

2005 Alaska Science and Engineering Fair Winners

Alaska Science and Engineering Fair Finalists

These winners will go on to the Intel International Science Fair in Phoenix, Arizona.

- 1st place: Elise Sorum, Valdez High School, "To Build a Better Harbor"
- 2nd place: Nicole Jeffery, Barrow High School, "Do Salmon Genes Wear Out in the Farm?"

Ribbon Awards-Junior and Senior High

Middle School Main Category Winners

These students were chosen by the Alaska State Science and Engineering Fair judges as having the best projects in their respective categories.

Behavioral & Social Sciences	Joseph Warren, Bethel Regional High School, "Learning Does Affect Count"
Bio-Chemistry	Christina Knapp, Central Middle School, "Do You Need to Knead?"
Botany	Elizabeth Bennett, Monroe Catholic Jr. High, "Which Bud Will Burst First"
Chemistry	Stacy Wheeler, Central Middle School, "Zinc or Sink"
Computer Science	Kyle Borash, Central Middle School, "Does the Number of Reporting Satellites Affect the Accuracy of GPS?"
Earth & Space Science	Nathaniel Moore, Frontier Charter School, "Intraplanetary Flight: Future Airfoil Quandry?"
Engineering	K'hala Carpenter, Schoenbar Middle School, "Roof Insulation Combat"
Environmental Sciences	Brianna Traxinger, Central Middle School, "Anchorage Water Quality"
Gerontology	(No entrants in this category)
Mathematics	Charles Dahlberg, Dillingham Middle/High School, "The Ultimate Race"
Medicine & Health	Nick Parker, Family Partnership Charter School, "Prevalence of Obesity in Juneau Students"
Microbiology	Dylan Nease, Gilson Jr. High (Valdez), "Wanna Wrestle"
Physics	Melannie Vonguay, Central Middle School, "What Kind of Insulation is Best For a Cold Weather Climate"
Zoology	(No entrants in this category)
Team Projects	Stephanie Thompson & Tiffany Creed, Kotzebue Middle/High School, "Rollin' with The Hammies"

2005 Alaska Science and Engineering Fair Winners

High School Main Category Winners

These students were chosen by the Alaska State Science and Engineering Fair judges as having the best projects in their respective categories.

Behavioral & Social Sciences	Rebekah Gueco, Barrow High School, "Determining Differences In Comprehension Between Seeing and Hearing"
Bio-Chemistry	(No entrants in this category)
Botany	Savannah Afoa, Dimond High School, "Got Roots?"
Chemistry	(No entrants in this category)
Computer Science	(No entrants in this category)
Earth & Space Science	I an Green, Dimond High School, "Tsunami Waves"
Engineering	Elise Sorum, Valdez High School, "To Build a Better Harbor"
Environmental Sciences	Samantha Abeyratne, Kotzebue High School, "Pollution Free 'Water Cell' Electricity"
Mathematics	Ana Peterlin, Monroe Catholic High School (Fairbanks), "Global Warming: The Effect Time Has on Temperature"
Medicine & Health	Kelsey Hirsch, Kotzebue Middle/High School, "Pain of a Stain"
Microbiology	Mary Mitchell, Mt. Edgecombe High School (St. Marys), "Wolbachia in Sitka"
Zoology (Tied)	Jordan Jeffery, Barrow High School, "Hot Bowheads" Nicole Jeffery, Barrow High School, "Do Salmon Genes Wear Out in the Farm?"
Team Projects	Keira Abrams & Lena Hensley, Project Education Residential School (Galena), "The Medicinal Uses of Spruce and Birch"

Military Awards

U. S. Army Research Laboratory Awards

These students received certificates.

- Daniel Kranich/Gary Juul III, Rogers Park Elementary, "Why Does the Lifter Levitate?"
- Krista Dieckgraeff, Sand Lake Elementary, "Temperature's Effect on Carbon Monoxide Levels"
- Ben Moore Jr., Frontier Charter School, "Cold Fusion: Energy for Alaska?"

2005 Alaska Science and Engineering Fair Winners

U. S. Army Research Laboratory Awards, Continued

- Nick Parker, Family Partnership Charter School, "Prevalence of Obesity in Juneau Students"
- Chloe Howe, West Valley High School, "Cannula Rumen Fluid Leakage Inhibitor (CRFLI)..."
- Elizabeth Jesdard, Dimond High School, "Tracking Disease Outbreaks"
- Andrei McQuesten, Degnan High School (Unakaleet), "Does Temperature affect the way salt and baking soda crystals form?"
- Savannah Afoa, Dimond High School, "Got Roots?"
- John Curran, Cordova Jr/Sr High, "Diffusion of Aluminum"
- Keira Abrams/Lena Hensley, Project Education Residential School (Galena), "The Medicinal Uses of Spruce and Birch"
- Ian Green, Dimond High School, "Tsunami Waves"
- Megan Bowen, Barrow High School, "You are what you eat: use of Carbon 13 and Nitrogen15 Isotope ratios"
- Jordan Jeffery, Barrow High School, "Hot Bowheads"
- Kelly Walker/Jessie McKay, Valdez High School, "What's That Smell?"

U. S. Army Research Laboratory Awards, Continued

These students received a certificate and a \$50 savings bond application.

- Ana Peterlin, Monroe Catholic High School (Fairbanks), "Global Warming: The Effect Time has on Temperature"
- Elise Sorum, Valdez High School, "To Build a Better Harbor"
- Samantha Abeyratne, Kotzebue High School, "Pollution Free 'Water Cell' Electricity"
- Nicole Jeffery, Barrow High School, "Do Salmon Genes Wear Out in the Farm?"

This student received a certificate and a \$100 savings bond application.

- Wade Decker, Service High School, "Rotary-Valve Pulse Jet Engine"

Naval Research Laboratory Science Awards

These students received a certificate and medallion.

- Michael Lambrecht, Hopson Middle School, "BEO Breakup Project"
- Nathaniel Moore, Frontier Charter School, "Intraplanetary Flight: Future Airfoil Quandry?"

These students received a certificate and award mailed later

- Nicole Jeffrey, Barrow High School, "Do Salmon Genes Wear Out in The Farm?"
- Ana Peterlin, Monroe Catholic High School, "Global Warming: The Effect Time Has On Temperature"

2005 Alaska Science and Engineering Fair Winners

U. S. Air Force Awards

These students received a certificate and a day planner for Best Overall in Fair

- Wade Decker, Service High School, "Rotary-Valve Pulse Jet Engine"
- Elise Sorum, Valdez High School, "To Build a Better Harbor"
- Samantha Abeyrathe, Kotzebue High School, "Pollution Free 'Water Cell' Electricity"
- Paige Corona, Juneau High School, "Anthropogenic Effects on Bacterial Growth"

Awards from Local Organizations (Special Categories)

National Weather Service in conjunction with American Meteorological Society,
Anchorage Chapter

Elementary

1. Daniel Yesner, Aquarian Charter School, "Snowflakes and Snowpack"
2. Krista Dieckgraeff, Sand Lake Elementary, "Temperature's Effect on Carbon Monoxide Levels"
3. Alexander Schumann, Sand Lake Elementary, "Heat Absorption"

Middle School

1. Solomon Krevans, Bethel Regional High School, "Global Warming"
2. Michael Lambrecht, Hopson Middle School, "BEO Breakup Project"
3. Lainey Beaver and Jared Miller, Kotzebue Middle School, "Tsunami"

High School

1. Ana Peterlin, Monroe Catholic High School (Fairbanks), "Global Warming: The Effect Time Has on Temperature"
2. Ian Green, Dimond High School, "Tsunami Waves"
3. Uinniq Ahgeak, Barrow High School, "Air Tides: The Effect of the Moon on Barometric Pressure"

Alaska Science Consortium

Elementary: \$50.00 and Certificate

- Johanna Noble, Aquarian Charter School, "How is a Rainbow Made?"
- Clara Jarrett, Aniguin School (Elim), "Are you dying to lower your blood pressure?"
- Lisa Torres and Laurel Paton, Rabbit Creek Elementary, "Colorful Cubes"
- Cristina Reddin and Eboni Williams, Ursa Major Elementary, "Volcano Disaster"
- Trevor Norris, Valdez Elementary, "Ready, Aim, Fire"

Middle: \$125.00 and Certificate

- Stacy Wheeler, Central Middle School, "Zinc or Sink"
- Elizabeth Bennett, Monroe Catholic Jr. High (Fairbanks), "Which Bud Will Burst First?"

High School: \$500.00 and Certificate

- Elise Sorum, Valdez High School, "To Build a Better Harbor"

2005 Alaska Science and Engineering Fair Winners

Commissioned Officer's Association/ USPHS Alaska Chapter

Middle School Projects:

1. Nick Parker, "Prevalence of Obesity in Juneau Students"
2. Haley Hughes, "Hand Hygiene"
3. Hannah Prescott, "Which Over the Counter Antacid is Most Effective"

High School Winners:

1. Alice Glenn and Margaret Edwards, "Traditional Inupiaq Oil"
2. Paige Corona, "How Human Activity Affects Bacterial Growth in Intertidal Sediments"

American Society for Microbiology: Alaska Branch

The winners are receiving a certificate and a cash prize.

Their winners are:

- For Elementary School receiving \$25.00: Breanna Moore, Sand Lake Elementary, "Pooch Smooch"
- For Middle School receiving \$50.00: Dylan Nease, George Gilson Jr. High, "Wanna Wrestle"
- For High School receiving \$100.00: Paige Corona, Juneau High School, "Anthropogenic Effects on Bacterial Growth"

Institute Of Electrical & Electronic Engineers (IEEE)

Elementary

1. Ben Moore Jr., Frontier Charter School, "Cold Fusion: Energy for Alaska?" (\$75.00 Gift Certificate to Best Buy)
2. Daniel Kranich and Gary Juul III, Rogers Park Elementary, "Why Does the Lifter Levitate?" (\$50.00 Gift Certificate to Best Buy)
3. Hannah Moore, Rogers Park Elementary, "Listening to Jupiter's Radio Storms" (\$25.00 Gift Certificate to Best Buy)

There were no middle or high school projects that met the IEEE judging criteria.

Society of American Military Engineers (SAME)

These Students received certificates and savings bonds

Elementary:

1. Sarah Noel, Ocean View Elementary, "Froggy FACE-OFF"
2. Devon Haynes, Aquarian Charter School, "Growing Crystals"
3. Chloe Stoces, Aquarian Charter School, "Does Littering Really Effect the Earth?"

2005 Alaska Science and Engineering Fair Winners

Society of American Military Engineers (SAME), Continued

Middle School:

1. Brennan Zelener, Central Middle School, "How Swinging Pendulums Can Combine to Create Causal Harmony"
2. Stacy Wheeler, Central Middle School, "Zinc or Sink"
3. Emmanuel Everett, Central Middle School, "Let it Flow"

High School:

1. Kelly Walker/Jessie McKay, Valdez High School, "What's That Smell?"
2. Allison Huntington, Galena City Schools, "Alcohol and Dehydration"
3. Margaret Edwards, Barrow High School, "Traditional Inupiaq Oils"

Society for Technical Communication

These awards are given for the best abstracts and display designs. These students receive a certificate and \$50 for 1st, \$30 for 2nd, \$20 for 3rd, or a certificate for honorable mention.

Elementary grades 4-6 Abstracts:

1. Marco Torres, Rabbit Creek Elementary, "Which Decaying Food Gives Off The Most Gas?"
2. Krista Dieckgraeff, Sand Lake Elementary, "Temperature's Effect on Carbon Monoxide Levels"
3. Kelsey Meacham, Aurora Elementary, "It's Shocking"

Honorable Mention: Collin Dieckgraeff, Sand Lake Elementary, "Magnetic Levitation"

Honorable Mention: Hannah Norris, Hermon Hutchens Elementary (Valdez), "Flopped Over Electromagnets"

Middle School Abstracts:

1. Nick Parker, "Prevalence of Obesity in Juneau Students"
2. Jessilin Albright, Gilson Jr. High (Valdez), "The Effect of Different Sources of Light On Plant Growth"
3. Leo Ash, Central Middle School, "The Effects of Different Wing Placements on Aircraft"

Honorable Mention: Joseph Christman, Chiniak School (Kodiak), "Egg Drop Splat!"

Honorable Mention: Willaby Shuster, Kotzebue Middle School (Kotzebue), "Tissue Culture"

2005 Alaska Science and Engineering Fair Winners

Society for Technical Communication, Continued

Middle School Displays:

1. Blake Steenhoven, Central Middle School, "Effectgs of Different Sugars on Blood"
2. Stacy Wheeler, Central Middle School, "Zinc or Sink"
3. Taylor Everett "I t's Only Light"

Honorable Mention: Brianna Traxinger, Central Middle School, "Anchorage Water Quality"

Honorable Mention: Madeleine Bundy, Central Middle School, "Testing Art Paints and Surfaces to Different Environments"

High School Abstracts:

1. Vinnia Ahgeak, Barrow High School, "Air Tides: The Effect of the Mmon on Barometric Pressure"
2. Alice Glenn/Margaret Edwards, Barrow High School, "Traditional Inupiaq Oils"
3. Jordan Jeffery, Barrow High School, "Hot Bowheads"

Honorable Mention: Nicole Jeffery, Barrow High School, "Do Salmon Genes Wear Out on the Farm?"

Honorable Mention: Elise Sorum, Valdez High School, "To Build a Better Harbor"

High School Displays:

1. Paige Corona, Lumen Christi High School, " Anthropogenic Effects on Barterial Growth"
 2. : Elise Sorum, Valdez High School, "To Build a Better Harbor"
- Tied for 3rd: Ian Green, Dimond High School, "Tsunami Waves"
- Tied for 3rd: Nicole Jeffery, Barrow High School, "Do Salmon Genes Wear Out on the Farm?"

Alaska Fly Fishers

These winners were invited to attend the Alaska Fly Fishers monthly meeting where they will be presented with a plaque and \$100.00 Savings Bond.

- Elementary School: Ambriel Sandone, Tanaina Elemetary (Wasilla), "What Do Fish Eat In Winter?"
- Middle School: Briana Traxinger, Central Middle School, "Anchorage Water Quality"
- High School: Jordan Jeffery, Barrow High School, "Hot Bowheads"

2005 Alaska Science and Engineering Fair Winners

Alaska Geological Society

These winners were invited to attend the Alaska Geological Society's luncheon where they will receive formal certificates and gift certificates to Barnes and Noble.

The winners were:

Elementary:

- Hannah Moore, Rogers Park Elementary, "Listening to Jupiter's Radio Storms"
- W. Patrick Browne, Home School, "Does a Minerals Hardness Affect Its Streak?"

Middle School:

- Lainey Beaver and Jared Miller, Kotzebue Middle School, "Tsunami"
- Madeleine Bulkow, Central Middle School, "Global Warming & The Greenhouse Effect"
- Solomon Krevans, Bethel Regional High School, "Global Warming"

High School:

- Ian Green, Dimond High School, "Tsunami Waves"

American Chemical Society

(Results not reported to the Alaska Science and Engineering Fair staff)

Blockbuster Video

Blockbuster Video kindly donated 32 free video or DVD rentals. These cards were used for our door prize drawing.

The Imaginarium

These projects were judged as projects that show good science and also create their display in a way that make the science and the concepts accessible to an audience. The winners received a certificate, 1 year individual membership to the Imaginarium, and a \$20.00 gift certificate to the Imaginarium Store. In the case of a team project, they shared the prize.

- Hannah Moore, Rogers Park Elementary, "Listening to Jupiter's Radio Storms"
- Team project of Stephen Kranick and Tim Sewell, O'Malley and Rogers Park Elementary, "Moto Madness"

Pioneer Marketing and Management

The winners of this prize were judged best in their categories of Mathematics and Chemistry.

- For Chemistry: Stacy Wheeler, Central Middle School, Monroe Catholic High School (Fairbanks), "Zinc or Sink"
- For Mathematics: Ana Peterlin, "Global Warming: The Effect Time Has on Temperature"

2005 Alaska Science and Engineering Fair Winners

V.F. Grace

V. F. Grace kindly a variety of items to the Science Fair. These cards were used for our door prize drawing.

Awards from National Organizations

American Psychological Association (APA) and Teachers of Psychology in Secondary Schools (TOPSS)

Outstanding research in psychology under the category of behavioral and social sciences – certificate and recognition of the student’s achievement may be publicized via various APA publications.

- There were no projects that met the judging criteria in 2005.

ASM International Foundation

Medallion and a certificate recognizing the winner of the best materials engineering project.

- Chloe Howe, West Valley High School, "Cannula Rumen Fluid Leakage Inhibitor (CRFLI) ..."

Association of Women Geoscientists

Award Certificate to female students whose projects exemplify high standards of innovativeness and scientific excellence in the geosciences. Special consideration was to be given to projects that increase the public awareness of the geosciences, illustrate the interdisciplinary nature of the geosciences, or promote the sensitivity to the earth as a global system.

- Ana Peterlin, Monroe Catholic High School (Fairbanks), "Global Warming: The Effect Time Has on Temperature"

Eastman Kodak Company

One First Place award for the "Best use of Photographic Images or Digital Image Processing to Gather Data, Solve a Problem, or Clearly Explain the Essence of a Science Project". Certificate of Recognition along and two Kodak Digital 35mm One Time Use Cameras, one for the winning student and one for the sponsoring teacher.

- Ian Green, Dimond High School, "Tsunami Waves"

2005 Alaska Science and Engineering Fair Winners

Herbert Hoover-Young Engineer Award

Outstanding engineering project - certificate and medallion. The student should have a good grasp of engineering fundamentals, demonstrate competence in one or more engineering disciplines and show good communication skills by effectively explaining his/her project.

- Elise Sorum, Valdez High School, "To Build a Better Harbor"

Intel Excellence in Computer Science

The winner is the top first place winner of the computer science category in grades 9 through 12 - \$200.00.

- There were no projects that met the judging criteria.

International Society for Optical Engineering

This award was judged as the best project that applied optics or photonic - certificate and entered in a drawing for a prize of \$100.00 to be drawn on May 6, 2005.

- There were no projects that met the judging criteria.

Mu Alpha Theta

Mu Alpha Theta, the National High School and Two-Year College Mathematics Honor Society, wished to provide one certificate to an individual or group project, from grades 9-12, demonstrating the most challenging, thorough, and creative investigation of a problem involving modern mathematics. This project does not necessarily have to be entered in the Mathematics category.

- Ana Peterlin, Monroe Catholic High School (Fairbanks), "Global Warming: The Effect Time Has on Temperature"

National Society of Professional Engineers

One award, consisting of a certificate, and "NSPE Innovative Engineering Award" lapel pin and a subscription to Engineering times, to the most outstanding engineering project.

- Elise Sorum, Valdez High School, "To Build a Better Harbor"

Ricoh Corporation

The Ricoh Sustainable Development Award goes to the one individual or team entry, selected from among all the general award categories whose principles and technical innovations offer the greatest potential for increasing our ability to grow environmentally friendly and socially responsible businesses. The winner will receive a certificate, a one-year subscription to Science News Magazine and be entered into a drawing for 2 digital cameras of which one goes to the winner's teacher.

- The winner is Samantha Abeyratne, Kotzebue High School, "Pollution Free 'Water Cell' Electricity"

2005 Alaska Science and Engineering Fair Winners

Society for In Vitro Biology

One certificate to be awarded to the most outstanding 11th grade student exhibiting in the areas of plant or animal in vitro biology or tissue culture.

- There were no projects that met the judging criteria.

U. S. Metric Association

One certificate to be presented to the student in grades 9-12 whose project involves a significant amount of quantitative measurement and which best uses the SI (International System) metric system for those measurements.

- There were no projects that met the judging criteria.

Water Environment Federation: U. S. Stockholm Junior Water Prize

This project was judged the best water-related science project by a student in grades 9-12. The winner will receive a certificate and may advance to the next round of judging by the Water Environment Federation.

- Elise Sorum, Valdez High School, "To Build a Better Harbor"

Yale Science & Engineering Association, Inc.

One certificate to the most outstanding 11th grade student exhibiting in the areas of Computer Science, Engineering, Physics or Chemistry.

- The winner is Scott Mahar, Dimond High School, "The Standard Model of Particle Physics"

Discovery Young Scientists

The Discovery Young Scientist awards are presented to our Middle School Category Winners. They will receive a certificate, a lapel pin and a booklet that explains how to continue on in the competition.

Behavioral & Social Sciences	Joseph Warren, Bethel Regional High School (Bethel), "Learning Does Affect Count"
Bio-Chemistry	Christina Knapp, Central Middle School, "Do You Need to Knead?"
Botany	Elizabeth Bennett, Monroe Catholic Jr. High, "Which Bud Will Burst First"
Chemistry	Stacy Wheeler, Central Middle School, "Zinc or Sink"
Computer Science	Kyle Borash, Central Middle School, "Does the Number of Reporting Satellites Affect the Accuracy of GPS?"
Earth & Space Science	Nathaniel Moore, Frontier Charter School, "Intraplanetary Flight:Future Airfoil Quandry?"

2005 Alaska Science and Engineering Fair Winners

Discovery Young Scientists, Continued

Engineering	K'hala Carpenter, Schoenbar Middle School, "Roof Insulation Combat"
Environmental Sciences	Brianna Traxinger, Central Middle School, "Anchorage Water Quality"
Mathematics	Charles Dahlberg, Dillingham Middle/High School, "The Ultimate Race"
Medicine & Health	Nick Parker, Family Partnership Charter School, "Prevalence of Obesity in Juneau Students"
Microbiology	Dylan Nease, Gilson Jr. High (Valdez), "Wanna Wrestle"
Physics	Melannie Vonguay, Central Middle School, "What Kind of Insulation is Best For a Cold Weather Climate"
Team Projects	Stephanie Thompson & Tiffany Creed, Kotzebue Middle/High School, "Rollin' with The Hammies"

School Trophies

- Middle School: The trophy is awarded to Central Middle School.
- High School: The trophy is awarded to Kotzebue High School.

University of Alaska Advanced College Tuition Scholarship

The recipient of the Advanced College Tuition Scholarship is currently a student between the grades of 6-8. They are receiving a scholarship account set up in the amount of \$1,500 to attend the University of Alaska upon graduation from high school.

- Stacy Wheeler, Central Middle School, "Zinc or Sink"

University of Alaska Chancellor's Scholarships

The two recipients of this scholarship are receiving a tuition waiver to the University of Alaska, Anchorage for up to 12 credits this current fall semester and up to 12 credits the following spring semester. This waiver does not include books or fees.

- Nicole Jeffery, Barrow High School, "Do Salmon Genes Wear Out in the Farm?"
- Wade Decker. Service High School, "Rotary-Valve Pulse Jet Engine"

The Most Outstanding Science Teacher Awards

These teachers are being recognized as the most outstanding science teachers participating in our science fair.

- For Elementary: Cindy Hughes and she is receiving a cash prize of \$50.00
- For Middle School: Dana Phillips will be receiving a cash prize of \$100.00
- For High School: Leslie Pierce is receiving a cash prize of \$100.00