

PRESENTATION OF AWARDS
2015 Maine State Science Fair

American Meteorological Society

Andrew Sandweiss

Bangor High School

A novel model to better predict the intensity of El Niño Modoki in the pacific basin

American Meteorological Society

Sydney McDonald

Bangor High School

A durable tethered balloon system

American Psychological Association

Safa Saleh

Greely High School

What's up with science's gender gap?

ASM Materials Education Foundation

Hannah Rubin

Bangor High School

A laboratory procedure to determine the water holding capacity of synthetic track materials for thoroughbred horse racing

Association for Women Geoscientists

Morgan Jones

Bangor High School

Comparing hydroponic vs. soil-based plant growth

ASU Walton Sustainability Solutions Initiatives

Paige Brown

Bangor High School

Identifying and remediating the sources of pollution in impaired Bangor streams

ASU Walton Sustainability Solutions Initiatives

Aaron Fleischer

Berwick High School

Recycling wasted/lost energy in chimney heat to prevent ice dams

INTEL Excellence in Computer Science

Ben Schade & Justin Hamilton

Maine School of Science and Mathematics

Calculating the horizon with perspective projection

Mu Alpha Theta

Anton Bershansky

Maine School of Science and Mathematics
GEB-type integer sequences

National Oceanographic and Atmospheric Administration

Kyle Hansen
Greely High School
The efficiency of different types of solar trackers over a full solar cycle

Office of Naval Research (U.S. Navy and Marine Corps)

Meagan Currie
Greely High School
Planaria regeneration: effects of anti-cancer agents paclitaxel and demecolcine on the regenerative capacity and rate of the brown planaria, *Dugesia tigrina*

Office of Naval Research (U.S. Navy and Marine Corps)

Ben Schade & Justin Hamilton
Maine School of Science and Mathematics
Calculating the horizon with perspective projection

Ricoh Americas Corporation

Mary Butler
Bangor High School
CNF as a component of a low-cost water filtration system

The Reach Center

Elliott Ross
Hebron Academy
A test of optimal foraging theory: prey handling time by crayfish as a function of temperature

Society for In Vitro Biology

Demetri Maxim
Gould Academy
Directed differentiation of human pluripotent stem cells into kidney cells

Stockholm Jr. Water Prize

Gabriel Oldfield
Bangor High School
The effects of different refining and drying processes on the ability of cellulose nanofiber filters to filter water

Stockholm Jr. Water Prize

David Rubin
Bangor High School
Analysis of phosphorus levels in Maine municipal water supplies

U.S. Air Force

Mariah Gould
Nokomis High School
How a gluten-based diet affects weight

Yale Science and Engineering

Aidan Coyne
Bangor High School
The investigation of possible substitutes for *Zostera marina* in intertidal zones of Frenchman Bay

3rd Place, Animal Sciences

Elizabeth Robbins
Bangor High School
Macroinvertebrates

2nd Place, Animal Sciences

Elliott Ross
Hebron Academy
A test of optimal foraging theory: prey handling time by crayfish as a function of temperature

1st Place, Animal Sciences

Sarah Caldwell & Chris Teufel
Falmouth High School
What are the effects of melatonin and caffeine on the behavior of *Oreochromis aureus*?

3rd Place, Behavioral and Social Sciences

Julian Wiley
Falmouth High School
Password selection strength: male vs. female

2nd Place, Behavioral and Social Sciences

Sarah Franklin
Maine School of Science and Mathematics
Why "password" is not a good password

1st Place, Behavioral and Social Sciences

Kaici Aloupis & Emma England
Falmouth High School
Technological effects on eyesight

3rd Place, Biology, Biochemistry & Medical Sciences

Clinton Jeffery & Xingyao Chen
Mount Desert Island High School

Trp53 and atherosclerosis

2nd Place, Biology, Biochemistry & Medical Sciences

Meagan Currie

Greely High School

Planaria regeneration: effects of anti-cancer agents paclitaxel and demecolcine on the regenerative capacity and rate of the brown planaria, *Dugesia tigrina*

1st Place, Biology, Biochemistry & Medical Sciences

Demetri Maxim

Gould Academy

Directed differentiation of human pluripotent stem cells into kidney cells

3rd Place, Chemistry & Mathematics

Conor Thompson

Bangor High School

Number paths in triangular grids

2nd Place, Chemistry & Mathematics

Anton Bershansky

Maine School of Science and Mathematics

GEB-type integer sequences

1st Place, Chemistry & Mathematics

Maggie Nolan

Greely High School

Detection of ethanol and its concentration through use of new identification kits

3rd Place, Computer Science

Benjamin Sinclair

Greely High School

Utilization of whois domain registration data for SMTP spam filtering

2nd Place, Computer Science

Daniel O'Brien

Bangor High School

Creating a computer model and software to extract additional, relevant data from MRIs for clinical and research application

1st Place, Computer Science

Ben Schade & Justin Hamilton

Maine School of Science and Mathematics

Calculating the horizon with perspective projection

3rd Place, Earth Science, Physics & Astronomy

MaggieBeth Turcotte

Bangor High School

Observational study of Galilean moons of Jupiter and their differences between Jupiter and each other

2nd Place, Earth Science, Physics & Astronomy

Vishva Nalamalapu & Marcy Kitteredge
Falmouth High School

Varying molecular sizes of condensation nuclei impact on cloud duration

1st Place, Earth Science, Physics & Astronomy

Jared Merrifield
Greely High School

The effect of aerodynamics on a pellet

3rd Place, Energy & Transportation

Ezra Smith
Home School

Potatoes to power: are organic materials relevant for electricity production?

2nd Place, Energy & Transportation

Evan Irwin
Falmouth High School
Experimentations in energy

1st Place, Energy & Transportation

Daniel Alfonsetti
Lewiston High School
Optimizing wireless power transfer using resonate inductive coupling

3rd Place, Engineering & Materials

Gabriel Oldfield
Bangor High School
The effects of different refining and drying processes on the ability of cellulose nanofiber filters to filter water

2nd Place, Engineering & Materials

Hannah Rubin
Bangor High School
A laboratory procedure to determine the water holding capacity of synthetic track materials for thoroughbred horse racing

1st Place, Engineering & Materials

Aidan Coyne
Bangor High School
The investigation of possible substitutes for *Zostera marina* in intertidal zones of Frenchman Bay

3rd Place, Environmental Science

Lillian Black
Greely High School
Fecal coliforms happen

2nd Place, Environmental Science

Andrew Sandweiss
Bangor High School
A novel model to better predict the intensity of El Niño Modoki in the Pacific basin

1st Place, Environmental Science

Paige Brown
Bangor High School
Identifying and remediating the sources of pollution in impaired Bangor streams

3rd Place, Microbiology

Elyse Daub, Susannah Powell & Ban Shoukeir
Bangor High School
Can variable soils affect the energy output of microbial fuel cells?

2nd Place, Microbiology

Tyler DeFroscia
Bangor High School
Development of an affordable biosensor for the rapid detection of red tide

1st Place, Microbiology

Griffin Weston
Greely High School
The effect of ultraviolet light on bacterial growth

3rd Place, Plant Sciences

Haili Rahkonen & SeungMin Nam
Maine School of Science and Mathematics
The level of pH, acidic or basic, affects the growth of Mentha and Ocimum citriodorum

2nd Place, Plant Sciences

Morgan Jones
Bangor High School
Comparing hydroponic vs. soil-based plant growth

1st Place, Plant Sciences

Stephen Comeau
Bangor High School
The effect of eastern white pine needle disease and plot density on Maine's white pine

INTEL ISEF 3rd Place

Paige Brown

Bangor High School

Identifying and remediating the sources of pollution in impaired Bangor streams

INTEL ISEF 2nd Place

Ben Schade & Justin Hamilton

Maine School of Science and Mathematics

Calculating the horizon with perspective projection

INTEL ISEF 1st Place

Demetri Maxim

Gould Academy

Directed differentiation of human pluripotent stem cells into kidney cells