

# 2022 FINAL AWARDS

## Senior Division Sweepstakes Winners

The first place (Marcus J. Friskop Sweepstakes) winner received a gold state plaque, a jacket, a \$400 cash award from the Marcus J. Friskop Family, a \$500 cash award from the University of North Dakota College of Arts & Sciences, and a 1 Year \$2500 Scholarship to the University of North Dakota and will advance to the ISEF in Atlanta Georgia and will exhibit his/her project.

The second place (sweepstakes runner-up) winner received a gold state plaque, a jacket, a \$250 cash award from the University of North Division School of Medicine & Health Sciences, and a 1 Year \$2000 Scholarship to the University of North Dakota and will advance to the ISEF in Atlanta Georgia and will exhibit his/her project.

The third place (sweepstakes 2nd runner-up) winner received a state plaque, a hooded sweatshirt, a \$200 cash award from the University of North Dakota College of Engineering & Mines, and a 1 Year \$1000 Scholarship to the University of North Dakota and will advance to the ISEF in Atlanta Georgia and will exhibit his/her project.

## Senior Division – 1st Place – Sweepstakes Winner

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

## Senior Division – 2nd Place – Sweepstakes Runner-Up

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

## **North Dakota State Science and Engineering Fair**

### **Senior Division – 3rd Place – Sweepstakes Second Runner-Up**

Benjamin Ellingson, Maddock School District, “Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques”

### **Senior Division Place Winners**

Projects that are selected as finalists received a gold plaque and a jacket and will advance to the ISEF in Atlanta Georgia in May and will exhibit their project.

Projects selected as alternates received a silver plaque and are alternates to the ISEF in Atlanta Georgia in May but will not exhibit their project unless a finalist from that region cannot attend.

### **Northwest Region**

1st Finalist: Lindsey Vachal, Tioga School District, "Effectiveness of Cattle Dewormers"

2nd Finalist: Gracie Nutt, Tioga School District, "A.I. T.A."

3rd Finalist: Abrianna Volz, Tioga School District, "Animals vs. Human Bacteria"

1st Alternate: Anthony Cardona, Tioga School District, "Between Boys and Girls, who has a better reaction time with virtual reality games"

2nd Alternate: Hunter Davis, Tioga School District, "Throwing Touchdowns and Kicking Field Goals with Ease"

3rd Alternate: Emma Berg, Tioga School District, “Colorful Learning”

## **North Dakota State Science and Engineering Fair**

### **Northeast Region**

1st Finalist: Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

1st Alternate: Rebecca Sather, Olivia Whitney, Red River High School District, "D.B.D. 101 (Dead Body Decomposition)"

### **Southwest Central Region**

1st Finalist: Alivia Geffre, Flasher School District, "Antibiotics vs Oils"

2nd Finalist: Jada Bonogofsky, Flasher School District, "Antibiotic Resistance"

1st Alternate: Summer Fleck, Flasher School District, "Conception Rates in Cattle As Affected By Mineral Consumption"

2nd Alternate: Sophia Jochim, Flasher School District, "What's Their Emergency?"

3rd Alternate: Grant Hauge, Flasher School District, "How Much Is Too Much"

### **Southeast Region**

1st Finalist: Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"

2nd Finalist: Brayden Sutherland, Lisbon School District, "Social Confidence"

3rd Finalist: Elizabeth Sherbrooke, Hankinson School District, "Analysis of Smiling Back"

4th Finalist: Elise Elliot, Hankinson School District, "Antibacterial Effectiveness of Hand Soaps" 1st Alternate: Cale Benson, Hankinson School District, "Significant Sunscreen"

2nd Alternate: Kardelen Hanson , Hankinson School District, "The Psychology and Demographics of Panic Buying"

3rd Alternate: Sofia Hanson, Hankinson School District, "Music In Different Cultures"

## **North Dakota State Science and Engineering Fair**

### **Junior Division Sweepstakes Winners**

The first place (Sweepstakes) winner received a gold state plaque, a \$150 cash award from the

ND IDeA Network of Biomedical Research Excellence and a \$250 cash award in honorarium of Marcus J. Friskop from the Maddock High School Science Fair Alumni Students.

The second place (Sweepstakes Runner-Up) winner received a silver plaque and a \$100 cash award from the ND IDeA Network of Biomedical Research Excellence.

#### **Junior Division 1st Place – Sweepstakes Winner**

Madelynn Greco, ASB School District, "Electrolysis"

#### **Junior Division 2nd Place – Sweepstakes Runner-Up**

Landon Gaudreau, ASB School District, "Can an engine run on gasoline vapors?"

Amla Prochnow, Hankinson School District, "The Hidden Antimicrobial Potential of Houseplants"

## **North Dakota State Science and Engineering Fair**

### **Junior Division Place Winners**

All first and second place winners received a gold plaque. All third, fourth, and fifth place winners received a silver plaque.

#### **Northwest Region**

1st Place: Abigail Ferguson, Tioga School District, "Bubbling Water Tanks"

2nd Place: Zoey Conyers, East Fairview School District, "Think Beyond the Herb"

3rd Place: Anthony Kram, Williston School District, "The Mpemba Effect"

4th Place: Emma McCoy, ASB School District, "Salty Solution: The effect of salts on the boiling point of water"

5th Place: Jacob Grunenwald, Williston School District, "Rubberband Paddle Boat"

#### **Northeast Region**

1st Place: Sonakshi Singhal, South Middle School, "Variation in snow due to air pollution and presence of impurities"

2nd Place: Amaa Wijetunga, Grand Forks Public Library, "Filtering Water Through Denim Cloth Efficiency"

3rd Place: Ella Lizakowski, Schroeder Middle School, "Acid Fever"

4th Place: Layton Pribula, Schroeder Middle School, "Hearing the Rainbow"

5th Place: Kenai Auch, Schroeder Middle School, "Buzz Words"

## **North Dakota State Science and Engineering Fair**

### **Southwest Central Region**

1st Place: Jacob Ohlhauser, Linton School District, "Got Bacteria?"

2nd Place: Aidyn Fisher, Scranton School District, "Under Pressure"

3rd Place: Brenna Eckroth, Flasher School District, "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

4th Place: Kinley Stadheim, Scranton School District, "The Uterine Swim Team"

5th Place: Taelyn Boldt, Flasher School District, "There Goes The Fabric"

### **Southeast Region**

1st Place: Quincy Welder, Kidder County School District, "Bank It or Clank It"

2nd Place: Keegan Isakson, Kidder County School District, "Die-fi, What Kills Your Wi-fi?" 3rd Place: Evelyn Chambers, Woodhaven Academy, "Clean Cage = Healthy Pet"

4th Place: Cora Oster, Lisbon School District, "Water - What's In It?"

5th Place: Ava Frolek, Lidgerwood School District, "Hatching Brine Shrimp"

## **Agriculture/Soil Science**

### **North Dakota Soil Conservation District/Auxiliary**

Project Related to Soil Conservation

1 Winner: Senior Division: Monetary Award of \$150 And a Certificate

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

## **North Dakota State Science and Engineering Fair**

### **North Dakota Soil Conservation District/Auxiliary**

Project Related to Soil Conservation

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

### **North Dakota Soil Conservation District/Auxiliary**

Project Related to Soil Conservation

1 Winner: Junior Division: Monetary Award of \$150 And a Certificate

Sonakshi Singhal, South Middle School, "Variation in snow due to air pollution and presence of impurities"

### **North Dakota Soil Conservation District/Auxiliary**

Project Related to Soil Conservation

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Caden Holte, Tioga School District, "Do bigger seeds grow bigger plants?"

## **Farmers Union Insurance - North Dakota**

Project Related to Agriculture

2 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision" Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

## **North Dakota State Science and Engineering Fair**

### **Farmers Union Insurance - North Dakota**

Project Related to Agriculture

2 Winners: Junior Division: Monetary Award of \$25 And a Certificate

Kinley Stadheim, Scranton School District, "The Uterine Swim Team"

Elizabeth Fedje, Brooke Gullickson, Jacey Nelson, Valley- Edinburg Middle School District, "A Race to Light"

### **North Dakota Farm Bureau**

Project Related to Agriculture

2 Winners: Senior Division: Monetary Award of \$25 And A Certificate

Summer Fleck, Flasher School District, "Conception Rates in Cattle As Affected By Mineral Consumption"

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **North Dakota Farm Bureau**

Project Related to Agriculture

2 Winners: Junior Division: Monetary Award of \$25 And A Certificate

Evelyn Chambers, Woodhaven Academy, "Clean Cage = Healthy Pet"

Zoey Conyers, East Fairview School District, "Think Beyond the Herb"



## **North Dakota State Science and Engineering Fair**

### **Chemistry/Biochemistry**

#### **Department of Chemistry**

Project in Chemistry

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Brenna Eckroth, Flasher School District, "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

#### **Department of Chemistry**

Project in Chemistry

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

#### **American Chemical Society-Red River Valley Section**

Project in Field of Chemistry

1 Winner: Junior Division: A \$100 Barnes and Noble Gift Card, A Periodic Table Scroll Pen, And a Certificate

Landon Gaudreau, ASB School District, "Can an engine run on gasoline vapors?"

#### **American Chemical Society-Red River Valley Section**

Project in Field of Chemistry

1 Winner: Senior Division: A \$100 Barnes and Noble Gift Card, A Periodic Table Scroll Pen, And a Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

## **North Dakota State Science and Engineering Fair**

### **NDSSEF Association**

Project in Biochemistry

1 Winner: Junior Division: Monetary Award of \$50 And A Certificate

Phillip Schuetzle, Linton School District, "Just Swish It"

### **NDSSEF Association**

Project in Biochemistry

1 Winner: Senior Division: Monetary Award of \$50 And A Certificate

Rebecca Sather, Olivia Whitney, Red River High School District, "D.B.D. 101 (Dead Body Decomposition)"

## **Earth/Atmospheric Sciences**

### **Department of Atmospheric Sciences**

Project in Atmospheric Sciences

1 Winner: Junior or Senior Division: Monetary Award of \$100 And a Certificate

Landon Gaudreau, ASB School District, "Can an engine run on gasoline vapors?"

### **Department of Geography**

Project in Geography

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Amla Prochnow, Hankinson School District, "The Hidden Antimicrobial Potential of Houseplants"

## **North Dakota State Science and Engineering Fair**

### **Department of Geography**

Project in Geography

1 Winner: Senior Division: Monetary Award of \$75 And a Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

### **Harold Hamm School of Geology & Geological Engineering**

Project in Geology/ Geological Engineering

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate

Malory Kemp, Cavalier School District, "Defeating the Drought through Soil Management Practices"

### **Harold Hamm School of Geology & Geological Engineering**

Project in Geology/ Geological Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **North Dakota Geological Society**

Project in Field of Geology or Earth Science

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

McKayla Sagini, Schroeder Middle School, "Desalination: Light Bulb VS Plastic Wrap"

## **North Dakota State Science and Engineering Fair**

### **North Dakota Geological Society**

Project in Field of Geology or Earth Science

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **American Meteorological Society**

Project Related to Meteorology

1 Winner: Junior or Senior Division: A Certificate

Malory Kemp, Cavalier School District, "Defeating the Drought through Soil Management Practices"

### **Association For Women Geoscientists**

Project Related to Geosciences

1 Winner (Must Be A Female Exhibitor): Junior or Senior Division: A Certificate

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

### **National Oceanic & Atmospheric Administration**

Project Related to Improved Understanding of the Earth's Processes

1 Winner: Junior Division: A Certificate

McKayla Sagini, Schroeder Middle School, "Desalination: Light Bulb VS Plastic Wrap"

## **North Dakota State Science and Engineering Fair**

### **NASA Earth System Science Award**

Project Related to Earth's Interconnected Systems 1 Winner: Junior or Senior Division:  
A Certificate

Sonakshi Singhal, South Middle School, "Variation in snow due to air pollution and presence of impurities"

### **National Geographic Society**

Project Related to Issues of Oceans, Lands, Wildlife, Human History & Cultures, and Human Ingenuity 1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

## **Energy/Power/Electricity**

### **Otter Tail Power Company**

Project Related to Energy or Electricity

3 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Olivia Frolek , Lidgerwood School District, "Gel Electrophoresis"

Cale Benson, Hankinson School District, "Significant Sunscreen"

Mandy Oster, Tioga School District, "Wind Power vs. Solar Power"

### **Otter Tail Power Company**

Project Related to Energy or Electricity

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Layton Pribula, Schroeder Middle School, "Hearing the Rainbow"

Abigail Ferguson, Tioga School District, "Bubbling Water Tanks"

## **North Dakota State Science and Engineering Fair**

### **Xcel Energy**

Project Related to Energy or Electricity

3 Winners: Junior Division: Monetary Award of \$25 And a Certificate

Layton Pribula, Schroeder Middle School, "Hearing the Rainbow"

Keegan Isakson, Kidder County School District, "Die-fi, What Kills Your Wi-fi?" Landon

Graudreau, ASB School District, "Can an engine run on gasoline vapors?"

### **Xcel Energy**

Project Related to Energy or Electricity

3 Winners: Senior Division: Monetary Award of \$25 And a Certificate

Olivia Frolek , Lidgerwood School District, "Gel Electrophoresis"

Cale Benson, Hankinson School District, "Significant Sunscreen"

Mandy Oster, Tioga School District, "Wind Power vs. Solar Power"

## **Engineering**

### **Department of Petroleum Engineering**

Project in Engineering

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Olivia Frolek, Lidgerwood School District, "Gel Electrophoresis"

## **North Dakota State Science and Engineering Fair**

### **College of Engineering and Mines**

Project in Engineering

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Aidyn Fisher, Scranton School District, "Under Pressure"

### **College of Engineering and Mines**

Project in Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **College of Engineering and Mines**

Project in Engineering (Female Winner)

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Engineering Scholarship And a Certificate

Daci Wells, Flasher School District, "3 Way Bend Test Comparison"

### **Society of Automotive Engineers**

Project in Mobility Engineering

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate

Madelynn Greco, ASB School District, "Electrolysis"

## **North Dakota State Science and Engineering Fair**

### **Society of Automotive Engineers**

Project in Mobility Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Gracie Nutt, Tioga School District, "A.I. T.A."

### **ASM Materials Education Foundation**

Project in Materials Engineering

1 Winner: Junior or Senior Division: A Ribbon And a Certificate

Keegan Isakson, Kidder County School District, "Die-fi, What Kills Your Wi-fi?"

### **NPS Metals a Division of Owen Industries**

Project Related to Manufacturing

1 Winner: Junior Division: Monetary Award of \$200 And a Certificate

Aidyn Fisher, Scranton School District, "Under Pressure"

### **NPS Metals a Division of Owen Industries**

Project Related to Manufacturing

1 Winner: Senior Division: Monetary Award of \$300 And a Certificate

Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"



## **North Dakota State Science and Engineering Fair**

### **Engineering (Chemical)**

#### **Department of Chemical Engineering**

Project in Chemical Engineering

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

McKayla Sagini, Schroeder Middle School, "Desalination: Light Bulb VS Plastic Wrap"

#### **Department of Chemical Engineering**

Project in Chemical Engineering

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **Engineering (Civil)**

#### **Department of Civil Engineering**

Project in Civil Engineering

1 Winner: Junior Division: Monetary Award of \$25 And a Certificate

Amaa Wijetunga, Grand Forks Public Library, "Filtering Water Through Denim Cloth Efficiency"

## **North Dakota State Science and Engineering Fair**

### **Department of Civil Engineering**

Project in Civil Engineering

1 Winner: Senior Division: Monetary Award of \$25 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **Engineering (Electrical)**

#### **Dr. Richard Schultz Award - Department of Electrical Engineering**

Project in Electrical Engineering

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate Madelynn Greco, ASB School District, "Electrolysis"

#### **Dr. Richard Schultz Award - Department of Electrical Engineering**

Project in Electrical Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate Daci Wells, Flasher School District, "3 Way Bend Test Comparison"

### **Engineering (Mechanical)**

#### **Department of Mechanical Engineering**

Project in Mechanical Engineering

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate Abigail Ferguson, Tioga School District, "Bubbling Water Tanks"

## **North Dakota State Science and Engineering Fair**

### **Department of Mechanical Engineering**

Project in Mechanical Engineering

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate Gracie Nutt, Tioga School District, "A.I. T.A."

### **Environmental Sciences**

#### **College of Engineering and Mines**

Project in Energy/Environmental Science

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

#### **Ricoh Corporation**

Project Related to Environmentally Friendly Businesses

1 Winner: Senior Division: A Certificate

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

#### **NDSSEF Association**

Project Related to Environmental Remediation

1 Winner: Junior Division: Monetary Award of \$50 And A Certificate

Amaa Wijetunga, Grand Forks Public Library, "Filtering Water Through Denim Cloth Efficiency"

## **North Dakota State Science and Engineering Fair**

### **NDSSEF Association**

Project Related to Environmental Remediation

1 Winner: Senior Division: Monetary Award of \$50 And A Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

### **Human Nutrition/Food Science**

#### **Hot Cakes Café & Lodging**

Project That Has Emphasis on Food Quality or Food Safety

1 Winner: Junior Division: Monetary Award of \$25, T-Shirt, And a Certificate

Brenna Eckroth, Flasher School District, "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

#### **Hot Cakes Café & Lodging**

Project That Has Emphasis on Food Quality or Food Safety

1 Winner: Senior Division: Monetary Award of \$25, T-Shirt, and a Certificate

Hailey Qual, Lisbon School District, "Testing Pasteurization Levels in Milk"

### **NDSSEF Association**

Project Related to Human Nutrition or Food Science

2 Winners: Senior Division: Monetary Award of \$25 And a Certificate

Javin Friesz, Flasher School District, "Testing Water Quality"

Denver Nelson, Hankinson School District, "An Analysis of Various Drinking Water Sources"

## **North Dakota State Science and Engineering Fair**

### **NDSSEF Association**

Project Related to Human Nutrition or Food Science

2 Winners: Junior Division: Monetary Award of \$25 And a Certificate

Blake Solberg, Schroeder Middle School, "Fast and the Fungus"

Carrie LaDuke, Flasher School District, "The Effect Of Egg Substitute On Muffin Quality"

### **ISEF Alumni**

#### **ISEF Alumni**

Project as Determined by ISEF Judges

1 Winner: Junior or Senior Division: Monetary Award of \$200 And a Certificate

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

#### **ISEF Alumni**

Project as Determined by ISEF Judges

1 Winner: Junior or Senior Division: Monetary Award of \$100 And a Certificate

Madelynn Greco, ASB School District, "Electrolysis"

### **Life Sciences**

#### **Department of Biomedical Sciences**

Project in Area of Life Sciences (Molecular Biology Emphasis)

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Phillip Schuetzle, Linton School District, "Just Swish It"

Ava Frolek, Lidgerwood School District, "Hatching Brine Shrimp "

## **North Dakota State Science and Engineering Fair**

### **Department of Biomedical Sciences**

Project in Area of Life Sciences (Molecular Biology Emphasis)

2 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

Elise Elliot, Hankinson School District, "Antibacterial Effectiveness of Hand Soaps"

### **Department of Biology**

Project in Biology

1 Winner: Junior Division: Monetary Award of \$50 and a Certificate

Malory Kemp, Cavalier School District, "Defeating the Drought through Soil Management Practices"

### **Department of Biology**

Project in Biology

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Biology Scholarship and a Certificate Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

### **North Dakota Veterinary Medical Association**

Project Related to Veterinary Medicine

1 Winner: Senior Division: Monetary Award of \$300 And a Certificate

Summer Fleck, Flasher School District, "Conception Rates in Cattle As Affected By Mineral Consumption"

## **North Dakota State Science and Engineering Fair**

### **North Dakota Veterinary Medical Association**

Project Related to Veterinary Medicine

1 Winner: Senior Division: Monetary Award of \$225 And a Certificate

Lindsey Vachal, Tioga School District, "Effectiveness of Cattle Dewormers"

### **North Dakota Veterinary Medical Association**

Project Related to Veterinary Medicine

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Kinley Stadheim, Scranton School District, "The Uterine Swim Team"

### **Auxiliary to the North Dakota Veterinary Medical Association**

Project Related to Veterinary Medicine

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Amla Prochnow, Hankinson School District, "The Hidden Antimicrobial Potential of Houseplants"

### **Society for In Vitro Biology**

Project in the Area of Tissue Culture

1 Winner: 11th Grader Division: A Certificate

Summer Fleck, Flasher School District, "Conception Rates in Cattle As Affected By Mineral Consumption"

## **North Dakota State Science and Engineering Fair**

### **NDSSEF Association**

Project in Botany

1 Winner: Junior Division: Monetary Award of \$50 And A Certificate

Amla Prochnow, Hankinson School District, "The Hidden Antimicrobial Potential of Houseplants"

### **NDSSEF Association**

Project in Botany

1 Winner: Senior Division: Monetary Award of \$50 And A Certificate

Grant Hauge, Flasher School District, "How Much Is Too Much"

## **Mathematics/Computer Science**

### **Department of Mathematics**

Project in Mathematics

1 Winner: Junior Division: Monetary Award of \$50 and a Certificate

Quincy Welder, Kidder County School District, "Bank It or Clank It"

### **Department of Mathematics**

Project in Mathematics

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Mathematics Scholarship and a Certificate

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"



## **North Dakota State Science and Engineering Fair**

### **School of Electrical Engineering & Computer Science**

Project in Computer Science

1 Winner: Junior Division: Monetary Award of \$100 and a Certificate

Keegan Isakson, Kidder County School District, "Die-fi, What Kills Your Wi-fi?"

### **School of Electrical Engineering & Computer Science**

Project in Computer Science

1 Winner: Senior Division: Monetary Award of \$100 and a Certificate

Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"

### **Mu Alpha Theta**

Project Involving Modern Mathematics

1 Winner: Senior Division: A Certificate

Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

### **North Dakota Guaranty & Title Co.**

Project Related to Computer Science (Emphasis in Artificial Intelligence)

1 Winner: Junior Division: Monetary Award of \$250 And a Certificate

Jakob Kehrwald, Schroeder Middle School, "Hand Eye Coor-drone-ation"

## **North Dakota State Science and Engineering Fair**

### **North Dakota Guaranty & Title Co.**

Project Related to Computer Science (Emphasis in Artificial Intelligence)

1 Winner: Senior Division: Monetary Award of \$250 And a Certificate

Gracie Nutt, Tioga School District, "A.I. T.A."

## **Medicine/Health**

### **ND IDeA Network of Biomedical Research Excellence**

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary Award of \$50 and a Certificate

Evelyn Chambers, Woodhaven Academy, "Clean Cage = Healthy Pet"

### **ND IDeA Network of Biomedical Research Excellence**

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$100 and a Certificate

Lindsey Vachal, Tioga School District, "Effectiveness of Cattle Dewormers"

### **School of Medicine & Health Sciences**

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$300 and a Certificate

Rebecca Sather, Olivia Whitney, Red River High School District, "D.B.D. 101 (Dead Body Decomposition)"

## **North Dakota State Science and Engineering Fair**

### **School of Medicine & Health Sciences**

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$150 and a Certificate

Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

### **School of Medicine & Health Sciences**

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary Award of \$300 and a Certificate

Amla Prochnow, Hankinson School District, "The Hidden Antimicrobial Potential of Houseplants"

### **Department of Biomedical Sciences**

Project in Pharmacology/Immunology

1 Winner: Junior Division: Monetary Award of \$100 and a Certificate

Mykenzie Winkler, Grant County School District, "Zap That Zit"

### **Department of Biomedical Sciences**

Project in Pharmacology/Immunology

1 Winner: Senior Division: Monetary Award of \$100 and a Certificate

Jada Bonogofsky, Flasher School District, "Antibiotic Resistance"

## **North Dakota State Science and Engineering Fair**

### **North Dakota Dental Foundation**

Project Related to Dentistry

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Brenna Eckroth, Flasher School District, "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

Jenna Rode, Kidder County School District, "Rethink Your Drink"

### **North Dakota Dental Foundation**

Project Related to Dentistry

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Elizabeth Sherbrooke, Hankinson School District, "Analysis of Smiling Back "

### **North Dakota Academy of Family Physicians**

Project Related to Medicine

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Sophia Jochim, Flasher School District, "What's Their Emergency?"

### **American Society for Clinical Laboratory Science - North Dakota**

Project Related to Laboratory Medicine

3 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Elise Elliot, Hankinson School District, "Antibacterial Effectiveness of Hand Soaps"

Alivia Geffre, Flasher School District, "Antibiotics vs Oils"

Olivia Frolek , Lidgerwood School District, "Gel Electrophoresis"

## **North Dakota State Science and Engineering Fair**

### **American Society for Clinical Laboratory Science - North Dakota**

Project Related to Laboratory Medicine

3 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Skye Weinberger, Flasher School District, "Efficacy of Hand Hygiene While Using Public Restrooms" Cora Oster, Lisbon School District, "Water - What's In It?"

Rali Kautz, Kidder County School District, "Ewww, Gross! What is that?!"

### **North Dakota Pharmacists Association**

Project in Field of Pharmacology

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Mykenzie Winkler, Grant County School District, "Zap That Zit"

### **North Dakota Pharmacists Association**

Project in Field of Pharmacology

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Lindsey Vachal, Tioga School District, "Effectiveness of Cattle Dewormers"

## **Microbiology**

### **Department of Biomedical Sciences**

Project in Microbiology/Infectious Disease

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Jacob Ohlhauser, Linton School District, "Got Bacteria?"

Blake Solberg, Schroeder Middle School, "Fast and the Fungus"

## **North Dakota State Science and Engineering Fair**

### **Department of Biomedical Sciences**

Project in Microbiology/Infectious Disease

2 Winners: Senior Division: Monetary Award of \$100 And a Certificate

Elise Elliot, Hankinson School District, "Antibacterial Effectiveness of Hand Soaps"

Emma Kratcha, Hankinson School District, "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

### **Department of Biomedical Sciences**

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate

Amla Prochnow, Hankinson School District, "The Hidden Antimicrobial Potential of Houseplants"

### **Department of Biomedical Sciences**

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Jada Bonogofsky, Flasher School District, "Antibiotic Resistance"

## **North Dakota State Science and Engineering Fair**

### **Military/Navy**

#### **Navy**

Project (All Categories Considered)

2 Winners: Senior Division: An Educational Recognition Award Valued at \$75, A Medallion, and a Certificate

Elise Elliot, Hankinson School District, "Antibacterial Effectiveness of Hand Soaps"

Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

#### **Navy**

Project (All Categories Considered)

2 Winners: Junior Division: A Medallion And a Certificate

Keegan Isakson, Kidder County School District, "Die-fi, What Kills Your Wi-fi?"

Chaskee Schmidt, Flasher School District, "Germ Busters"

### **Military/North Dakota Army National Guard**

#### **North Dakota Army National Guard**

Project That Has Applications Useful to North Dakota Army National Guard 1 Winner:

Junior Division: A Duffle Bag With Assortment of Items

Layton Pribula, Schroeder Middle School, "Hearing the Rainbow"

#### **North Dakota Army National Guard**

Project That Has Applications Useful to North Dakota Army National Guard 1 Winner -

Runner Up: Junior Division: A Backpack With Assortment of Items Cora Oster, Lisbon School District, "Water - What's In It?"

## **North Dakota State Science and Engineering Fair**

### **North Dakota Army National Guard**

Project That Has Applications Useful to North Dakota Army National Guard 1 Winner:

Senior Division: A Duffle Bag With Assortment of Items

Sophia Jochim, Flasher School District, "What's Their Emergency?"

### **North Dakota Army National Guard**

Project That Has Applications Useful to North Dakota Army National Guard 1 Winner -

Runner Up: Senior Division: A Backpack With Assortment of Items Javin Friesz, Flasher School District, "Testing Water Quality"

## **Military/United States Air Force**

### **Air Force**

Project That Has Applications Useful to Air Force

4 Winners: Junior or Senior Division: An Over-the-Shoulder Sling Pack, Power Bank Charger, Dog Tag USB Flash Drive, A Dual USB Car Charger, and a Certificate

Kiya Sparks, Tioga School District, "Did you or Didn't you?"

Jacob Ohlhauser, Linton School District, "Got Bacteria?"

Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

Brayden Sutherland, Lisbon School District, "Social Confidence"



## **North Dakota State Science and Engineering Fair**

### **Physics/Astronomy**

#### **Department of Physics & Astrophysics**

Project in Physics & Astronomy

2 Winners: Junior Division: Monetary Award of \$100 And a Certificate

Layton Pribula, Schroeder Middle School, "Hearing the Rainbow"

Micah Levene, Strasburg School District, "Sound To Light"

#### **Department of Physics & Astrophysics**

Project in Physics & Astronomy

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Physics Scholarship and a Certificate Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

#### **United States Metric Association**

Project Using Metric System for Measurements

5 Winners: Junior Division: A Certificate

Trevon Soiseth, Grenora School District, "The "Par"fect Temperature to Golf in"

Quincy Welder, Kidder County School District, "Bank It or Clank It"

Keegan Isakson, Kidder County School District, "Die-fi, What Kills Your Wi-fi?"

Henry VonBank, Hankinson School District, "It's a Bird, It's a Plane, It's a Man Yes, It's a Paper Plane"

Billee Sundhagen, Tioga School District, "Do the Different Wave Lengths of Light Affect Solar Energy"

## **North Dakota State Science and Engineering Fair**

### **Social/Behavioral Sciences**

#### **Department of Psychology**

Project in Psychology or Behavioral Science

2 Winners: Junior Division: Monetary Award of \$100 And a Certificate

Kingdom Facade, ASB School District, "How does playing sports affect your brain "

Jake Schlothauer, East Fairview School District, "How Does Music Affect the Heart Rate"

#### **Department of Psychology**

Project in Psychology or Behavioral Science

2 winners: Senior Division: Monetary Award of \$100 And a Certificate

Baasch/Jordan Team, Lisbon School District, "The Stroop Effect"

Kardelen Hanson, Hankinson School District, "The Psychology and Demographics of Panic Buying"

#### **Virginia George Inheritance Fund**

Project in Social or Behavioral Science

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate Brayden

Sutherland, Lisbon School District, "Social Confidence"

#### **Virginia George Inheritance Fund**

Project in Social or Behavioral Science

1 Winner: Junior Division: Monetary Award of \$25 And a Certificate Kyan Stadheim,

Scanton School District, "Match-Up"

## **North Dakota State Science and Engineering Fair**

### **American Psychological Association**

Project Related to Psychology

1 Winner: Junior or Senior Division: A Certificate

Kaden Keller, Tioga School District, "Eyewitness Accuracy"

## **Sweepstakes**

### **Yale Science And Engineering Association**

Project in Areas of Computer Science

1 Winner (Must Be a 11th Grade Student): Senior Division: A Medallion And A Certificate

Sudiksha Singhal, Red River High School District, "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

### **Regeneron Biomedical Science Award**

Project Related to Biomedical Science and Research

1 Winner: Senior Division: Monetary Award of \$500 And a Certificate

Jada Bonogofsky, Flasher School District, "Antibiotic Resistance"

## **Water Quality**

### **American Water Works Association**

Project Related to Drinking Water Quality

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Abigail Ferguson, Tioga School District, "Bubbling Water Tanks"

## **North Dakota State Science and Engineering Fair**

### **American Water Works Association**

Project Related to Drinking Water Quality

1 Winner: Senior Division: Monetary Award of \$75 And a Certificate

Gavin Kratcha, Hankinson School District, "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

### **North Dakota Water Environment Association**

Project Related to Water Quality

1 Winner: Senior Division: Monetary Award of \$75 And A Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

### **North Dakota Water Environment Association**

Project Related to Water Quality

1 Winner: Junior Division: Monetary Award of \$75 And A Certificate

McKayla Sagini, Schroeder Middle School, "Desalination: Light Bulb VS Plastic Wrap"

### **North Dakota Rural Water Systems Association**

Project Related to Water Quality

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

## **North Dakota State Science and Engineering Fair**

### **Water Environment Federation**

Project Related to Water Quality or Water Conditions

1 Winner: Junior or Senior Division: A Certificate

Malory Kemp, Cavalier School District, "Defeating the Drought through Soil Management Practices"