FLINT REGIONAL SCIENCE & ENGINEERING FAIR

2020 Senior Division

Special Awards

American Meteorological Society

- Outstanding achievement for creative scientific endeavor in the areas of atmospheric and related oceanic and hydrologic sciences

- Vanessa Burkhard
  - Saginaw Arts & Sciences Academy
  - The Effects of Polymer Degradation on Stentor coeruleus

American Psychological Association

- Outstanding research in psychological science under the category of behavioral and social sciences or any category related to psychology.

- Nathaniel Watson
  - Saginaw Arts & Sciences Academy
  - Red vs. Blue: How Clothing Color Affects Perceived Dominance and Assertiveness

ASM Materials Education Foundation

- Most outstanding exhibit in materials science.

- Isaac Hales
  - Valley Lutheran High School
  - Up Cycling Paves The Way To Better Infrastructure

ASM MATERIALS
EDUCATION FOUNDATION

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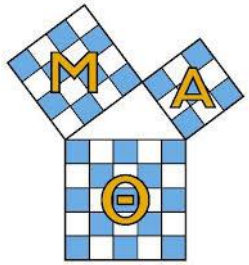
Association for Women Geoscientists

- High standard of innovativeness and scientific excellence in the geosciences.

- Vanessa Burkhard
  - Saginaw Arts & Sciences Academy
  - The Effects of Polymer Degradation on Stentor coeruleus

MU Alpha Theta

- Demonstrates the most challenging, original, thorough, and creative investigation of a problem involving mathematics.



- David Wang
  - H.H. Dow High School
  - Quantum Computing

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NASA EARTH System Science Award

- Best demonstrates insight into Earth's interconnected spheres.

- Katie McCarthy
  - Saginaw Arts & Sciences Academy
  - Calculating the Concentrations of Nonmetals in Water Samples Leading to Harmful Algal Blooms in Previously-Fertilized Areas

National Oceanographic Atmospheric Association

- Research emphasizes NOAA's mission of Science, Service, and Stewardship:
  - *To understand and predict changes in climate, weather, oceans, and coasts, To share that knowledge and information with others, and To conserve and manage coastal and marine ecosystems and resources.*

- Shiloh Maliskey
  - Saginaw Arts & Sciences Academy
  - Using Gypsum to Reduce the Urban Heat Island Effect

Ricoh Sustainable Development Award

- Outstanding project that addresses issues of environmental responsibility and sustainable development.

- Isaac Hales
  - Valley Lutheran High School
  - Up Cycling Paves The Way To Better Infrastructure

Society for In Vitro Biology

- Most outstanding 11th grade student exhibiting in the areas of plant or animal in vitro biology or tissue culture.

- Malhar Amin
  - Saginaw Arts & Sciences Academy
  - Accelerating Enzymatic Reactions in E. coli Encoded with the Lux Operon to Increase Luminosity

Stockholm Junior Water Prize

- Best water-science projects.

- Katie McCarthy
  - Saginaw Arts & Sciences Academy
  - Calculating the Concentrations of Nonmetals in Water Samples Leading to Harmful Algal Blooms in Previously-Fertilized Areas
- Isaac Hales
  - Valley Lutheran High School
  - Up Cycling Paves The Way To Better Infrastructure
- Vanessa Burkhard
  - Saginaw Arts & Sciences Academy
  - The Effects of Polymer Degradation on Stentor coeruleus

US AID Science Champion

- Exceptional project that has the potential to make an impact on addressing international development challenges.

- Arohi Nair
  - Okemos High School
  - Identifying Chest Radiographs with No Pathology Using a Convolutional Neural Network

US EPA

- Recognition of projects in the areas of environmental sciences and engineering.

- Students with projects in environmental science and engineering will be receiving a letter.

US Metric Association

- Best use of the metric system

- Akshanth Bandla
  - Saginaw Arts & Sciences Academy
  - The Disaggregation Properties of Epigallocatechin Gallate on Amyloid Fibrils Formed From Beta-Lactoglobulin Aggregation and The Effects of Epigallocatechin Gallate on Caenorhabditis Elegans

US Air Force

- Excellence in Science, Technology, Engineering and Math

- Winners receive backpack, charger and swag kit
- Gabe Howald
  - Saginaw Arts and Sciences Academy
  - A Study of Language Efficiency
- Rayen Aouadi
  - Saginaw Arts and Sciences Academy
  - Comparing Different Machine Learning Models and Their Effectiveness In Predicting Data

US Air Force

- Excellence in Science, Technology, Engineering and Math

- Winners receive backpack, charger and swag kit
- David Wang
  - H.H. Dow High School
  - Quantum Computing
- Mariah Collins
  - Saginaw Arts and Sciences Academy
  - Fabricating Bone Scaffolds Using PEEK Incorporated with Hydroxyapatite and Carbon to Enhance Mechanical Properties

U.S. AIR FORCE

FLINT REGIONAL SCIENCE & ENGINEERING FAIR

US Navy and Marine Corps

- Excellence in Science, Technology, Engineering and Math

- Winners receive medallion + $50 gift card
- Rayen Aouadi
  - Saginaw Arts and Sciences Academy
  - Comparing Different Machine Learning Models and Their Effectiveness In Predicting Data
- David Wang
  - H.H. Dow High School
  - Quantum Computing

FLINT REGIONAL SCIENCE & ENGINEERING FAIR

US Navy and Marine Corps

- Excellence in Science, Technology, Engineering and Math

- Winners receive medallion + $50 gift card
- Mariah Collins
  - Saginaw Arts and Sciences Academy
  - Fabricating Bone Scaffolds Using PEEK Incorporated with Hydroxyapatite and Carbon to Enhance Mechanical Properties

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Yale Science and Engineering Association

- Most outstanding 11th grade project exhibiting in the areas of Computer Science, Engineering, Physics, or Chemistry.

- Akshanth Bandla
  - Saginaw Arts & Sciences Academy
  - The Disaggregation Properties of Epigallocatechin Gallate on Amyloid Fibrils Formed From Beta-Lactoglobulin Aggregation and The Effects of Epigallocatechin Gallate on Caenorhabditis Elegans

Flint River Watershed Coalition

- Promotion of Clean Water in Genesee County

- Katie McCarthy
  - Saginaw Arts & Sciences Academy
  - Calculating the Concentrations of Nonmetals in Water Samples Leading to Harmful Algal Blooms in Previously-Fertilized Areas
- Isaac Hales
  - Valley Lutheran High School
  - Up Cycling Paves The Way To Better Infrastructure
- Vanessa Burkhard
  - Saginaw Arts & Sciences Academy
  - The Effects of Polymer Degradation on Stentor coeruleus

Genesee County Medical Society

- Excellence in Medical Studies

- Ayan Nair
  - Okemos High School
  - A Smart Aid for the Visually Impaired to Detect Approaching Objects with Varying Speeds

Hurley Medical Center

- Excellence in Medical Studies

- Winner receives a trophy
- Akshanth Bandla
  - Saginaw Arts & Sciences Academy
  - The Disaggregation Properties of Epigallocatechin Gallate on Amyloid Fibrils Formed From Beta-Lactoglobulin Aggregation and The Effects of Epigallocatechin Gallate on Caenorhabditis Elegans

Kettering University – Summer Programs

- Excellence in sustainability research.

- Recipient receives a scholarship to attend the DTE Sustainable City Energy Summer Camp from July 22 - July 30.
- Katrina Wells
  - Birch Run High School
  - It Will All Come Out in the Wash: The Filtration of Microplastic Fibers in Washing Machine Discharge Through a Valvular Conduit

Kettering University – Summer Programs

- 1st Alternate: Shiloh Maliskey
  - Saginaw Arts & Sciences Academy
- 2nd Alternate: Andrew Wagner
  - Saginaw Arts & Sciences Academy

Matthew Bauerle Mathematics Award

- Excellence in Mathematics

- 2nd Award: $25 Gift Card
- Rayen Aouadi
  - Saginaw Arts & Sciences Academy
  - Comparing Different Machine Learning Models and Their Effectiveness In Predicting Data

Matthew Bauerle Mathematics Award

- Excellence in Mathematics

- 1st Award: $50 Gift Card
- David Wang
  - H. H. Dow High School
  - Quantum Computing

McLaren Health Care

- Excellence in Behavioral and Social Science

- Nathaniel Watson
  - Saginaw Arts & Sciences Academy
  - Red vs. Blue: How Clothing Color Affects Perceived Dominance and Assertiveness

McLaren Health Care

- Excellence in Microbiology

- Malhar Amin
  - Saginaw Arts & Sciences Academy
  - Accelerating Enzymatic Reactions in E. coli Encoded with the Lux Operon to Increase Luminosity
- Reece Metcalfe
  - Saginaw Arts & Sciences Academy
  - The effect of alcoholic hand sanitizers compared to non alcoholic hand sanitizers
- Braydon Evans
  - Saginaw Arts & Sciences Academy
  - The effects of fungi on varying bacteria

McLaren Health Care

- Excellence in Biochemistry

- Armaan Mahajan
  - Saginaw Arts & Sciences Academy
  - An in vitro evaluation of the effects of Resveratrol and Amygdalin on cell division of Lytechinus variegatus Zygotes
- Audrey Wong
  - Saginaw Arts & Sciences Academy
  - Concentration of CaCl2 on Transforming Bacteria
- Serena Ahmad
  - Saginaw Arts & Sciences Academy
  - The Physiological Effects of High-Fructose Corn Syrup 55 on Vanessa cardui

McLaren Health Care

- Excellence in Medicine and Health Sciences

- Bhanu Mamillapalli
  - Saginaw Arts & Sciences Academy
  - Preventing Skin Cancer with Precise Photochromic Indicators
- Pratham Patel
  - Saginaw Arts & Sciences Academy
  - Effects of Dopamine on Regeneration Rates of Planaria
- Arohi Nair
  - Okemos High School
  - Identifying Chest Radiographs with No Pathology Using a Convolutional Neural Network

McLaren Health Care

- Excellence in Cellular and Molecular Biology

- Therese Joffre, Grace Bremmer, Logan McNamara
  - HH Dow High School + Midland High School
  - Fabrications of Scaffolds for Bone Repair and Regeneration

Michigan Association of Hazardous Material Professionals

- Excellence in Environmental Science and Engineering

- Winner receives plaque and cash prize
- Malhar Amin
  - Saginaw Arts & Sciences Academy
  - Accelerating Enzymatic Reactions in E. coli Encoded with the Lux Operon to Increase Luminosity

FLINT REGIONAL SCIENCE & ENGINEERING FAIR

MIDHHS Explore Lab Science

- Creativity and exploration

- 3rd Award
- Ayan Nair
  - Okemos High School
  - A Smart Aid for the Visually Impaired to Detect Approaching Objects with Varying Speeds

MIDHHS Explore Lab Science

- Creativity and exploration

- 2nd Award
- Malhar Amin
  - Saginaw Arts & Sciences Academy
  - Accelerating Enzymatic Reactions in E. coli Encoded with the Lux Operon to Increase Luminosity
  - High School

MIDHHS Explore Lab Science

- Creativity and exploration

- 1st Award
- Benjamin Schall
  - Saginaw Arts & Sciences Academy
  - DNA Damage Induced by Cell Phone RF Radiation

Kettering University

- $3,000 Renewable Scholarship for 4 Years

- Mariah Collins
  - Saginaw Arts and Sciences Academy
  - Fabricating Bone Scaffolds Using PEEK Incorporated with Hydroxyapatite and Carbon to Enhance Mechanical Properties

University of Michigan-Flint

- Full tuition and mandatory fee scholarship for 4 years
- Top 3 Grand Award Winners

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