati Zoo, this time at the Center for Conservation and Research of Endangered Wildlife (CREW) with Bill Swanson, introduced Jason to cat reproductive biology. After completing his Ph.D. at Purdue University, he returned to Cincinnati as a post-doctoral research fellow at CREW to work on techniques for in vitro fertilization in domestic cats and to develop research programs for black-footed cats and sand cats. In 2004, he also started working with the Black-Footed Cat Working Group in South Africa. After stops at the University of Illinois at Urbana-Champaign in the Department of Comparative Biosciences, and the Colorado Center for Reproductive Medicine (human fertility), Jason joined Omaha's Henry Doorly Zoo & Aquarium as the Director of Reproductive Sciences in 2016. In 2021, he became VP of Conservation and Animal Health, where he oversees the Departments of Animal Health, Nutrition, Behavioral Health and Welfare, Reproductive Sciences, and Conservation Genetics made up of 38 people, including 14 D.V.M. or Ph.D. positions.



AWARDS CEREMONY

March 26, 2024, Lauritzen Gardens

6:00-6:10 PM | Optional Set Up for Exhibition of Projects

6:15-6:45 PM | Public viewing of Exhibition begins

6:45-8:15 PM | Keynote and Awards Ceremony

8:15-8:30 PM | NJAS Qualifier meeting

8:30 PM | Public viewing ends



JUNIOR

DIVISION PROJECTS

JUNIOR DIVISION PROJECTS

BIOMEDICAL ENGINEERING

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1001	Bella Bowers & Natasha Sysouvanh	8	Buffett Middle School	The CPR Practice Device
1002	Anna Dickerson	7	McMillan Middle School	All Hands On Deck!
1003	Emily Snell	7	King Sci & Tech Middle	Prosthetic Shark Fins

CELLULAR/MOLECULAR BIOLOGY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1011	Kate Alley	8	Buffett Middle School	Which Environment Does Algae Grow Best In?
1012	Meghna Moorthy	8	Millard North Middle School	The Ecosystem Correlates with Tumor Microenvironment System of Cancer
1013	Jasmine O'Connor	8	King Sci & Tech Middle	Enzyme Catalase Reactions
1014	Jalayah Thomas	8	Buffett Middle School	The Fragaria Extraction

CHEMICAL CHANGES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1021	Dora Abekoue	8	Buffett Middle School	Light It Up
1022	George Addy & Henry Ebers	7	St. Margaret Mary	A Foamy Elephant Explosion
1023	Nesah Ahamad	8	McMillan Middle School	Burn Baby Burn
1024	Brayden Johnson	8	Buffett Middle School	H2O Battery
1025	Kayleigh Rego	8	McMillan Middle School	Getting to the Rust of the Problem
1026	Luke Steube	8	Buffett Middle School	An En-Light-ning Experiment

COLOR SENSATION

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1031	Quinn Briardy	8	King Sci & Tech Middle	Stroboscopic Photography to Identify Abnormal Movement
1032	Jordyn Schulze	7	King Sci & Tech Middle	Blind Spots
1033	Braedyn Slachetka	8	King Sci & Tech Middle	Camera Obscura
1034	Vivian Winter	7	Bennington Middle School	Chromatic Perspectives

COMPUTER SCIENCES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1041	Lily Andersen	7	King Sci & Tech Middle	What Colors Do Dogs See?
1042	Olivia Bridges	8	King Sci & Tech Middle	What Color Attracts a Tortoise the Most?
1043	Yami Lopez Busane	8	Buffett Middle School	Making Clothes with Built In Sensors
1044	Oliver Gura	8	King Sci & Tech Middle	Human/AI articles
1045	Elvira Johnson	7	King Sci & Tech Middle	What Designs Create the Best Zoo Enrichment Options for Cats?
1046	Joseph Kwapnioski	7	St. Cecilia's Cathedral	How Far Does Electricity Transfer Wirelessly?
1047	Aishwarya Pandharpurkar	8	Elkhorn Valley View Middle School	Amplifying Wifi around Water with Parabolic Reflectors
1048	Aryka Plume	8	King Sci & Tech Middle	Nano-silver Particles in Pond Ecosystems

JUNIOR DIVISION PROJECTS

DISSOLVING CHEMISTRY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1051	Kadence Bosan	8	Buffett Middle School	Dissolving Delights
1052	Isabelle Hale	8	Buffett Middle School	Dissolving Candies
1053	Mya Sawyer	8	Buffett Middle School	Bombtastic Bath Blasts
1054	Jesse Schaefer	8	King Sci & Tech Middle	Bath Bomb Science

EARTH & ENVIRONMENTAL SCIENCE

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1061	Halli Buckley	8	Beveridge Middle School	Ice Ice Baby
1062	Anna Lattison	8	King Sci & Tech Middle	Ash and Plants
1063	Ian Leighter	7	King Sci & Tech Middle	The Effects of Algal Blooms in Lake Environments
1064	Evelyn Risinger & Olivia Hollibaugh	7	St. Margaret Mary	Rising Heat = Raising Issues
1065	Carson Thorberg	7	Bennington Middle School	Breathe Green
1066	Adrian Biegger	8	King Sci & Tech Middle	Water+Flooding=Dams

ENERGY: SUSTAINABLE MATERIALS & DESIGN

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1071	Alia Abdessalam	7	McMillan Middle School	Full Steam Ahead
1072	Thanvi Bhat	8	Millard North Middle School	Conserving Silica Sand
1073	Anabell Gibson	8	McMillan Middle School	This Will Save You From Radiation!

ENGINEERING TECHNOLOGY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1081	Malcom Barnes	8	McMillan Middle School	Smashing Shapes
1082	Cornell Booth	7	King Sci & Tech Middle	How Does Tension Effect Guitar String's Sounds?
1083	Joselyn Alvarado Ceballos	8	Beveridge Middle School	Crack Crack Boom
1084	Nevin Gonzales	8	King Sci & Tech Middle	How Many Different Materials Stand Up Against an Earthquake?
1085	Spencer Hartig	6	Bennington Middle School	A Blueprint for Building Stability
1086	Eh Glo Hpo	8	King Sci & Tech Middle	How Does the Shape of the Blade Affect the Energy Production?
1087	Jennifer Khu	7	King Sci & Tech Middle	Will the Size of a Windmill Sail Affect How Much Water It Will Produce?

FOOD CHEMISTRY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1091	Linden Clark	8	Buffett Middle School	My Molecules Don't Fold
1092	Lyla Harris Mayle	8	Beveridge Middle School	Different Sweeteners in Cookies
1093	Kaleigh Merkevicus	8	Buffett Middle School	Baking with Butter
1094	Gianna Papini	8	Buffett Middle School	Pure pH

HEALTH SCIENCES: BEHAVIOR

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1101	Justina Graves	8	Beveridge Middle School	Stay Healthy

JUNIOR DIVISION PROJECTS

1102	Dailiet Hernandez	8	Beveridge Middle School	Do Teens Get Enough Sleep
1103	Natalie Kastrup	8	Beveridge Middle School	Keep It Clean
1104	Sloan Mikuls & Ella McMahon	7	St. Margaret Mary	Racing Heart Rates
1105	Yoal Put	8	King Sci & Tech Middle	Cardiovascular Activity
1106	Adan Rasgado	8	Beveridge Middle School	Bulking vs Cutting

HEALTH SCIENCES: EXTERNAL FACTORS

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1111	David Dadabaev	8	Buffett Middle School	Sweet Tooth
1112	Claire Gering & Savva Shea	7	St. Margaret Mary	Nature's Candy
1113	Lesley Makoumbou-Brice	8	King Sci & Tech Middle	Does the Application Method of Sunscreen Effect Its Effectiveness in Protecting against UV Rays?
1114	Kate Nipper	7	McMillan Middle School	Ouch, My Feet Hurt!!!
1115	Luciana Popp	8	Buffett Middle School	Oils vs Chapped Lips
1116	Georlene Tcheuhchoua	8	Beveridge Middle School	So Fresh N So Clean

MATERIALS SCIENCE: COMPOSITES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1121	Miriam Brown	7	McMillan Middle School	Finding the Best Parachute
1122	Evan Donnelly	8	Beveridge Middle School	Bullet Proof Plastic
1123	Layton Feeny	8	Beveridge Middle School	Making Water Fresh
1124	Bridget King	8	Buffett Middle School	Glue Testing
1125	Paul Melkus & Jude Hasiak	7	St. Margaret Mary	The Fantastic Photoelectric Effect
1126	Kayleigh Morris	8	McMillan Middle School	Does Brand Matter?
1127	Max Samuland	8	McMillan Middle School	Is Flex Seal the Real Deal?

MATERIALS SCIENCE: TEMPERATURE

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1131	Ezley Jones	8	Buffett Middle School	Hot n' Cold Magnets
1132	Isabel Mammen & Lucy Lauer	7	St. Margaret Mary	It's Getting Hot In Here!
1133	Winston Matthews	7	St. Margaret Mary	Keep a Cool Head
1134	Aziz May	8	Buffett Middle School	Cup Conduction
1135	Madelyn Schnieder	8	Buffett Middle School	Keep the Heat
1136	Hayden Simmons	8	Buffett Middle School	Tennis Ball Temp
1137	Cameron Smith	8	King Sci & Tech Middle	Insulation

MICROBIOLOGY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1141	Luke Bein	8	Buffett Middle School	Mold Temperature in Different Temperatures
1142	Ava Carpenter	8	King Sci & Tech Middle	Sterilizing Medical Equipment
1143	Charlotte Dabestani	8	King Sci & Tech Middle	Water Filtration
1144	Helena Detisch	8	McMillan Middle School	OoOo DON'T EAT THAT
1145	Christian Essien	8	King Sci & Tech Middle	Is 20 seconds the Most Optimal Hand Washing Time?
1146	Tessa Huebert	8	Beveridge Middle School	The Collaps-ation Experimentation
1147	Than Myint	8	King Sci & Tech Middle	Bacterial Growth
1148	Jack Raduechel	8	Buffett Middle School	Germ Exterminator

JUNIOR DIVISION PROJECTS

PHYSICAL CHANGES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1151	Isabella Bryant-More	8	King Sci & Tech Middle	How Does A Comet's Composition Affect The Way It Melts?
1152	Hara Satez	8	Beveridge Middle School	Balloon vs Water Temperature
1153	Sam Uno	8	Buffett Middle School	Soapy Experiment

PHYSICS: MOTION

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1161	Royce Agonor Jr	8	King Sci & Tech Middle	Trajectory of Banking a Basket
1162	Adam Bateman	8	McMillan Middle School	Launch It Into the air
1163	Jaxen Kocsis	7	King Sci & Tech Middle	Angle Of Speed
1164	Cameron Mellon	7	Bennington Middle School	Crashing Cosmos
1165	Victor Rozier-Epting	8	Buffett Middle School	Magnetized Speed
1166	Prayash Thapa	8	King Sci & Tech Middle	Does the Shape of the Fin on a Rocket Determine the Travel Distance?
1167	Connor Vickers	8	Buffett Middle School	Rubber Band Cars

PLANT SCIENCES: GROWTH & DEVELOPMENT

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1171	Henry Dawes	8	Buffett Middle School	Shining Shrubs
1172	Vanessa Perales	8	Buffett Middle School	Musical Beans
1173	Totyanna See	8	King Sci & Tech Middle	Plant Light

PLANT SCIENCES: SOIL MANIPULATION

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1181	Arabella Bradfield	8	King Sci & Tech Middle	Plants vs Cleaners: Organic vs Nonorganic
1182	Tae Dah Nar	8	King Sci & Tech Middle	Does Litter Inhibit Plant Growth?
1183	Arianna Detisch	8	McMillan Middle School	What Organisms Will Help Plants Grow the Fastest?
1184	Alexis Kavan	8	Buffett Middle School	Eggshelltastic Plants
1185	Skylar Linstrom	8	King Sci & Tech Middle	Plant vs Vitamins
1186	Music Paw	8	King Sci & Tech Middle	Plant Growth with Phosphorus
1187	Miri Peterson	7	King Sci & Tech Middle	Transpiration Rates With Different Plant Species
1188	Mariano Ponce Ortiz	8	King Sci & Tech Middle	Artificial vs Natural Fertilization
1189	Andrew Sorrows	7	Bennington Middle School	Digging into Growth

SENSORY SCIENCE

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1191	Hsa Moo	8	King Sci & Tech Middle	Flavors Detection Base on Area of Tongue
1192	SriAdithya Pandharpurkar	6	Elkhorn Valley View Middle School	Game Your Neurons and Brawl the Pain!!!
1193	George Whitbeck	8	Beveridge Middle School	Eat. Sleep. Run. Repeat

JUNIOR DIVISION PROJECTS

SOCIAL SCIENCES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1201	Hannah Caddell	8	Beveridge Middle School	Decades to Dollars
1202	Kaylee Cummings	8	King Sci & Tech Middle	Do People Prefer Expensive or Cheap?
1203	Abrielle Graves	8	Beveridge Middle School	How Do You See It?
1204	Nora Johnson	6	Bennington Middle School	Repetition and Recall
1205	Ah bee Lah	8	Beveridge Middle School	Pum Pum: Do You Hear That?
1206	Jenna Murray	6	Bennington Middle School	Unlocking Confidence

SOUND

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
1211	Mallory Herr	8	King Sci & Tech Middle	Physical Affect of Sound
1212	Gabriella Perez	8	Beveridge Middle School	Hocus, Pocus, FOCUS!!!
1213	Emerson Porter	8	McMillan Middle School	How Does Listening to Music While Studying Affect Memorization?

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SENIOR

DIVISION PROJECTS

ANIMAL BEHAVIOR

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2001	Madelyn Cristo	12	Zoo Academy	The Effects of Different Pitches and Tones of <i>Canis lupus familiaris</i> Behavior
2002	Mia Frederick	11	Zoo Academy	Domestic Cats vs. African Wildcats Reaction to Weather in Controlled Environments.
2003	Katherine Hazell	12	Zoo Academy	Behavioral Comparison of <i>Felis lybica</i> and <i>Felis catus</i>
2004	Anastasia Mizzell	11	Zoo Academy	Preventing Repetitive Behaviors Shown in Captive <i>Rhinoptera bonasus</i>
2005	Thayen Ryan	11	Zoo Academy	The Effect of Stimuli on Mammal Communication
2006	Zoey Seager	11	Zoo Academy	Ferret behaviors
2007	Bailey Wallace	12	Zoo Academy	Right-Handed Rattlesnakes: Environmental Factors Influence on <i>Crotalus atrox</i> Movement, Position, and Coiling
2008	Dezeraya Wright & Brenna Petersen	11	Zoo Academy	The Effect of <i>Otocinclus cocama</i> and <i>Otocinclus marcospilus</i> Eating Habits on an Environment.

ANIMAL SCIENCES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2011	Cody Gross	12	Zoo Academy	Tapir Treats and Feats: The Effect of Browse on <i>Tapirus indicus</i> Throughput Rate
2012	Ethan Rand	12	Zoo Academy	The Effect of Genetics in Canine Dental Health
2013	Sha'uri Sanchez	11	Zoo Academy	What Homemade Bait Attracts Flies the Best?

BEHAVIOR AND SOCIAL SCIENCE

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2021	Peter Jessen	11	Omaha Central High	Effects of Academic Stress and Self Efficacy on Academic Performance in High School Students
2022	Kaydence Jones	12	Zoo Academy	The Effect of Cross Hand-Eye Dominance on Volleyball Players Hitting Percentage
2023	Remy Mathews	11	Zoo Academy	How People Tell Tone
2024	Beth Mergens	12	Omaha Central High	Does Vaporized Delta-8 THC Function as a Reinforcer in Male Rats?
2025	Skylar Paroda-Dillman	12	Zoo Academy	Clouds and Kids
2026	Jeremy Robson	12	UNMC High School Alliance	Objective Real-world Driving: A Novel Social Biomarker to Predict Cognitive Function in Drivers with MCI or AD
2027	Anushka Sajja	10	Millard North High School	Detection of brain structural alterations due to chronic nicotine abuse using in vivo diffusion tensor magnetic resonance imaging

CELLULAR & MOLECULAR BIOLOGY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2031	Ella Holtzclaw	12	Omaha North High School	Cloning a Streptavidin-Binding Protein Involved in DNA Packaging Using Mutagenesis
2032	Julia Matos & Mischa Mikityuk	12	UNMC High School Alliance	SAP30: An Oncogene-Like Protein in High-Risk Neuroblastoma
2033	Isabel Walocha	12	UNMC High School Alliance	The Claudin Project

BIOMEDICAL & HEALTH SCIENCES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2041	Fran Brannen	12	Omaha Central High	Caffeine and its Effects on Heart Rate and Blood Pressure
2042	Amir Elrefaie	12	UNMC High School Alliance	Therapeutic Efficacy of Omega 3-Fatty Acids to Mitigate Methamphetamine Induced Brain Dysfunction
2043	Emma Hindman	11	Zoo Academy	Difference Between a Dog and Human Heart Rate
2044	Carter Keys	11	Zoo Academy	Effects of Preworkout
2045	Ved Pendyala	12	Creighton Prep	Effects of Acute and Chronic Gabapentin Use on Cardiovascular Function.
2046	Anuj Singh	11	Millard North High School	The Role of Opioids in Accelerated Aging
2047	Ria Vootla	12	UNMC High School Alliance	When Defeat Hits Home: How Tiny Brain Messengers Impact Adolescent Brains

COMPUTATIONAL BIOLOGY & BIOINFORMATICS

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2051	Sofia Acosta & Hunter Stoffel	12	Omaha North High School	Comparative Analysis of Protein-Lipid Interactions of Prion and Doppel Proteins Anchored to Model Lipid Bilayers
2052	Edgar Del Cid Lutin	12	UNMC High School Alliance	Computational Identification of Reactive Thiol-Containing Proteins
2053	Athreya Reddy	9	Elkhorn South High School	Identifying New Targets to Prevent Anti-Bacterial Resistance Using an Artificial Intelligence and a Computer Aided Drug Design Approach

EARTH & ENVIRONMENTAL SCIENCES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2061	Olive Kerkman	12	Zoo Academy	The Effect of Climate Change on <i>Aurelia labiata</i>
2062	Naomi Long	11	Zoo Academy	The Effect of Oil on the Photosynthesis of Native Nebraska Marsh Plants
2063	Marti Warrior & Olivia Kirchhevel	12	Zoo Academy	Reusable Water Bottle Effectiveness

ENVIRONMENTAL ENGINEERING

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2071	Maria Lopez-Lopez	12	Omaha Central High	How Does the Environment Effect the Rate of Decay of Fruit?
2072	Alyssa Moheiser & Hadley McComas	12	Duchesne Academy	Solar Energy in the Means of Sustainability and Its Effects on the World Demonstrated Through Light
2073	Avery Moores	12	Zoo Academy	Phytoremediation Potential
2074	Aiden Whalen	12	Omaha Central High	Exploring the Statistical Similarities Between a Reverse Osmosis System and a Home Made Water Filtration System in their Ability to Remove Contaminants
2075	Michael Whitney	11	Zoo Academy	Conservation of Energy

MATERIALS SCIENCE

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2081	Shruti Garapati	12	Omaha Central High	An Electron Microscopy and Image Processing Method for Characterizing 3D-Printable Glass Nanoparticles
2082	Mercedes Renken	12	UNMC High School Alliance	The Impact of Ethylenediaminetetraacetic Acid on the Coefficient of Friction Between Ultra-High Molecular Weight Polyethylene and Cobalt Chrome

SENIOR

DIVISION PROJECTS

MATHEMATICS

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2091	Henry Carstens	11	Omaha Central High	How Summative to Formative Weight Effects Graduation Rate

MICROBIOLOGY

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2101	Ximena Altuzar	10	Omaha Central High	The Effects of Ultraviolet Radiation on <i>Microoccus luteus</i>
2102	Elysia Jones	11	Zoo Academy	The Effect of Temperature on Aquafina Bottled Water
2103	Sean Mathews	12	Ralston High School	Isolating and Purifying Soil Samples to Discover Novel Bacteria-Eating Virus (phages)
2104	Esha Pandharpurkar	10	Elkhorn South High School	Analyzing the Impact of Carbon Emissions on Managed Soil Types
2105	Alivia Rodriguez	12	Omaha Central High	Variance of Bacteria in Water

PLANT SCIENCES

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2111	Abdul Almansob	12	Omaha Central High	Plant Growth
2112	Joselyn Korte	11	Zoo Academy	The Effect of Different Light Frequencies with LED Lights on Plant Growth
2113	Madison Neeley & Addisen Elsaesser	11	Zoo Academy	The Effects of Hydrogels on Soil Moisture
2114	Lindsey Voorhees	11	Zoo Academy	The Effects of Glyphosate on the <i>Kalanchoe blossfeldiana</i>

TRANSLATIONAL MEDICAL SCIENCE

#	STUDENT	GRADE	SCHOOL	PROJECT TITLE
2121	Lily Blake	12	UNMC High School Alliance	The Effect of Closed Incision Negative Pressure Wound Therapy on Postoperative Infections and Surgical Site Complications following Revision Total Hip and Knee Arthroplasty
2122	Shelby Lee	12	UNMC High School Alliance	Chemical Synthesis and Characterization of a Long Acting Tenofovir Phosphonate Prodrug
2123	Pranavi Prakash	10	Millard North High School	CDK9-specific PROTAC 2 Treatment Sensitizes Pancreatic Cancer Cells to Navitoclax

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AWARDS

GRAND PRIZE

JUNIOR
TOP 6 PROJECTS

NJAS MEDAL, \$110

SENIOR
TOP 6 PROJECTS

NJAS MEDAL, \$110

CATEGORY AWARDS

JUNIOR DIVISION

FIRST PLACE Plaque, \$60

Second Place
(> 3 entry) Plaque, \$45

Third Place
(> 5 entry) Plaque, \$35

Fourth Place
(> 9 entry) Plaque, \$25

SENIOR DIVISION

FIRST PLACE Plaque, \$60

Second Place
(> 3 entry) Plaque, \$45

Third Place
(> 5 entry) Plaque, \$35

Fourth Place
(> 9 entry) Plaque, \$25

MSEF officials assign similar projects to the same category. The number of awardees in each category is determined by the number of entries. For categories with fewer than 3 entries, each project is compared to a standard. As a result, a project may receive 2nd place, 3rd place, or no place at all.

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Scott Sieck
Kim Sieck
Kenzie Bias
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Olayemi Olorunsola
Nghị (Melody) Nguyen
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Anum Akbar
Haritha Chava
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Mohammad Abdullah Khan
Ajay Murakonda
Meg Schaefer
Marjina Akter Kalpana
Amanda Macke
Swathi Priyanka Murakonda
Gunjan Sharma
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Alexandria Eiken
Katie Brake
Nashanthea Roland
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Indumati Ramireddy
Soumi Basu
Tapan Patel
Kirtana Arikath
Taylor Bruett
Dipanwita Das
Crystal Krause
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Rebecca Slotkowski
Michael Fryda
Lauren Cramer
Laura Flores
Jack Olson
Sandeep Kumar Singh
Shar Soe
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Safwan Elkhatib
Ishaan Yadav
Anupa Kamat

**Judges confirmed as of March 7, 2024. For an updated list of judges, visit msefomaha.com*

SPOTLIGHT

MSEF: ENCOURAGING STUDENT RESEARCH IN SCIENCE
AND ENGINEERING CONCEPTS



MICHELE RICARD TEACHER/SPONSOR AWARD

Michele Ricard, an Omaha high school teacher who annually sponsored around 20 projects for over a decade, passed away suddenly in November 2017. Each year during the MSEF Awards Ceremony, MSEF recognizes a teacher/sponsor who, like Michele, has demonstrated ongoing enthusiasm, encouragement, and dedication to student science research and MSEF participation.

PREVIOUS AWARDEES:

- **John Huber**, *McMillan Magnet Center*
- **Amy Leising**, *Zoo Academy*
- **Dara Rosenberg**, *Alice Buffett Magnet Middle School*
- **Tracy Rumbaugh**, *Omaha Central High School*
- **Jackie Schneider**, *Lifegate Christian School*
- **Kimberly Wichert**, *Alice Buffett Middle School*
- **Marlo Tomich**, *Swanson Elementary*
- **Jenna Miller**, *Swanson Elementary*

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