

2018 – Final Awards – ND State Science & Engineering Fair

Senior Division Sweepstakes Winners

The first place (Marcus J. Friskop Sweepstakes) winner received a gold state plaque, a jacket, a \$200 cash award from the Marcus J. Friskop Family, a \$500 cash award from the University of North Dakota Division of Student Affairs / UND Office of Research & Economic Development, and a 1 Year \$2500 Scholarship to the University of North Dakota and will advance to the ISEF in Pittsburgh Pennsylvania 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 Dakota Division of Student Affairs / UND Office of Research & Economic Development, and a 1 Year \$2000 Scholarship to the University of North Dakota and will advance to the ISEF in Pittsburgh Pennsylvania 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 School of Graduate Studies, and a 1 Year \$1000 Scholarship to the University of North Dakota and will advance to the ISEF in Pittsburgh Pennsylvania and will exhibit his/her project.

Senior Division – 1st Place – Sweepstakes Winner

Abigail Post, Hankinson School District , "Air Quality: A Quantitative Approach to Small and Large Particles "

Senior Division – 2nd Place – Sweepstakes Runner-Up

Juliann Spilman, Mandan School District , "Enhanced Biofilter Control of CAFO Air Emissions"

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

Alyssa Kemp, Cavalier School District, "Buffering the Bloom – The Effect of Agricultural Buffer Zones on Pond Eutrophication"

Senior Division Place Winners

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

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

Norhtwest Region

1st Finalist: Abigail Larson, Tioga School District , "A Better Way to Wean"

2nd Finalist: Hannah Johnson, Grenora School District , "Are Plant Growth Regulators Always Effective When Treating Wheat?"

3rd Finalist: Mikayla Wolfe, Tioga School District , "Whistle While You Work It"

1st Alternate: Katia Gibeau, Trenton School District , "Water Watch"

2nd Alternate: Arabella Andersen, Grenora School District , "Power of Suggestion"

Northeast Region

1st Finalist: Britney Freund, Lakota School District , "Under Which Conditions do Planaria Regenerate Fastest?"

1st Alternate: Matt Koski, Lakota School District , "Which Organic Fertilizer Is Most Efficient ... Phase 2"

2nd Altnerate: Wesley Kemp, Cavalier School District , "True or False and ABC -The Mathematics Behind Multiple Choice "

Southwest Central Region

1st Finalist: Pamela Nash, Strasburg School District , "Does Mental Practice Make Perfect?"

2nd Finalist: Mya Vetter, Linton School District , "Bat Consumption of Ostrinia Nubilalis, European Corn Borer"

1st Alternate: Abbigale Steeke, Scranton School District , "Feed Intake and Efficiency of Beef Cattle"

2nd Alternate: Avery Roth, Grant County School District , "Do environmental changes alter or impact the sex of a beef calf from a natural breeding?"

Southeast Central Region

1st Finalist: Kathleen Schmidt, Ashley School District , "Belly Button Bacteria"

2nd Finalist: Addie Schnabel, Ashley School District , "Nitrogen Fixation Biological vs. Synthetic Agents"

1st Alternate: Tanner Kempf, Ashley School District , "Wind Energy: DC Motor vs. Alternator"

2nd Alternate: Nicole Schmidt, Ashley School District , "Antibiotic vs. Bacteria"

Southeast Region

1st Finalist: Emerson Falk, Hankinson School District , "An Antibacterial and Antifungal Comparison of Countertop Disinfectants "

1st Alternate: Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

2nd Alternate: Josianna Prochnow, Hankinson School District , "Monitoring Mold and Mycotoxin Exposure Through the Duration of Corn Harvest"

Junior Division Sweepstakes Winners

The first place (Sweepstakes) winner received a gold state plaque, a \$125 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 \$75 cash award from the ND IDeA Network of Biomedical Research Excellence.

Junior Division 1st Place – Sweepstakes Winner

Emma Kratcha, Hankinson School District , "Determining the Effects of Seed Size and Additives on Crusting and Compaction"

Junior Division 2nd Place – Sweepstakes Runner-Up

Halle Rivinius, Grant County School District , "Which environmental area will result in the most microbial growth?"

Junior Division Place Winners

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

Northwest Region

1st Place: Shane Waltner, Horse Creek School District , "I'm Going to Let it Shine"

2nd Place: Angelica Alexandrou, Stony Creek School District , "To Game or Not to Game"

3rd Place: Isaiah Zochert, Tioga School District , "Water Filtration"

4th Place: Dani Berry, East Fairview School District , "Let it Grow"

Northeast Region

1st Place: Jaden Chine, Schroeder Middle School District , "Dehydration Station"

2nd Place; Nauman Farid, Schroeder Middle School District , "Silence Is Golden"

3rd Place: Sophus Hammond, Cayden Reed, Valley Middle School District , "A.N.T.S."

4th Place: Kaylee Kemp, Cavalier School District , "Don't Tread on Me. An Investigation on Athletic Shoe Tread Design and the Coefficient of Friction"

Southwest Central Region

1st Place: Derek Vetter, Linton School District , "Super Soil"

2nd Place: Blake Bernhardt, Wing School District , "Alternative Centrifuges"

3rd Place: Bailee Pierce, Scranton School District , "Nothing but Net"

4th Place: Alora Kroh, Emma Helbling, Mandan School District , "Will Hydroponic Plants Develop Faster"

Southeast Central Region

1st Place: Jackson Meidinger, Ashley School District , "Writing with Bacteria"

2nd Place: Hannah Seefeld, Ellendale School District , "What's in Your Soil?"

3rd Place: Marshall Lindgren, Ashley School District , "Flushing Ewes"

4th Place: Katrina Gojkovich, Ashley School District , "Do Plants Have Favorite Colors?"

Southeast Region

1st Place: Jaxon Gronenberg, Griggs County Central School District , "Escherichia coli Bacteria Resistance to Antibiotics"

2nd Place: Aaron Moser, Griggs County Central School District , "Effects of Circumstance on Regeneration "

3rd Place: Jack VenHuizen, Griggs County Central School District , "Comparison of Bovine Phenotype and Genotype"

4th Place: Jacob Wolf, Oak Grove Lutheran School District , "Protecting Athletes in Football"

Agriculture/Soil Science

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

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

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

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

Addie Schnabel, Ashley School District , "Nitrogen Fixation Biological vs. Synthetic Agents"

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

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

Hannah Seefeld, Ellendale School District , "What's in Your Soil?"

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

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

Derek Vetter, Linton School District , "Super Soil"

Farmers Union Insurance - North Dakota

Project Related to Agriculture

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

Juliann Spilman, Mandan School District , "Enhanced Biofilter Control of CAFO Air Emissions"

Abbigale Steeke, Scranton School District , "Feed Intake and Efficiency of Beef Cattle"

Farmers Union Insurance - North Dakota

Project Related to Agriculture

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

Lindsey Vachal, Tioga School District , "Grow, Grow, Grow"

Alivia Erickson, Griggs County Central School District , "Effect of Sulfur on Plants"

North Dakota Farm Bureau

Project Related to Agriculture

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

Jack VenHuizen, Griggs County Central School District , "Comparison of Bovine Phenotype and Genotype"

Emma Kratcha, Hankinson School District , "Determining the Effects of Seed Size and Additives on Crusting and Compaction"

North Dakota Farm Bureau

Project Related to Agriculture

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

Josianna Prochnow, Hankinson School District , "Monitoring Mold and Mycotoxin Exposure Through the Duration of Corn Harvest"

Benjamin Krump, Hankinson School District , "A Quality Analysis of Meats from Various Beef Breeds"

Chemistry/Biochemistry

Department of Chemistry

Project in Chemistry

1 winner: Junior Division: Monetary award of \$50 and a certificate

Clara Green, Camille Finney, Cloe Haakenson, Valley Middle School District , "Air Pollution is Getting Closer To Home"

Department of Chemistry

Project in Chemistry

1 winner: Senior Division: Monetary award of \$100 and a certificate

Addie Schnabel, Ashley School District , "Nitrogen Fixation Biological vs. Synthetic Agents"

American Association for Clinical Chemistry

Project in Clinical Chemistry

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

Aubrey Henson, Tioga School District , "Stronger than Pain"

American Chemical Society-Red River Valley Section

Project in Field of Chemistry

1 Winner: Junior or Senior Division: A \$100 Barnes and Noble Gift Card, An Ultimate Geek Pen, And a Certificate

Andrew Mehlhoff, Wing School District , "DeNova Synthesis of Chlamydomonas Rienhardtii"

NDSSEF Association

Project in Biochemistry

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

Aaron Moser, Griggs County Central School District , "Effects of Circumstance on Regeneration "

NDSSEF Association

Project in Biochemistry

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

Kathryn Slavick, Mandan School District , "Effects of Breakfast Foods on Hunger and Calorie Consumption with Consideration of Blood Glucose Levels"

Earth/Atmospheric Sciences

Department of Atmospheric Sciences

Project in Atmospheric Sciences

1 winner: Junior or Senior Division: Monetary award of \$75 and a certificate

Abigail Post, Hankinson School District , "Air Quality: A Quantitative Approach to Small and Large Particles "

Department of Geography

Project in Geography

1 winner: Junior Division: Monetary award of \$50 and a certificate

Baxter Sand, Ashley School District , "Forage Clippings"

Department of Geography

Project in Geography

1 winner: Senior Division: Monetary award of \$50 and a certificate

Laura Muggli, Grant County School District , "How much glyphosate can be detected in wheat areas that have been desiccated?"

Harold Hamm School of Geology & Geological Engineering

Project in Geology/ Geological Engineering

1 winner: Junior Division: Monetary award of \$100 and a certificate

Emma Kratcha, Hankinson School District , "Determining the Effects of Seed Size and Additives on Crusting and Compaction"

Harold Hamm School of Geology & Geological Engineering

Project in Geology/ Geological Engineering

1 winner: Senior Division: Monetary award of \$100 and a certificate

Tanner Kempf, Ashley School District , "Wind Energy: DC Motor vs. Alternator"

North Dakota Geological Society

Project in Field of Geology or Earth Science

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

Derek Vetter, Linton School District , "Super Soil"

North Dakota Geological Society

Project in Field of Geology or Earth Science

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

Juliann Spilman, Mandan School District , "Enhanced Biofilter Control of CAFO Air Emissions"

American Meteorological Society

Project Related to Meteorology

2 Winners: Junior or Senior Division: A Certificate

Jacob Russell, Ellendale School District , "Solar Vexing"

Clara Green, Camille Finney, Cloe Haakenson, Valley Middle School District , "Air Pollution is Getting Closer To Home"

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 , "Determining the Effects of Seed Size and Additives on Crusting and Compaction"

National Oceanic & Atmospheric Administration

Project Related to Improved Understanding of the Earth's Processes

1 Winner: Junior Division: A Certificate And A Medallion

Kyra Goeb, Trenton School District , "Death Rays"

NASA Earth System Science Award

Project Related to Earth's Interconnected Systems

1 Winner: Junior or Senior Division: A Certificate

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

Energy/Power/Electricity

Otter Tail Power Company

Project Related to Energy or Electricity

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

Sarah Farmer, Trenton School District , "Burning Biofuels"

Tanner Kempf, Ashley School District , "Wind Energy: DC Motor vs. Alternator"

Grant Schneider, Ashley School District , "Fidgeting for Electricity"

Otter Tail Power Company

Project Related to Energy or Electricity

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

John Vandeberg, Saphire Boehm, Chris Stahlmen, Valley Middle School District , "Motor Of The Future"

Sophus Hammond, Cayden Reed, Valley Middle School District , "A.N.T.S."

Xcel Energy

Project Related to Energy or Electricity

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

John Vandeberg, Saphire Boehm, Chris Stahlmen, Valley Middle School District , "Motor Of The Future"

Lucas Martinez, KC Tappen School District , "A Battery That Makes Cents"

Kayedenn Rivinius, Grant County School District , "How do you cool a house using water?"

Xcel Energy

Project Related to Energy or Electricity

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

David Steinke, Hope School District , "Full Steam Ahead"

Alexis Kempf, Ashley School District , "Solar Situation"

Grant Schneider, Ashley School District , "Fidgeting for Electricity"

UND Energy and Environmental Research Center

Project in Energy, Power, and Electricity

1 Winner: Senior Division: Monetary award of \$100 and a certificate

Juliann Spilman, Mandan School District , "Enhanced Biofilter Control of CAFO Air Emissions"

Engineering

College of Engineering and Mines

Project in Engineering

1 Winner: Junior Division: Monetary award of \$50 and a certificate

Nauman Farid, Schroeder Middle School School District , "Silence Is Golden"

College of Engineering and Mines

Project in Engineering

1 Winner: Senior Division: Monetary award of \$100 and a certificate

Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

College of Engineering and Mines

Project in Engineering (Female Winner)

1 Winner: Senior Division: Monetary award of \$100 and a \$500 UND Engineering scholarship and a certificate

Juliann Spilman, Mandan School District , "Enhanced Biofilter Control of CAFO Air Emissions"

Society of Automotive Engineers

Project in Mobility Engineering

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

Taden Robinson, Stony Creek School District , "Tire with the Most Grab"

Society of Automotive Engineers

Project in Mobility Engineering

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

Dylan Peterson, Hankinson School District , "The Effects of Weight Distribution on Trailer Handling"

Department of Petroleum Engineering

Project in Engineering

1 winner: Senior Division: Monetary award of \$50 and a certificate

Sarah Farmer, Trenton School District , "Burning Biofuels"

Engineering (Chemical)

Department of Chemical Engineering

Project in Chemical Engineering

1 winner: Junior Division: Monetary award of \$50 and a certificate

Kyra Goeb, Trenton School District, "Death Rays"

Department of Chemical Engineering

Project in Chemical Engineering

1 winner: Senior Division: Monetary award of \$50 and a certificate

Joshua Olson, Ellendale School District , "Plant Power!"

Engineering (Civil)

Department of Civil Engineering

Project in Civil Engineering

1 winner: Junior Division: Monetary award of \$25 and a certificate
Quinn Roehl, Valley Middle School School District , "Shelter for Refugees"

Department of Civil Engineering

Project in Civil Engineering

1 winner: Senior Division: Monetary award of \$25 and a certificate
Ben Hulm, Strasburg School District , "Bridge Busting"

Engineering (Electrical)

Dr. Richard Schultz Award - Department of Electrical Engineering

Project in Electrical Engineering

1 winner: Junior Division: Monetary award of \$50 and a certificate
Shane Waltner, Horse Creek School District , "I'm Going to Let it Shine"

Dr. Richard Schultz Award - Department of Electrical Engineering

Project in Electrical Engineering

1 winner: Senior Division: Monetary award of \$50 and a certificate
Alexis Kempf, Ashley School District , "Solar Situation"

IEEE Red River Valley Section

Project in Electrical Engineering

1 Winner: Senior Division: Monetary award of \$50 and a certificate
Tanner Kempf, Ashley School District , "Wind Energy: DC Motor vs. Alternator"

IEEE Red River Valley Section

Project in Electrical Engineering

1 Winner: Junior Division: Monetary award of \$50 and a certificate
John Vandenberg, Saphire Boehm, Chris Stahlmen, Valley Middle School District , "Motor Of The Future"

Engineering (Mechanical)

Department of Mechanical Engineering

Project in Mechanical Engineering

1 winner: Junior Division: Monetary award of \$50 and a certificate

Sophus Hammond, Cayden Reed, Valley Middle School District , "A.N.T.S."

Department of Mechanical Engineering

Project in Mechanical Engineering

1 winner: Senior Division: Monetary award of \$50 and a certificate

Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

Environmental Sciences

College of Engineering and Mines

Project in Energy/Environmental Science

1 Winner: Senior Division: Monetary award of \$100 and a certificate

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

Coalition For Conservation & Environmental Education

Outstanding Environmental Project

1 Winner: Senior Division: A Cash Award of \$50, A Large Purple Rosette Ribbon, And a Certificate

Mya Vetter, Linton School District , "Bat Consumption of Ostrinia Nubilalis, European Corn Borer"

Coalition For Conservation & Environmental Education

Outstanding Environmental Project

1 Winner: Junior Division: A Cash Award of \$50, A Large Purple Rosette Ribbon, And a Certificate

Katrina Gojkovich, Ashley School District , "Do Plants Have Favorite Colors?"

Ricoh Corporation

Project Related to Environmentally Friendly Businesses

1 Winner: Senior Division: A Certificate

Tiffany Engelhart, Ashley School District , "GMO vs. Non-GMO"

NDSSEF Association

Project Related to Environmental Remediation

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

Allison Engelhart, Ashley School District , "Manure vs. Fertilizer"

NDSSEF Association

Project Related to Environmental Remediation

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

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

Human Nutrition/Nursing

Department of Nutrition & Dietetics

Project in Nutrition and Food Science

1 winner: Junior Division: Monetary award of \$25 and a certificate

Bjorn Eide, Oak Grove Lutheran School District , "Teens Addicted to their Phones"

Department of Nutrition & Dietetics

Project in Nutrition and Food Science

1 winner: Senior Division: Monetary award of \$50 and a \$250 UND Nutrition scholarship and a certificate

Kathleen Schmidt, Ashley School District , "Belly Button Bacteria"

Hot Cakes Café Excellence in Science Award

Project That Has Emphasis on Food Quality or Food Safety

1 Winner: Junior or Senior Division: A Cash Award of \$25 And a Certificate

Benjamin Krump, Hankinson School District , "A Quality Analysis of Meats from Various Beef Breeds"

ISEF Alumni

ISEF Alumni

Project as Determined by ISEF Judges

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

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

ISEF Alumni

Project as Determined by ISEF Judges

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

Juliann Spilman, Mandan School District , "Enhanced Biofilter Control of CAFO Air Emissions"

Life Sciences

Department of Biomedical Sciences

Project in Area of Life Sciences (Molecular Biology Emphasis)

2 winners: Junior Division: Monetary award of \$50 each and a certificate

Caleb Edland, Griggs County Central School District , "The Food Preference of White Tail Deer"

Aaron Moser, Griggs County Central School District , "Effects of Circumstance on Regeneration "

Department of Biomedical Sciences

Project in Area of Life Sciences (Molecular Biology Emphasis)

2 winners: Senior Division: Monetary award of \$50 each and a certificate

Braden Prochnow, Hankinson School District , "Extraction Methods Used to Improve the Antibacterial Potential of Peppers"

Mya Vetter, Linton School District , "Bat Consumption of Ostrinia Nubilalis, European Corn Borer"

Department of Biology

Project in Biology

1 winner: Junior Division: Monetary award of \$50 and a certificate

Aaron Moser, Griggs County Central School District , "Effects of Circumstance on Regeneration "

Department of Biology

Project in Biology

1 winner: Senior Division: Monetary award of \$100 and a \$300 UND Biology scholarship and a certificate

Josianna Prochnow, Hankinson School District , "Monitoring Mold and Mycotoxin Exposure Through the Duration of Corn Harvest"

North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

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

Abbigale Steeke, Scranton School District , "Feed Intake and Efficiency of Beef Cattle"

North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

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

Benjamin Krump, Hankinson School District , "A Quality Analysis of Meats from Various Beef Breeds"

North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

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

Kara Siemieniewski, Lidgerwood School District , "Cows and Bacteria"

Auxiliary to the North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

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

Jack VenHuizen, Griggs County Central School District , "Comparison of Bovine Phenotype and Genotype"

NDSSEF Association

Project in Botany

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

Katrina Gojkovich, Ashley School District , "Do Plants Have Favorite Colors?"

NDSSEF Association

Project in Botany

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

Hannah Johnson, Grenora School District , "Are Plant Growth Regulators Always Effective When Treating Wheat?"

Kingsbury Family

Outstanding Life Science Project

2 Winners: Junior or Senior Division: Monetary award and a plaque

Kara Siemieniewski, Lidgerwood School District , "Cows and Bacteria"

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

Mathematics/Computer Science

Intel Excellence In Computer Science

Project in Computer Science Category

1 Winner: Senior Division: A Cash Award of \$200 And A Certificate

Megan Beyer, Litchville-Marion School District , "How Safe is Your Password?"

Mu Alpha Theta

Project Involving Modern Mathematics

1 Winner: Senior Division: A Certificate

Abigail Post, Hankinson School District , "Air Quality: A Quantitative Approach to Small and Large Particles "

Department of Computer Science

Project in Computer Science

1 winner: Junior Division: Monetary award of \$50 and a certificate

Kaylee Kemp, Cavalier School District , "Don't Tread on Me. An Investigation on Athletic Shoe Tread Design and the Coefficient of Friction"

Department of Computer Science

Project in Computer Science

1 winner: Senior Division: Monetary award of \$50 and a certificate

Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

Department of Mathematics

Project in Mathematics

1 winner: Junior Division: Monetary award of \$50 and a certificate

Emma Kratcha, Hankinson School District , "Determining the Effects of Seed Size and Additives on Crusting and Compaction"

Department of Mathematics

Project in Mathematics

1 winner: Senior Division: Monetary award of \$100 and a \$500 UND Mathematics scholarship and a certificate

Wesley Kemp, Cavalier School District , "True or False and ABC -The Mathematics Behind Multiple Choice "

Medicine/Health

Department of Pathology/ND INBRE

Project in Medical or Health Sciences

1 winner: Junior Division: Monetary award of \$50 and a certificate
Blake Bernhardt, Wing School District , "Alternative Centrifuges"

Department of Pathology/ND INBRE

Project in Medical or Health Sciences

1 winner: Senior Division: Monetary award of \$100 and a certificate
Kathleen Schmidt, Ashley School District , "Belly Button Bacteria"

School of Medicine & Health Sciences

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary award of \$100 and a certificate
Emerson Falk, Hankinson School District , "An Antibacterial and Antifungal Comparison of
Countertop Disinfectants "

School of Medicine & Health Sciences

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary award of \$50 and a certificate
Abigail Post, Hankinson School District , "Air Quality: A Quantitative Approach to Small and Large
Particles "

School of Medicine & Health Sciences

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary award of \$100 and a certificate
Aaron Moser, Griggs County Central School District , "Effects of Circumstance on Regeneration "

Department of Biomedical Sciences

Project in Pharmacology/Immunology

1 winner: Junior Division: Monetary award of \$100 and a certificate
Bailee Rudolph, Ashley School District , "Is Antibacterial Soap More Efficient?"

Department of Biomedical Sciences

Project in Pharmacology/Immunology

1 winner: Senior Division: Monetary award of \$100 and a certificate
Aubrey Henson, Tioga School District , "Stronger than Pain"

Medicine/Health

North Dakota Dental Foundation

Project Related to Dentistry

1 Winner: Junior Division: A Cash Award of \$50 And a Certificate
Kara Siemieniewski, Lidgerwood School District , "Cows and Bacteria"

North Dakota Dental Foundation

Project Related to Dentistry

1 Winner: Senior Division: A Cash Award of \$50 And a Certificate
Benjamin Krump, Hankinson School District , "A Quality Analysis of Meats from Various Beef Breeds"

North Dakota Academy of Family Physicians

Project Related to Medicine

1 Winner: Senior Division: A Cash Award of \$50 And a Certificate
Abigail Post, Hankinson School District , "Air Quality: A Quantitative Approach to Small and Large Particles "

North Dakota Society for Clinical Laboratory

Project Related to Laboratory Medicine

3 Winners: Senior Division: A Cash Award of \$50 And a Certificate
Braden Prochnow, Hankinson School District , "Extraction Methods Used to Improve the Antibacterial Potential of Peppers"
Laura Muggli, Grant County School District , "How much glyphosate can be detected in wheat areas that have been desiccated?"
Kathleen Schmidt, Ashley School District , "Belly Button Bacteria"

North Dakota Society for Clinical Laboratory

Project Related to Laboratory Medicine

3 Winners: Junior Division: A Cash Award of \$50 And a Certificate
Blake Bernhardt, Wing School District , "Alternative Centrifuges"
Bailee Rudolph, Ashley School District , "Is Antibacterial Soap More Efficient?"
Jaxon Gronenberg, Griggs County Central School District , "Escherichia coli Bacteria Resistance to Antibiotics"

Microbiology/Pharmacology

Department of Biomedical Sciences

Project in Microbiology/Infectious Disease

2 winners: Junior Division: Monetary award of \$50 each and a certificate

Jackson Meidinger, Ashley School District , "Writing with Bacteria"

Jayden White Owl, Trenton School District , "Musical Bacteria"

Department of Biomedical Sciences

Project in Microbiology/Infectious Disease

2 winners: Senior Division: Monetary award of \$100 each and a certificate

Kathleen Schmidt, Ashley School District , "Belly Button Bacteria"

Allison Habib, Hankinson School District , "The Effectiveness of Essential Oil Brands on Bacteria and Mold Growth"

Department of Biomedical Sciences

Project in Medical or Health Sciences

1 winner: Junior Division: Monetary award of \$100 and a certificate

Halle Rivinius, Grant County School District , "Which environmental area will result in the most microbial growth?"

Department of Biomedical Sciences

Project in Medical or Health Sciences

1 winner: Senior Division: Monetary award of \$100 and a certificate

Braden Prochnow, Hankinson School District , "Extraction Methods Used to Improve the Antibacterial Potential of Peppers"

North Dakota Pharmacists Association

Project in Field of Pharmacology

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

Aaron Moser, Griggs County Central School District , "Effects of Circumstance on Regeneration "

North Dakota Pharmacists Association

Project in Field of Pharmacology

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

Aubrey Henson, Tioga School District , "Stronger than Pain"

Military

Navy

Project (All Categories Considered)

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

Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

Abigail Post, Hankinson School District , "Air Quality: A Quantitative Approach to Small and Large Particles "

Jacob Russell, Ellendale School District , "Solar Vexing"

Navy

Project (All Categories Considered)

3 Winners: Junior Division: A Medallion And a Certificate

Sophus Hammond, Cayden Reed, Valley Middle School District , "A.N.T.S."

Emma Taylor, Tioga School District , "Wonders of Water Quality"

Danielle Gilstad, Ashley School District , "#Filter"

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, a Blue Tooth Speaker, And a Certificate

Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

Jacob Russell, Ellendale School District , "Solar Vexing"

Sophus Hammond, Cayden Reed, Valley Middle School District , "A.N.T.S."

Danielle Gilstad, Ashley School District , "#Filter"

Physics/Astronomy

Department of Physics & Astrophysics

Project in Physics & Astronomy

1 winner: Junior Division: Monetary award of \$100 and a certificate

Kaylee Kemp, Cavalier School District , "Don't Tread on Me. An Investigation on Athletic Shoe Tread Design and the Coefficient of Friction"

Department of Physics & Astrophysics

Project in Physics & Astronomy

1 winner: Senior Division: Monetary award of \$100 and a \$500 UND Physics scholarship and a certificate

Dylan Peterson, Hankinson School District , "The Effects of Weight Distribution on Trailer Handling"

North Dakota Physics Teachers

Project in Area of Physics or Physical Science

1 Winner: Senior Division: A Cash Award of \$20, T-Shirt, And a Certificate

Joshua Olson, Ellendale School District , "Plant Power!"

North Dakota Physics Teachers

Project in Area of Physics or Physical Science

1 Winner: Junior Division: A Cash Award of \$20, T-Shirt, And a Certificate

Caleb Cowart, Schroeder Middle School School District , "Think Fast!"

United States Metric Association

Project Using Metric System for Measurements

5 Winners: Junior or Senior Division: A Certificate

Kaylee Kemp, Cavalier School District , "Don't Tread on Me. An Investigation on Athletic Shoe Tread Design and the Coefficient of Friction"

Alyssa Kemp, Cavalier School District , "Buffering the Bloom - The Effect of Agricultural Buffer Zones on Pond Eutrophication"

Maddox Pierce, Scranton School District , "Let's Bounce"

Allison Habib, Hankinson School District , "The Effectiveness of Essential Oil Brands on Bacteria and Mold Growth"

Makenna Binder, KC Steele School District , "How Does the Material Composition of a Wind Turbine's Blade Affect the Voltage it Produces?"

Social/Behavior Sciences

Department of Psychology

Project in Psychology or Behavioral Science

2 winners: Junior Division: Monetary award of \$100 each and a certificate

Bjorn Eide, Oak Grove Lutheran School District , "Teens Addicted to their Phones"

Angie Vetter, Linton School District , "The Secret of Music"

Department of Psychology

Project in Psychology or Behavioral Science

2 winners: Senior Division: Monetary award of \$100 each and a certificate

Sophia Wolla, Tioga School District , "Does Happiness Correlate with Self Esteem "

Makayla Berg, Tioga School District , "With or Without Color?"

Virginia George Inheritance Fund

Project in Social or Behavioral Science

1 Winner: Senior Division: Monetary award of \$125 and a certificate

Pamela Nash, Strasburg School District , "Does Mental Practice Make Perfect?"

Virginia George Inheritance Fund

Project in Social or Behavioral Science

1 Winner: Junior Division: Monetary award of \$75 and a certificate

Dericka Akes, Valley Middle School School District , "Social Ain't Social"

Association of North Dakota Geographers

Project in Human-Environment Interaction

1 Winner: Senior Division: Monetary award of \$125 and a certificate

Arabella Andersen, Grenora School District , "Power of Suggestion"

American Psychological Association

Project Related to Psychology

1 Winner: Junior or Senior Division: A Certificate

Leandra Schmidt, Flasher School District , "Why are Teens Stressed?"

Sweepstakes

Yale Science And Engineering Association

Project in Areas of Computer Science, Engineering, Physics, or Chemistry

1 Winner: Senior Division: A Medallion And A Certificate

Hayden German, Hankinson School District , "The Most Effective Design For Reducing Mass While Maintaining Strength In Trusses"

Water Quality

American Water Works Association

Project Related to Drinking Water Quality

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

Isaiah Zochert, Tioga School District , "Water Filtration"

American Water Works Association

Project Related to Drinking Water Quality

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

Katia Gibeau, Trenton School District , "Water Watch"

North Dakota Water Environment Association

Project Related to Water Quality

1 Winner: Senior Division: A Cash Award of \$75 And a Plaque

Hunter Gallagher, Ashley School District , "Eroding Away the I-94 Corridor"

North Dakota Water Environment Association

Project Related to Water Quality

1 Winner: Junior Division: A Cash Award of \$75 And a Plaque

Derek Vetter, Linton School District , "Super Soil"

North Dakota Rural Water Systems Association

Project Related to Water Quality

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

Katia Gibeau, Trenton School District , "Water Watch"

Water Environment Federation

Project Related to Water Quality or Water Conditions

1 Winner: Junior or Senior Division:

Clara Green, Camille Finney, Cloe Haakenson, Valley Middle School District , "Air Pollution is Getting Closer To Home"