2016 Maine State Science Fair Awards
March 16, 2016

Grand Awards

These students will represent Maine at the 2016 Intel International Science and Engineering Fair.

Intel ISEF 3rd Place
Sydney McDonald, Bangor High School
*The design and analysis of an artificial muscle comprised of ionic-polymer metal composites*

Intel ISEF 2nd Place
Paige Brown, Bangor High School
*Constructing low-cost calcium alginate scaffolds for the reduction of pollutants in stormwater*

Intel ISEF 1st Place
1st - Demetri Maxim, Gould Academy
*Building human kidney tissue from pluripotent human stem cells: A promising new treatment for kidney disease*

Category Awards

Animal and Plant Sciences
3rd - Sarah Marcotte, Bangor High School
*Effects of road salt on White Pine tree health*

2nd - James Prescott, Bangor High School
*The effects of the amino acid content of pollen on the foraging habits of honey bees*

1st - Mei Tian, Bangor High School
*Testing the effectiveness of mycorrhizae in the remediation of soils*

Behavioral and Social Sciences
3rd - Brooke Asherman, Greely High School
*Visualization in sports*

2nd - Kaici Aloupis and Emma England, Falmouth High School
*The effects of music on comprehension performance*

1st - Madelyn Adams and Meghan Dye, Falmouth High School
*Behavioral factors and their impact on sleep quality*
Biological Sciences and Engineering
3rd - Alejandro Ramos, Lincoln Academy
*Tanausú*

2nd - Sydney McDonald, Bangor High School
*The design and analysis of an artificial muscle comprised of ionic-polymer metal composites*

1st - Demetri Maxim, Gould Academy
*Building human kidney tissue from pluripotent human stem cells: A promising new treatment for kidney disease*

Biomedical and Health Sciences
3rd - Evan Wyman, Greely High School
*Dental staining*

2nd - Aubrey Sparrow, Washington Academy
*Accuracy of home blood pressure monitors versus medical grade blood pressure monitors*

1st - Lilly Waddell, Bangor High School
*Testing the effectiveness of annual flu vaccines to corresponding flu outbreaks*

Chemistry and Materials Science
3rd - Ibrahim Saleh, Greely High School
*The effect of different stain removers on coffee stains*

2nd - Noah Gagne, Bangor High School
*Preserve paper towel comparison*

1st - Conor O’Brien, Bangor High School
*Group theory and square paths*

Computer Science and Robotics
3rd - Brendan Martin, Bangor High School
*The effects of artificial intelligence in game playing*

2nd - Jason Millette, Dexter Regional High School
*What is the most efficient and effective way to cool a computer*

1st - Karan Godara, Falmouth High School
*Designing data acquisition, management, and analysis software within Android*

Earth and Environmental Sciences
3rd - David Rubin, Bangor High School
*The impact of forest type on water quality in Maine lakes*

2nd - Maggie Nolan, Greely High School
*The effects of stormwater runoff and other pollutants on fresh water quality in Maine*
1st - Hassan Qureshi and Clara Bradley, Bangor High School  
*Stormwater effects on water quality in Bangor streams*

**Energy and Transportation**  
3rd - Nicolas Giandrea, Greely High School  
*Recovery of waste energy using Peltier plates*

2nd - Dwight Knightly, Bangor High School  
*Extending the duration of an organic battery*

1st - Tyler Delargy, Bangor High School  
*The effects of car braking*

**Mechanical and Environmental Engineering**  
3rd - Samuel Bonnevie, Greely High School  
*Initial rocket propulsion via steam explosion*

2nd - Emma Payne, Bangor High School  
*Designing and producing a biodegradable K-cup using cellulose nanofibers*

1st - Paige Brown, Bangor High School  
*Constructing low-cost calcium alginate scaffolds for the reduction of pollutants in stormwater*

**Microbiology**  
3rd - Annabelle Williams, Greely High School  
*The effect of natural antibacterials on Moraxella catarrhalis*

2nd - Madelaine Panici, Greely High School  
*Metals’ effect on bacterial growth*

1st - Corrigan Farnham, Greely High School  
*The effectiveness of disinfectants on bacterial quorum sensing communication*

**Physics, Astronomy, and Mathematics**  
3rd - Elyse Daub and Victoria Brissette-Rice, Bangor High School  
*How light pollution from Bangor, ME affects Acadia National Park*

2nd - Conor Thompson, Bangor High School  
*Group theory and square paths*

1st - William Reynolds, Bangor High School  
*Automated search and cataloging of supernovae*

**Special Awards**

**American Meteorological Society**  
Maddie Brookings and Reya Singh, Bangor High School
How to fix the effects of road salt on local streams
Sarah Montembeau and Sadie Humiston, R.W. Traip Academy
Local water health

American Psychological Association
Madelyn Adams and Meghan Dye, Falmouth High School
Behavioral factors and their impact on sleep quality

ASM Materials Education Foundation
Erica Desjardins, Bangor High School
Artistic science: Paint and viscosity

The Jackson Laboratory Future Innovator Award
Beatrice Buckley, The Watershed School
Remote sensing of street lighting levels

Conor O’Brien, Bangor High School
The effects of temperature on biosand filters

Jordan Bryant, Greely High School
Visual memory

Intel Award for Excellence in Computer Science
Karan Godara, Falmouth High School
Designing data acquisition, management, and analysis software within Android

Maine Mathematics and Science Alliance Award
Alejandro Ramos, Lincoln Academy
Tanausú

Mu Alpha Theta
Conor Thompson, Bangor High School
Group theory and square paths

National Aeronautic and Space Administration
David Rubin, Bangor High School
The impact of forest type on water quality in Maine lakes

National Oceanic and Atmospheric Administration
Elizabeth Robbins, Bangor High School
Macro invertebrates as bioindicators to assess stream health

Office of Naval Research
Mei Tian, Bangor High School
Testing the effectiveness of mycorrhizae in the remediation of soils
MaggieBeth Turcotte, Bangor High School
*Observing Groombridge 1618 for a potential planetary system*

**Ricoh Americas Corporation**
Mei Tian, Bangor High School
*Testing the effectiveness of mycorrhizae in the remediation of soils*

**Yale Science and Engineering**
Sydney McDonald, Bangor High School
*The design and analysis of an artificial muscle comprised of ionic-polymer metal composites*

**Stockholm Junior Water Prize**
Conor O’Brien, Bangor High School
*The effect of temperature on biosand filters*
Paige Brown, Bangor High School
*Constructing low-cost calcium alginate scaffolds for the reduction of pollutants in stormwater*
David Lavoie, Bangor High School
*Live data mapping of storm water runoff using HTML and Google databases to show up-to-date graphs for each area for each condition and source amount given*

**US Air Force**
Kaici Aloupis and Emma England, Falmouth High School
*The effects of music on comprehension performance*
Clara Bradley and Hassan Qureshi, Bangor High School
*Stormwater effects on water quality in Bangor streams*