

NORTH DAKOTA STATE SCIENCE & ENGINEERING FAIR

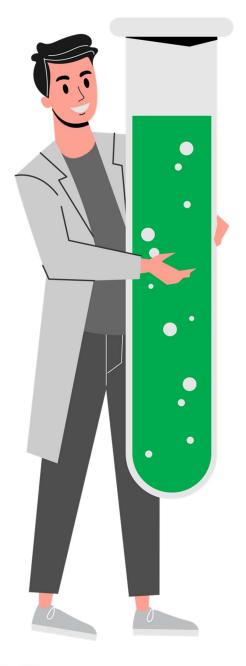
Hosted by the University of North Dakota







TABLE OF CONTENTS



Committee Members	3
Sponsors	2
Directors and Acknowledgements	5
Schedule	6
Instructors by Region	7-8
Northwest	
Northeast	
Southwest Central	
Southeast	
Map of Regions	9
Science Project List	. 10-16
Northwest (1) Junior Division	10
Northeast (2) Junior Division	1′
Southwest Central (3) Junior Division	12
Southeast Junior (4) Junior Division	13
Northwest (1) Senior Division	14
Northeast (2) Senior Division	15
Southwest Central (3) Senior Division	16
Southeast (4) Senior Division	17
Awards & Scholarships	. 18-21
NDSSEF Awards	18
UND Affiliated Awards & Sponsors	19
Other Organizations, Societies & Agencies Sponsoring Awards	20
UND Campus Map	23
Thank you!	24



NORTH DAKOTA STATE SCIENCE & ENGINEERING FAIR COMMITTEE MEMBERS

2025 Chair

Ryan Adams, Interim Dean, College of Engineering & Mines Chad Frost, Director, College of Engineering & Mines

Publicity and Promotions

Deb Austreng, College of Engineering & Mines

Program & Activities

Gwen Klawon, College of Engineering & Mines Karen Cisek, School of Medicine & Health Sciences Dr. Laura Munski, Dakota Science Center

Logistics & Communication

Gwen Klawon, College of Engineering and Mines Karen Cisek, School of Medicine & Health Sciences Dr. Laura Munski, Dakota Science Center

Awards

Dustin McNally, College of Engineering & Mines

Judging

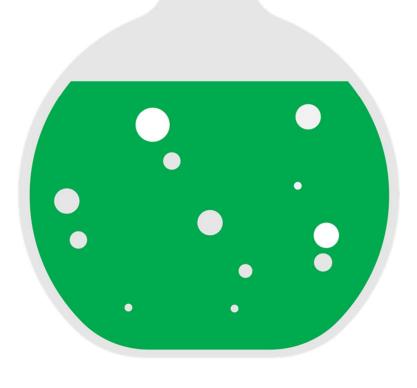
Nuri Oncel, College of Arts & Sciences

Resources & Budget

Tonya Parton, College of Engineering & Mines Ryan Adams, Interim Dean, College of Engineering & Mines Chad Frost, Director, College of Engineering & Mines

Other Committee Members

Kaitlin Lockett, Financial Aid Advisor





SPECIAL THANKS TO OUR SPONSORS

Major Sponsors

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ND IDeA Network of Biomedical Research Excellence (ND INBRE)
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Contributing Sponsors

UND College of Education and Human Development UND College of Nursing & Professional Disciplines Visit Greater Grand Forks























UND MEMORIAL UNION March 31 – April 1, 2025

2025 Associate Board Members

Marissa Motschenbacher
Charles Schiltz
Amber Beyer
Tana Schafer
Lorraine O'Shea
Gretchen Flatz
Peter Sykora-Executive Secretary

2025 Regional State Directors

Northwest (1) – Amber Beyer – East Fairview Northeast (2) – Lorraine O'Shea - Grand Forks Southwest Central (3) – Tana Schafer - Flasher Southeast (4) – Marissa Motschenbacher - Lidgerwood

Awards Coordinator

Peter Sykora (Watford City)

2025 ISEF Trip Director

Peter Sykora (Watford City)

Scientific Review & Rules Compliance Committee

Tana Schafer, Flasher - Gretchen Flatz, Dickinson - Tara Mertz-Hack, Ellendale

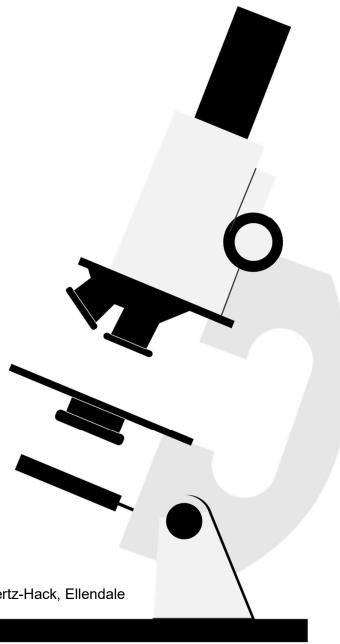
2025 Host Facilitator

Gwen Klawon, UND College of Engineering and Mines

The North Dakota State Science & Engineering Fair is operated by the NDSSEF Board. All inquiries regarding the Fair, its judging, and its rules should be directed to the NDSSEF Board.

Acknowledgements

The North Dakota State Science & Engineering Fair would like to thank all sponsors, UND faculty and staff, graduate students, and engineering student ambassadors for their tremendous support in making this year's Science & Engineering Fair a success. Your enthusiastic involvement is greatly appreciated.





75th NORTH DAKOTA STATE SCIENCE & ENGINEERING FAIR

Hosted by the University of North Dakota

SCHEDULE

Monday, March 31, 2025

8:00-11:00am Registration and Setup

Main Ballroom, Second floor, Memorial Union

11-12:45pm Lunch on your own

1:00pm Gather in Main Ballroom 214 A-D

1-3:30pm Hands-on activities, Teacher's chaperone students

4:00pm Students meet at Memorial Union Main Ballroom /Dismiss

5-7:30pm Northern Air Family Fun Center (1600 32nd Ave South, Grand Forks)

Tuesday, April 1st, 2025

8:00am Judges Report/Breakfast, Memorial Union, Second Floor, Small Ballroom (Room 220)

8:30am Judges' Meeting, Memorial Union, Second Floor, Small Ballroom (Room 220)

9:00am Judging Begins

9:00am Teachers' Meeting, Memorial Union, Third Floor, Room 340

11:30-1:00pm Students' Lunch (2 separate groups: 11:00am Juniors; 12:00pm Seniors)

Memorial Union, First Floor, Food Court (\$15 cards provided) *Time is subject to change

12-1:00pm Judges' Lunch (provided), Memorial Union, Second Floor, Small Ballroom (Room 220)

12:45pm Judges' Meeting (All Afternoon Judges), Memorial Union, Second Floor, Small Ballroom (Room 220)

1:00pm Judging Resumes 3:30-4:30pm Open to the public

4:30pm* Takedown and setup for Awards Ceremony, *Memorial Union, Second Floor, Main Ballroom (Room 214 A-D)*

*time is determined by the judges.

5:30 pm* Awards Ceremony* Memorial Union, Second Floor, Main Ballroom (Room 214 A-D)

*approximately Following Awards Ceremony: ISEF winners meet with Peter Sykora at the UND Memorial Union Main Ballroom Room 214 A-D.



NORTHWEST REGIONAL INSTRUCTORS

Amber Beyer (Director)

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Tucker Meidinger

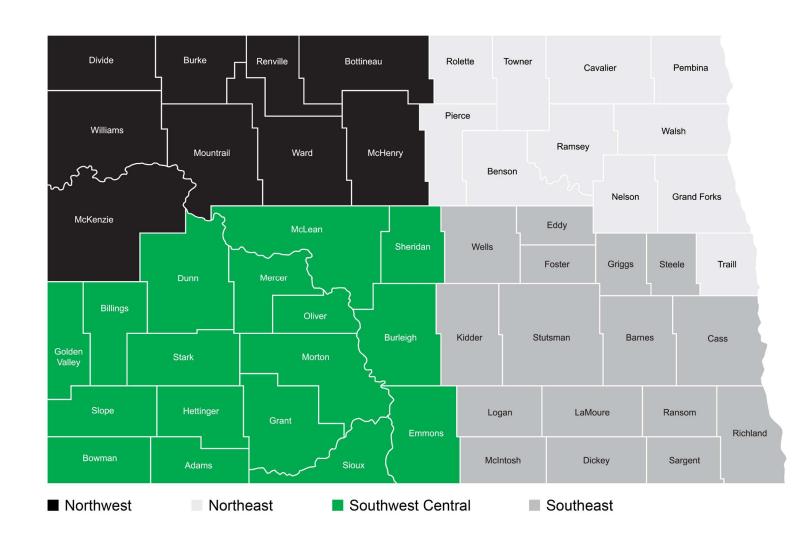
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NORTH DAKOTA SCIENCE & ENGINEERING FAIR REGION MAP





NORTHWEST (1) JUNIOR DIVISION

Director: Amber Beyer

#	Name	Project Title	School
101	Aurora Bratvold Cedar Fitzsimmons	Solar Oasis: Filtering Water with the Power of the Sung	New Town
102	Ava Brugh Kinsey Lahtinen Danika LeBeau	Purity vs. Pollution	New Town
103	Chloe Bushnell	Scrubb-a-dubb-dubb	East Fairview
104	Autumn Dusenberry Mataya Foote Victoria Hale	Sacred Hands	New Town
105	Harper Ferguson	Grazing Management Effects on Plants	Tioga
106	Jerol Gohrick	Potato Battery	Tioga
107	Waylon Seelye	What is the Best Design for a Rocket	Tioga
108	Keslee Keever	How Music Affects Plant Growth	Tioga
109	Zoya Kovaleva	Which water filters work best to make clean water	Tioga
110	Morgan Murphy	Does Color Affect Taste?	East Fairview
111	Marlene Perez	Is Hydroelectric Power Better for the Environment?	Williston MS
112	Taylor Poulsen	Amazing Absorption	East Fairview
113	Easton Rehak	Does the temperature of a tennis ball affect its bounce?	Tioga
114	Tucker Rice	Expected Corn Yields	Tioga
115	Athena Starr	A Study of Self Diagnosing	New Town
116	Xora Trickett	Get Your Hands Dirty!	East Fairview
117			
118			
119			
120			

NW-Alternates

#	Name	Project Title	School
1	Thatcher Davis	Zinc Battery	Tioga
2	Gracelyn Davidson	Sunlight or Artificial	Tioga
3	Mackayla Crosland	Puppy Paw Preference	Williston MS
4	Amara Stevens Kobe DeCoteu Kalijah Koteen	How light pollution affects fish	New Town



NORTHEAST (2) JUNIOR DIVISION

Director: Lorraine O'Shea

#	Name	Project Title	School
121	Che Yu	Machine Learning for Soil Moisture Prediction	South Middle School
122	Beckett Auch	Dancing Beats	Schroeder Middle School
123	Sudarshan Gautham	Five Second Rule	Schroeder Middle School
124	Bentley Moen & Kade Einarson	Transparency Test: Holograms	Valley/Edinburg Middle School
125	Kaylee Hegland	I Soiled My Pants	Schroeder Middle School
126	Helen Bernstrom	H2MATO	Schroeder Middle School
127	Keegan Berg & Joe Langerud	Banana Breakdown	Valley/Edinburg Middle School
128	Tori Lewis & Sophie Peterson	Fabric Wars	Valley/Edinburg Middle School
129	Chole Bjornson & Berlyn Latozke	The Dirt on pH	Valley/Edinburg Middle School
130	Nora Peterson	I Got Worms	Schroeder Middle School
131	Olivia Dafoe	Hues Got Memory?	Schroeder Middle School
132	Ashton Devlin	Let it Grow	Schroeder Middle School
133	Alexis Azenkang	Dirty Diseases	Schroeder Middle School
134	Hadley Miller	Growing Grass	Schroeder Middle School
135	Addy Kuenzel	Jammin Plants	Schroeder Middle School
136	Amelia Dodds	Making Waves	Schroeder Middle School
137	Surya Srivastava	Interstellar Inch	Schroeder Middle School
138	Declan Sailer	Playground Pathogens	Schroeder Middle School
139	Kimber Coxe	Keep it Cool	Schroeder Middle School
140	Amelia Buchhop	Spray Away	Schroeder Middle School

NE-Alternates

#	Name	Project Title	School
1	Mia Hager	Peas on Earth	Schroeder Middle School
2	Maybelline Balance & Rosalyn Fedje	Root Race	Valley/Edinburg Middle School



SOUTHWEST CENTRAL (3) JUNIOR DIVISION

Director(s): Tana Schafer & Gretchen Flatz

#	Name	Project Title	School
141	Delaney Bravender	Al Versus Real	Flasher Public School
142	Amelia LaDuke	How Proficient are Children at Differentiating Candy from Medicine	Flasher Public School
143	McKenna Ruscheinsky	Measure that Temperature!	Flasher Public School
144	Rebekka Bohl	Which Child-Resistant Bottle is the Most Effective?	Flasher Public School
145	Kendall Lord	What is the Best Way to Preserve Apples	Flasher Public School
146	Callie Diechert	Blown Away	Flasher Public School
147	Carlee Weinberger	Herbs vs. Antibiotics	Flasher Public School
148	Jeremiah Gessey	Exploring the Impact of Essential Oils on Planarian Mobility, Sensitivity and Learning Abilities	Flasher Public School
149	Noah Hetzel	Captivation Station	Flasher Public School
150	Jocelyn Zingg	Nutrient Interactions: Assessing the Impact of Nitrogen and Phosphorus on Sorghum Development	Flasher Public School
151	Brynn Janisse	Evaluating the Effectiveness of Oregano Oil Combined with Antibiotics in Inhibiting Bacterial Growth	Flasher Public School
152	Kinley Isbell	Quantitative Analysis of Oxytetracycline Potency Degradation Over Time Using Spectrophotometer	Flasher Public School
153	Jory Bonogofsky & Brinley Meyer	Perking Up or Pumping Hard? The Relationship Between Caffeine and Heart Rate	Flasher Public School
154	Kash Red Tomahawk	Handwashing Efficacy	Flasher Public School
155	Rusty Schafer	From Murky to Clear: The Journey of Water Purification	Flasher Public School
156	Eli Hatlestad	Food Desert Relief	Shiloh Christian School
157	Conrad Gjellstad	Our Clean School	Shiloh Christian School
158	Kenley Jahner	Do Screens Steal Your Sleep?	Linton Public School
159	Tessla Stevenson	How Does Soil Type Affect Infiltration Rate?	Scranton Public School
160	Ashton Evans	Investigating the Impact of Low pH on Soil	Scranton Public School

SWC-Alternates

#	Name	Project Title	School
1	Jordan Meyer & CeeAnna Ruscheinsky	Cattle Comfort: Investigating Shelter Designs for Optimal Heat Retention Under Varying Temperature Conditions	Flasher Public School
2	Colton Schaff	The Impact of Soil pH Levels on Plant Growth	Flasher Public School
3	Palmer Mack	How Does the Breed of Sheep Affect Meat Quality?	Scranton Public School
4	Daxlynn Empter	Sticky Situation	Glen Ulin Public School



SOUTHEAST (4) JUNIOR DIVISION

Director: Marissa Motschenbacher // Assistant Director: Megan Saunders

#	Name	Project Title	School
161	Sawyer Paulson	Are Suppressors Superior	Hankinson School
162	Gavin Sayler	Farmyard Fertilizers	Kidder County
163	Ella Liean	Let it Shine: The Impact of Light Distance in Hydroponics	Montpelier High School
164	Ben Sutherland	Frustration : A Gender Comparison Study	Lisbon Pubic School
165	Alaina Nenow	Eww, I've Been Kissed by a Dob!	Gackle-Streeter Public School
166	Tracy Moch	Where's My Keys?	Kidder County
167	Carter Remmick	Feeding the Fields	Kidder County
168	Dena Goehring	Hot Ice	Ashley Public School
169	Cohen Nelson	Rusty Revolution	Hankinson Public School
170	Tony Vetter	Plant Watering: All at Once vs. Gradually	Lisbon Public School
171	Ryker Stroehl & Christian Kackman	Avoiding Disaster	Lidgerwood Public School
172	Cooper Craven	Burning Paper: The Time of Few	Kidder County
173	Nolan Sutherland	A Study on Locational Difference's Effect on the Dialect of Students	Lisbon Public School
174	Fourie DuPreez	How Your Everyday Drinks Affect Your Teeth	Gackle-Streeter Public School
175	Caleb Kennedy	How much will it hold?	Kidder County
176	Brooke Oster	Lets Get Growing	Kidder County
177	Lily Oster	Comparison Study of Oral Bacteria in Humans and Canines	Lisbon Public School
178	Elliana Nicholson	Pick a card, any card	Kidder County
179	Kolten Schram	Blasting Away Bacteria	Lidgerwood Public School
180	Kaimbryn Sutherland	Wipe it Down!	Kidder County

SE-Alternates

#	Name	Project Title	School
1	Trinity Zimmerman	Which Skin Moisturizer Works Best	Ashley Public School
2	Maci Mittleider	Plant vs. Plastic	Kidder County
3	Jackson Lang	Watch the Drop	Kidder County
4	Calli Schaunaman	How Do You Defrost?	Ashley Public School



NORTHWEST (1) SENIOR DIVISION

Director: Amber Beyer

#	Name	Project Title	School
201	Crystal Borja	The Stroop Effect	Tioga
202	Savannah DeMoe	Chemical Impact on Life	Tioga
203	Grace Fedler	Brain drain or boost in efficiency	Tioga
204	Malory Garcia	People vs Dogs Whose Mouth is Cleaner	Tioga
205	Katherine Haakenson	Concentration Effectiveness	Tioga
206	Jenilynn Hanson	Mental Health in the Agricultural Industry	Tioga
207	Cheryl Hayes	Natural vs. Synthetic Antibiotics	Tioga
208	Amanda Kingston	How Caffeine Affects Your Body	Tioga
209	Angel Lockwood	Solar Energy and Mirrors	New Town
210	Criszah Lorraine Mahinay	Re-growing Lettuce in Different Water Types	New Town
211	Atley Pagl	Which Prop Has The Most Thrust	Tioga
212	Cash Schultz	The Gauss Rifle	Tioga
213	Jhosthine Tavera	"Water Filters Saves Live; Water Filtration Importance"	New Town
214	Ava Wallin	Does Club Head Speed Matter?	Tioga
215	Jeremiah Walsh	Shaking Things Up Pt 2	Tioga
216	Allie Wolla	Avalanche Pit	Tioga
217			
218			
219			
220			

NW-Alternates

#	Name	Project Title	School
1	Baryon Espartero	Measuring Magnetic Fields	Tioga
2	Michael Grimes	Nasty Loofahs	Tioga
3	Aubrey Bruhn Daniel Erickson Good Medicine Demaray	From Cigarettes to Corkboards	New Town
4	Contance Myers	Toothbrush Storage	Tioga



NORTHEAST (2) SENIOR DIVISION

Director: Lorraine O'Shea

#	Name	Project Title	School
221	Amaa Wijetunga	Hydrotectives	Red River High School
222	Katelyn Hur	Profiling COVID-19 Vaccine Adverse Events Using Case Reports	Red River High School
223	Sonakshi Singhal	On the Fundamental Understanding of Arsenic-Minerals Chemistry for Successful Environmental	Red River High School
224	Elizabeth Fedje & Brooke Gullickson	Cold Snap: Testing the Survival Limits of Bean Beetles in the Cold.	Valley-Edinburg High School
225	Jysmen Gritz	Do over the counter acne products inhibit bacterial growth?	Valley-Edinburg High School
226	Ingred Myrdal & Scarlett Dreger	Creating Compost from School Food and Paper Waste.	Valley-Edinburg High School
227	Carter Oberg & Theodore Otto	The effect of smoke exposure on plant photosynthesis.	Valley-Edinburg High School
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236			

NE-Alternates

#	Name	Project Title	School



SOUTHWEST CENTRAL (3) SENIOR DIVISION

Director(s): Tana Schafer & Gretchen Flatz

#	Name	Project Title	School
241	McKenzie Meyer	Simulating Digestive Efficiency in Cattle Feeds	Flasher Public School
242	Taelyn Boldt	Smart Irrigation	Flasher Public School
243	Jocelyn Rossow & Piper Schmidt	The Influence of pH on Temperature and E. coli Growth	Flasher Public School
244	Brenna Eckroth & Carrie LaDuke	The Effect of Water Filtration on Bacterial Growth	Flasher Public School
245	Kamryn Zenker	DATA from Enzymes	Flasher Public School
246	Cassy Hartman	Impact of Bacillus subtilis on Nutrient Bioavailability and Plant Growth in Aquaponic Systems	Flasher Public School
247	Payton Omlid	Nature vs. Synthesis: Evaluating Antioxidant Effectiveness in Fat Oxidation Prevention	Flasher Public School
248	Avery Stevens	Impact of High Fiber vs. Low-Fiber Diets on Gut Microbiota	Flasher Public School
249	Alexa Belisle	pH Precision: Evaluating the Reliability of Commercial and Natural Indicators	Flasher Public School
250	Booklyn Hepper	Coefficient of Thermal Expansion Testing True Results vs Measured Results	Flasher Public School
251	Madalyn Bohl	Enhancing Nutrient Uptake in Wheat: Evaluating the Effects of Mycorrhizal Fungi Inoculation	Flasher Public School
252	James Gessey	The Effect of Psychoactive Substances on the Growth and Treatment of K562 Cell Lines	Flasher Public School
253	Grant Hauge and Tyler Rossow	Smart Soil Monitoring	Flasher Public School
254	George Tannious & Laurentiu Punga	TerraCleaner	Legacy High School
255	Ghienaliyah Ayuyu	Dehydration Stress in Nephrolith Production	Dickinson High School
256	Ava Hauck	Convolutional Neural Networks in Hematological Analyses	Dickinson High School
257	Radheeka Weeraratne	Renewable Energy Storage Innovation of Air Batteries Using Steel Anodes	Dickinson High School
258	Layla Krinke	Comparing Bacterial Growth in Ground Beef Thawed Using Different Methods	Scranton Public School
259	Acalia Olson	Pharmaceuticals Effect on the Growth and Development of a Bean Plant	Scranton Public School
260	Isabelle Palczewski	The Effectiveness of Different Types of Insulation	Scranton Public School

SWC-Alternates

#	Name	Project Title	School
1	Brody Richter & Henry Serr	Distracted Teen Driving	Linton Public School
2	Keegan Roehrich	Which Skin Moisturizers Work Best?	Linton Public School
3	Aiden Meyer	Seal the Deal	Flasher Public School
4	Darron Frank	Smart Harvester	Flasher Public School



SOUTHEAST (4) SENIOR DIVISION

Director: Marissa Motschenbacher // Assistant Director: Megan Saunders

#	Name	Project Title	School
261	Brooke Homola	The Effect of Common Liquids on Lemna Minor in the Event of Accidental Contamination in Bodies of Water	Gackle-Streeter Public School
262	Karsyn Bladow	What Causes the Increase of Bacteria on Your Skin? Makeup or the Applicators?	Hankinson Public School
263	Justin Jiang	Effects of the Structure of 3D Printed Scaffolds on Cell Growth	Fargo Davies High School
264	Skylar Johnson	How to Grow Hydroponics using water instead of Soil	Enderlin Area Public School
265	Charlee Nenow	What Substances can Reduce the Growth of Staphylococcus Epidermidis?	Gackle-Streeter Public School
266	Denver Nelson	How the Impact of a Constant Force Affects Metals at Different Temperatures	Hankinson Public School
267	Angel Newman	JR vs. SR High Whose is Dirties	Ashley Public School
268	Matthew Bladow	How Different Levels of Ball Inflation Affect Peoples' Shooting Accuracy	Hankinson Public School
269	Cale Benson	Plants Fighting Garbage Air	Hankinson Public School
270	Ava Frolek	The Effects of Life on Our Plants	Kidder County
271	Sidney Mock	Influencing Bacteria in Bioremediation	Kidder County
272	Kenadi David	The Impact of Drinking Fluids on the Oral Microbiome	Hankinson Public School
273	Clara Harms	Comparison of Hand Hygiene Methods	Montpelier High School
274	Sinsear Long	A Comparison of Photodegradation Between Different Art Utensils	Hankinson Public School
275	Haley Kaseman	Soap vs. Hand Sanitizer	Ashley Public School
276	Elyse Tufte	Evaluating the Relationship of Screen time Duration and Anxiety in Adolescents	Kidder County
277	Olivia Koehler	A Comprehensive Analysis of the Effect of Nutrient Level on Plant Growth	Hankinson Public School
278	Evelyn Chambers	Acquiring and Decoding Neural Signals for Sensory Applications	Woodhaven Academy
279	Aubrey Isakson	Determining the Acute Toxicity Effects of Various Fuel Grades on Aquatic Ecosystems by Bioassay	Kidder County
280	Noah Welch	A Viewpoint into People's Perception of the World of Diabetes and Examining their Results Through In-Depth Analysis	Hankinson Public School

SE-Alternates

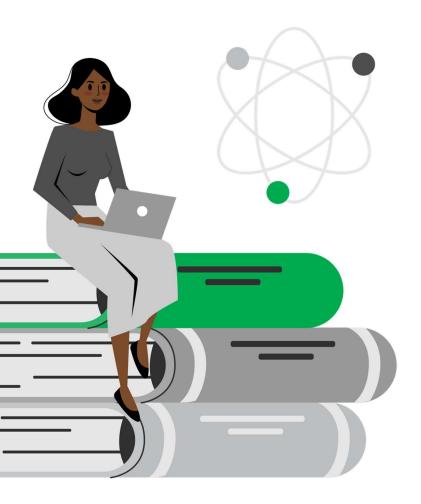
#	Name	Project Title	School
1	Landon Eichle	A Positive Outlook?	Kidder County
2			
3			
4			



NORTH DAKOTA STATE SCIENCE & ENGINEERING FAIR AWARDS: JUNIOR DIVISION

At the North Dakota State Science & Engineering Fair, five junior division students from each of the four regions are selected to receive special recognition. Three are selected as second-place winners, and two are selected as first-place winners. In addition, one presenter is selected as the junior division runner-up, sweepstakes award winner and one as the junior division sweepstakes winner. Awards are as follows:

- Second-place winners: each second-place winner receives a silver plaque.
- First-place winners: each first-place winner receives a gold plaque.
- Runner-up sweepstakes winner: the runner-up sweepstakes winner is judged as presenting the second-best junior division project from all regions and from any discipline category, and receives a silver plaque and a monetary award of \$150 from the ND IDeA Network of Biomedical Research Excellence.
- Sweepstakes winner: the sweepstakes winner is judged as
 presenting the best junior division project from all regions and
 from any discipline category. The sweepstakes winner receives
 a gold plaque, and a monetary award of \$200 from the ND IDeA
 Network of Biomedical Research Excellence.



NORTH DAKOTA STATE SCIENCE & ENGINEERING FAIR AWARDS: SENIOR DIVISION

From among the students presenting projects in the senior division: In the Northwest Region, five students will be selected to receive special recognition (three will be selected as second-place winners and two will be selected as first-place winners). In the Northeast Region, four students will be selected to receive special recognition (three will be selected as second-place winners and one will be selected as a firstplace winner). In the Southwest Central Region, five students will be selected to receive special recognition (three will be selected as second place winners and two will be selected as first-place winners). In the Southeast Region, six students will be selected to receive special recognition (three will be selected as second place winners and three will be selected as first place winners). In addition, one student is selected as presenting an outstanding project from among all regions and category disciplines, and receives the senior division sweepstakes second runner-up award, a second student is selected as presenting an outstanding project from among all regions and category disciplines and receives the sweepstakes runner-up award. The student who presents the best project from among all regions and category disciplines in the senior division is named the senior division sweepstakes winner. Awards are as follows:

- Second-place winners: the 12 second-place winners receive a silver plaque, and they are named as alternates to attend the International Science and Engineering Fair (ISEF) in Columbus, OH in May 2025.
- First-place winners: the 8 first-place winners receive a gold plaque. They also compete as North Dakota representatives at the ISEF in Columbus, OH.
- Sweepstakes Second Runner-Up: The Sweepstakes Second Runner-Up is judged as representing the third-best senior division project from all regions and from any discipline category. In addition to competing at ISEF, the winner receives a plaque, a monetary award of \$250, and a one-year, \$1,500 scholarship from the UND College of Nursing & Professional Disciplines.
- Sweepstakes Runner-Up: The Sweepstakes Runner-Up is judged as representing the second best-senior division project from all regions and from any discipline category. In addition to competing at ISEF, the winner receives a silver plaque, a oneyear, \$2,500 scholarship to the University of North Dakota, plus a monetary award of \$350 from the UND School of Aerospace Sciences.
- Sweepstakes Winner: The Sweepstakes Winner is judged as presenting the best senior division project from all regions and from any discipline category. In addition to competing at ISEF, the winner receives a gold plaque, a one-year, \$3,000 scholarship to UND, plus a monetary award of \$700 from the UND College of Engineering & Mines.
- Marcus J. Friskop Traveling Trophy: the sweepstakes winner's school receives the Marcus J. Friskop Traveling Trophy.
 Marcus was a long time supporter of science education and his visions greatly impact science fairs in North Dakota.



UNIVERSITY OF NORTH DAKOTA AWARDS

John D. Odegard School of Aerospace Sciences

Department of Atmospheric Sciences

\$125 monetary award and a certificate for project in Atmospheric Sciences, Junior or Senior division

College of Arts & Sciences

Department of Biology

- \$125 monetary award, \$500 UND Biology Scholarship, certificate for project in Biology, Senior division
- \$75 monetary award and a certificate for project in Biology, Junior division

Department of Chemistry

- \$125 monetary award and certificate for project in Chemistry, Senior division
- \$75 monetary award and certificate for project in Chemistry, Junior division

Department of Geography

- \$125 monetary award and a certificate for project the Atmospheric Sciences and Environmental Sciences, Senior division
- \$125 monetary award and a certificate for project in Earth Sciences, Junior division

Department of Mathematics

- \$125 monetary award, \$500 UND Math scholarship, and a certificate for project in the Mathematics, Senior division
- \$75 monetary award and certificate for project in the Mathematics, Junior division

Department of Physics & Astrophysics

- \$200 monetary award, \$1000 UND Physics scholarship, and a certificate for project in Physics, Senior division
- \$150 monetary award and a certificate for best project in Physics, Junior division 1 winners

Department of Psychology

- \$125 monetary award and a certificate for project in Psychology or Behavioral Science, Senior division: 2 winners
- \$125 monetary award and a certificate for project in the Psychology or Behavioral Science, Junior division: 2 winners

Virginia George Inheritance Fund

- \$75 monetary award for project in Social or Behavioral Science, Senior division
- \$50 monetary award for project in Social or Behavioral Science, Junior division

College of Engineering & Mines

- \$500 scholarship plus \$125 monetary award for project in Engineering (female winner), Senior division
- \$125 monetary award and certificate for project in Engineering, Senior division
- \$75 monetary award and certificate for project in Engineering, Junior division
- \$125 monetary award and certificate for project in Energy/Environmental Science, Senior division

Department of Biomedical Engineering

- \$100 monetary award for project in Biomedical engineering, Junior division
- \$150 monetary award for project in Biomedical engineering, Senior division

Department of Chemical Engineering

- \$75 monetary award and a certificate for project in Chemical Engineering, Senior division
- \$75 monetary award and a certificate for project in Chemical Engineering, Junior division

Department of Civil Engineering

- \$50 monetary award and a certificate for project in Civil Engineering, Senior division
- \$50 monetary award and a certificate for project in Civil Engineering, Junior division

School of Electrical Engineering & Computer Science

- \$100 monetary award and a certificate for project in Computer Science, Senior division
- \$100 monetary award and a certificate for project in Computer Science, Junior division

Dr. Richard Schultz Award - Department of Electrical Engineering

- \$125 monetary award and a certificate for project in Electrical Engineering, Senior division
- \$125 monetary award and a certificate for project in Electrical Engineering, Junior division

Department of Geology & Geological Engineering

- \$125 monetary award and certificate for project in Geology/Geological Engineering, Senior division
- \$125 monetary award and certificate for project in Geology/Geological Engineering, Junior division

Department of Mechanical Engineering

- \$75 monetary award and a certificate for project in Mechanical Engineering, Senior division
- \$75 monetary award and a certificate for project in Mechanical Engineering, Junior division

Department of Petroleum Engineering

 \$75 monetary award and a certificate for project in Engineering, Senior division

School of Medicine & Health Sciences

- \$300 monetary award, and a certificate for project in Medical or Health Sciences, Senior division
- \$150 monetary award, and a certificate for project in Medical or Health Sciences, Senior division
- \$300 monetary award, and a certificate for project in Medical or Health Sciences, Junior division

Department of Biomedical Sciences

- \$125 monetary award and certificate for project in Pharmacology/Immunology, Senior division
- \$125 monetary award and certificate for project in Pharmacology/Immunology, Junior division
- \$75 monetary award and certificate for project in Life Sciences (Molecular Biology Emphasis), Senior division, 2 winners
- \$75 monetary award and certificate for project in Life Sciences (Molecular Biology Emphasis), Junior division, 2
- \$125 monetary award and certificate for project in Microbiology/Infectious Disease, Senior division, 2 winners
- \$75 monetary award and certificate for project in Microbiology/Infectious Disease, Junior division, 2 winners
- \$125 monetary award and certificate for project in Medical or Health Sciences, Junior division
- \$125 monetary award and certificate for project in Medical or Health Sciences, Senior division

All awards are subject to change.



OTHER ORGANIZATIONS, SOCIETIES & AGENCIES SPONSORING AWARDS

American Chemical Society, Red River Valley Section

- \$100 Barnes and Noble Gift Card, A Periodic Table Scroll Pen, and a certificate, for best project in chemistry, Junior division
- \$100 Barnes and Noble Gift Card, A Periodic Table Scroll Pen, and a certificate, for best project in chemistry, Senior division

American Psychological Association

 A certificate for project related to Psychology, Senior or Junior division

American Society for Clinical Laboratory Science - North Dakota

- \$50 monetary award and a certificate for project related to laboratory medicine, Senior division, 3 Winners
- \$50 monetary award and a certificate for project related to laboratory medicine, Junior division, 3 Winners

American Water Works Association

 \$75 monetary award and a certificate for project related to drinking water quality, Junior and Senior divisions

Association for Women Geoscientists

 A certificate for project related to Geosciences, Senior or Junior division (Must be a female exhibitor)

Auxiliary to the North Dakota Veterinary Medical Association

 \$50 monetary award and a certificate for project related to veterinary medicine, Junior division

Baker Energy Services

- \$50 monetary award and a certificate for project in Botany, Senior Division, 2 winners.
- \$50 monetary award and a certificate for project in Botany, Junior Division, 2 winners.

ConocoPhillips

- \$50 monetary award and a certificate for project in the Environmental Science (pollution related) category, Senior Division, 2 winners.
- \$50 monetary award and a certificate for project in the Environmental Science (pollution related) category, Junior Division, 2 winners.

Farmers Union Insurance-North Dakota

- \$50 monetary award and a Certificate for project related to agriculture, Senior division, 2 winners
- \$50 monetary award and a certificate for project related to agriculture, Junior division, 2 winners

The Hinsz Weigum Families

- \$125 monetary award and certificate for project for Effective Data Collection, Senior Division, 1st Place
- \$50 monetary award and certificate for project for Effective Data Collection, Senior Division, 2nd Place
- \$100 monetary award and certificate for project for Effective Data Collection, Junior Division, 1st Place
- \$50 monetary award and certificate for project for Effective Data Collection, Junior Division, 2nd Place
- \$125 monetary award and certificate for project for Effective Data Analysis, Senior Division, 1st Place

- \$50 monetary award and certificate for project for Effective Data Analysis, Senior Division, 2nd Place
- \$125 monetary award and certificate for project for Research on Plants, Senior Division, 1st Place
- \$50 monetary award and certificate for project for Research on Plants, Senior Division, 2nd Place
- \$100 monetary award and certificate for project for Research on Plants, Junior Division, 1st Place
- \$50 monetary award and certificate for project for Research on Plants, Junior Division, 2nd Place
- \$125 monetary award and certificate for project for Research in Ecology, Senior Division, 1st Place
- \$50 monetary award and certificate for project for Research in Ecology, Senior Division, 2nd Place
- \$100 monetary award and certificate for project for Research in Ecology, Junior Division, 1st Place
- \$50 monetary award and certificate for project for Research in Ecology, Junior Division, 2nd Place

Hot Cakes Café & Lodging

- \$25 monetary award, a t-shirt, and a certificate for project that has emphasis on food quality or food safety, Junior division
- \$25 monetary award, a t-shirt, and a certificate for project that has emphasis on food quality or food safety, Senior division

ISEF Alumni

- \$200 and a certificate for project determined by ISEF judges, Senior or Junior division
- \$100 and a certificate for project determined by ISEF judges, Senior or Junior division

NPS Metals a Division of Owen Industries

- \$300 monetary award and a certificate for project related to Manufacturing, Senior division
- \$200 monetary award and a certificate for project related to Manufacturing, Junior division

National Oceanic & Atmospheric Administration

 A certificate and a medallion for project related to improved understanding of the earth's processes, Junior division

National Weather Service

 A certificate for project related to Meteorology, Junior and Senior division

North Dakota Academy of Family Physicians

 \$50 monetary award and certificate for project related to medicine. Senior division

North Dakota Academy of Nutrition and Dietetics

- \$50 monetary award and a certificate for project in Human Nutrition and Food Science, Senior division 2 winners
- \$50 monetary award and a certificate for project in Human Nutrition and Food Science, Junior division, 2 winners

North Dakota Farm Bureau

- \$50 Monetary award and a Certificate for project related to agriculture, Senior Division, 2 winners
- \$50 Monetary award and a Certificate for project related to agriculture, Junior Division, 2 winners

North Dakota Pharmacists Association

- \$100 monetary award and a certificate for project in the field of pharmacology, Senior division
- \$75 monetary award and a certificate for project in the field of pharmacology, Junior division

North Dakota Rural Water Systems Association

 \$100 monetary award and for project related to water quality, Senior division

North Dakota Veterinary Medical Association



- \$300 monetary award and a certificate for project related to veterinary medicine, Senior division
- \$225 monetary award and a certificate for project related to veterinary medicine. Senior division
- \$75 monetary award and a certificate for project related to veterinary medicine, Junior division

Yale Science and Engineering Association

 An E-book and a certificate for project in areas of computer science, Senior division

All awards are subject to change.

North Dakota Water Environment Association

- \$75 monetary award and certificate for project related to drinking water quality, Senior division
- \$75 monetary award and certificate for project related to drinking water quality, Junior division

Ottertail Power Company

- \$50 monetary award and a certificate for project related to energy or electricity, Senior division, 3 winners
- \$50 monetary award and a certificate for project related to energy or electricity, Junior division, 3 winners

Regeneron Biomedical Science Award

 \$375 monetary award and a certificate for project related to biomedical science and research, Senior division

Ricoh Corporation

 A certificate for project related to environmentally friendly businesses, Senior division

Society for In Vitro Biology

 A certificate for project in the area of tissue culture, 11thgrader

Society of Automotive Engineers

 \$100 monetary award and a certificate for best project in mobility engineering, Junior and Senior division

The Title Team

 \$125 Monetary award and a certificate for project in Computer Science (Emphasis in Artificial Intelligence), Junior and Senior divisions

United States Air Force

 An Over-the-Shoulder Sling Pack, Power Bank Charger, Dog Tag USB Flash Drive, a Dual USB Car Charger, and a Certificate for a project that has applications useful to the Air Force, 4 winners, Junior or Senior Division

United States Metric Association

 A certificate for project using metric system for measurements, Junior division, 5 winners

United States Navy

- Educational recognition award valued at \$75, a medallion and a certificate for project, all categories considered, Senior division, 3 winners
- A medallion and a certificate for project, all categories considered, Junior division, 3 winners

Water Environment Federation

 A certificate for project related to water quality or water conditions, Junior or Senior division

Xcel Energy

- \$50 monetary award and a certificate for project related to energy or electricity, Junior division, 3 winners
- \$50 monetary award and a certificate for project related to energy or electricity, Senior division, 3 winners



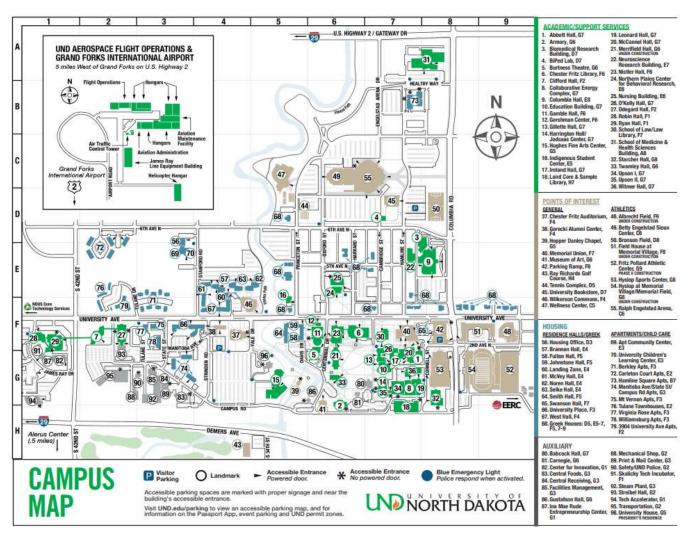
NOTES:



CAMPUS MAP

View the campus map online at https://und.edu/map/index.html

For information on event and visitor parking, please visit https://campus.und.edu/transportation/parking/event-parking.html





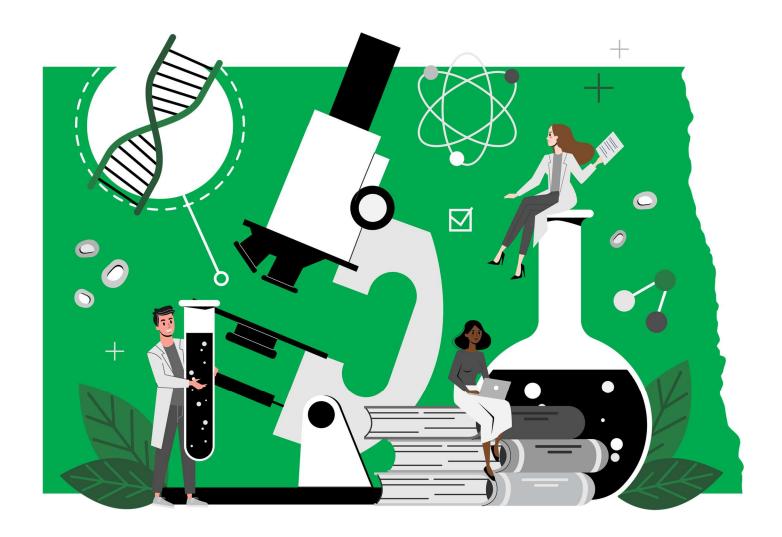


INTERACTIVE MAP

Scan the QR code with your smartphone's camera to access an interactive map of campus. Or visit <u>UND.edu/map</u>.







THANK YOU!

Thank you to each student for participating in this year's North Dakota State Science and Engineering Fair! We also thank the parents, teachers, and all those who supported them along the way. For more information about the Fair, photos, videos, awards list, and this book in digital format go to:

UND.edu/ndssef

