

Morgan State University-Science-Mathematics-Engineering Fair 2022

Middle School Winners

Physical Science

2nd Place

Name: Amexem Harris El
Project Title: The boiling egg project
School: Hamilton Elementary Middle School
Grade: 6

1st Place

Name: Mekhi Edwards
Project Title: Vegatable Battery
School: Hamilton Elementary Middle School
Grade: 6

Biological Science

4th Place

Name: Ashliegh Sims
Project Title: How Music Affects the Behavior of Animals
School: Hamilton Elementary Middle School
Grade: 8

3rd Place

Name: Margaret Dalbey
Project Title: Artificial Smells vs. Real Smells
School: Hamilton Elementary Middle School
Grade: 7

2nd Place

Name: Julie Hock
Project Title: Has the bird ever left the nest
School: Hamilton Elementary Middle School
Grade: 8

1st Place

Name: McLuhan Conway
Project Title: Is the Chesapeake Bay making the grade
School: Hamilton Elementary Middle School
Grade: 6

Morgan State University-Science-Mathematics-Engineering Fair 2022

Middle School Winners

Earth and Environmental Science

3rd Place

Name: Luke Dingle

Project Title: Where do you store your popcorn kernels

School: Hamilton Elementary Middle School

Grade: 7

2nd Place

Name: Alexis Snell

Project Title: Radiation levels

School: Hamilton Elementary Middle School

Grade: 8

1st Place

Name: Curtis Johnson

Project Title: Ocean Pollution

School: Hamilton Elementary Middle School

Grade: 8

Mathematics and Computer Science

1st Place

Name: Advik Rai

Project Title: AI for Autism Can artificial intelligence assist autistic persons to better adjust to their surroundings?

School: Clarksville Middle School

Grade: 8

Honorable Mention

Name: Danielle Griffin

Project Title: What Cleans Years of Dirt the Best

School: Hamilton Elementary Middle School

Grade: 6

Morgan State University-Science-Mathematics-Engineering Fair 2022

Middle School Winners

Engineering

4th Place

Name: Daniel (Danny) Lawner
Project Title: Parachute Deployment
School: The New Century School
Grade: 8

3rd Place

Name: Rhiannon Hopson
Project Title: A Variation Comparison of Concretes
School: Hamilton Elementary Middle School
Grade:8

2nd Place

Name: Miranda Vidals
Project Title: How does a light bulb turn on?
School: Baltimore Design School
Grade: 6

1st Place

Name: John Skokna
Project Title: What is the amount of resistance in home wiring?
School: Baltimore Design School
Grade: 6

Team Project

Middle School

Project Category Engineering

Names: Vasyl Dail and Jack Moore
Project Title: RR-Mo3
School: Hamilton Elementary Middle School
Grade: 6

Morgan State University-Science-Mathematics-Engineering Fair 2022

High School Winners

Physical Science

Honorable Mention

Name: Jamal Middleton

Project Title: What are the best welding rods for the welding industry?

School: Mergenthaler Vocational Technical High School

Grade: 10

2nd Place

Name: Adam Benslama

Project Title: Falling Towers

School: River Hill High School

Grade: 11

1st Place

Name: Hannah Fang

Project Title: Ca II Quasar Absorbers and Cosmic Dust Provide New Insights into Galactic Evolution, the Milky Way, and Star Formation

School: Centennial High School

Grade: 11

Morgan State University-Science-Mathematics-Engineering Fair 2022

High School Winners

Biological Science

Honorable Mention

Name: Jonah Schwartz

Project Title: Fabrication of Circular Channels in Hydrogel to Model in vivo Fluid Flow

School: Baltimore Polytechnic Institute

Grade: 12

Name: Jinyue Wang

Project Title: Highly Specific and Efficient Rice Pathogen Detection Method via Loop-mediated isothermal amplification (LAMP) and CRISPR/FnCas12a Cleavage (LACC)

School: Garrison Forest School

Grade: 11

Name: Nyla Powell

Project Title: The Usage of SUMO Proteases (SENPS) as a Potential Cancer Biomarker

School: Baltimore Polytechnic Institute

Grade: 12

Name: Ishani Ghosh

Project Title: The Effect of Saturated Lipid on Neuronal Stem Cell Migration and Differentiation Following Acute Brain Injury

School: Centennial High School

Grade: 10

Morgan State University-Science-Mathematics-Engineering Fair 2022

High School Winners

Biological Science

4th Place

Name: Zen Gordon

Project Title: Developing Early Detection Methods for Ovarian Cancer

School: Baltimore Polytechnic Institute

Grade: 12

3rd Place

Name: Jala Wallace

Project Title: Investigating Remdesivir Post Exposure Prophylaxis Activity

School: Baltimore Polytechnic Institute

Grade: 12

2nd Place

Name: Chelsea Hu

Project Title: Silk Fibroin Microspheres: An Innovative Approach to Improve Drug Delivery to the Lungs for the Treatment of Neonatal Respiratory Disease Syndrome (NRDS)

School: BASIS Independent Schools

Grade: 10

1st Place

Name: Nicole Liang

Project Title: Identifying Small Molecule Inhibitors of Programmed Cell Death 1 for Cancer Immunotherapy Using Pharmacophore-Based Virtual Screening

School: River Hill High School

Grade: 11

Morgan State University-Science-Mathematics-Engineering Fair 2022

High School Winners

Earth and Environmental Science

Honorable Mention

Name: Alexander Yang
Project Title: The Deadliness of Dust
School: Marriotts Ridge High School
Grade: 11

4th Place

Name: Martin Meister
Project Title: Mapping Submerged Aquatic Vegetation (SAV) in the Chesapeake Bay using
Remote Sensing Data with Machine Learning
School: Centennial High School
Grade: 9

3rd Place

Name: Mia Schildbach
Project Title: Studying the Ediacaran Period through the examination of a fossil from the Deep
Spring Formation of Nevada
School: Baltimore Polytechnic Institute
Grade: 12

2nd Place

Name: Saketh Sundar
Project Title: Deep Semantic Segmentation Approach for Agricultural Field Parcel Delineation
to Alleviate Food Insecurity Using Multi-Temporal Remote Sensing Imagery
School: River Hill High School
Grade: 11

1st Place

Name: Meredith Nishiura
Project Title: Effects of Urban Estuaries on Blue Crabs and Blue Crab Diet Institute
School: Baltimore Polytechnic
Grade: 12

Morgan State University-Science-Mathematics-Engineering Fair 2022

High School Winners

Mathematics and Computer Science

4th Place

Name: Srijan Ray

Project Title: Using Deep Learning to Combat Breast Cancer

School: Mount Hebron High School

Grade: 11

3rd Place

Name: Johns Hopkins

Project Title:

Using Machine Learning to Predict Ground Reaction Forces

School: Baltimore Polytechnic Institute

Grade: 12

2nd Place

Name: Keith Ceruti II

Project Title: PACMan: Mitigating Bias in Proposal Reviews

School: Baltimore Polytechnic Institute

Grade: 12

1st Place

Name: William Gao

Project Title: Designing A Deep Learning-Based Resource-Efficient Diagnostic System for Metastatic Breast Cancer: Reducing Long Delays of Clinical Diagnosis and Improving Patient Survival in Developing Countries

School: Centennial High School

Grade: 10

Team Project

High School

Project Category Engineering

Names: Akshay Kannan, Vedant Patel, Jonathan Lin

Project Title: Eyedrop Automation to Improve the Accuracy and Precision of Drug Delivery

School: Marriotts Ridge High School

Grade: 11

Morgan State University-Science-Mathematics-Engineering Fair 2022

OVERALL WINNERS

Name: Nicole Liang

Project Title: Identifying Small Molecule Inhibitors of Programmed Cell Death 1 for Cancer Immunotherapy Using Pharmacophore-Based Virtual Screening

School: River Hill High School

Grade: 11

Name: William Gao

Project Title: Designing A Deep Learning-Based Resource-Efficient Diagnostic System for Metastatic Breast Cancer: Reducing Long Delays of Clinical Diagnosis and Improving Patient Survival in Developing Countries

School: Centennial High School

Grade: 10

Special Awards

**Society of Women Engineers
Promising Engineer**

Name: Catherine Henderson

Project Title: The most effective way to keep an ice cube from melting and how to determine it.
School: Hamilton Elementary and Middle School
Grade: 7

Name: Miranda Vidals

Project Title: How does a light bulb turn on?
School: Baltimore Design School
Grade: 6

Name: Ramona Parkinson

Project Title: Egg-cellent Drinks
School: Baltimore Design School
Grade: 6

Name: Jasmine Thomas

Project Title: Disintegrating Medicine
School: Mergenthaler Vocational -Technical High School
Grade: 10

Name: Kassidy Shepard

Project Title: Types of ovens
School: Hamilton Elementary Middle School
Grade: 6

Name: Victoria Moffatt

Project Title: Potential & Kinetic Energy
School: Hamilton Elementary Middle School
Grade: 8

Name: Lauren Seldon

Project Title: Which cereal brand stays crunchy in milk the longest?
School: Baltimore Design School
Grade: 6

Society of Women Engineers
Outstanding Engineer

Name: Alicia Lawrence
Project Title: How to Make a Water Filter @ Home
School: Mergenthaler Vocational -Technical High School
Grade: 10

Name: Desirae Reid
Project Title: Keeping hot drinks hot
School: Baltimore Design School
Grade: 6

Name: Jasmine Miller
Project Title: Soda Air Balloon
School: Hamilton Elementary Middle School
Grade: 8

Name: Kamryn Murray
Project Title: Speed Rate of a Balloon Rocket
School: Hamilton Elementary Middle School
Grade: 6

Name: Mackenzie Carter
Project Title: The Wacky Water Wheel
School: Hamilton Elementary Middle School
Grade: 6

Name: Makenzie Fitzgerald
Project Title: The Medium and the Speed of Light
School: Hamilton Elementary Middle School
Grade: 8

Name: Meredith Nishiura
Project Title: Effects of Urban Estuaries on Blue Crabs and Blue Crab Diet
School: Baltimore Polytechnic Institute
Grade: 12

Lemelson Foundation
Early Inventor Prize

Name: Vasyl Dail and Jack Moore
Project Title: RR-Mo3 (Rescue Rover Model 3)
School: Hamilton Elementary Middle School
Grade: 6

Regeneron Biomedical Science Award

Names: Akshay Kannan, Vedant Patel, Jonathan Lin
Project Title: Eyedrop Automation to Improve the Accuracy and Precision of Drug Delivery
School: Marriotts Ridge High School
Grade: 11

Society of Science in partnership with the National Geographic Society
That's Geography

Name: Saketh Sundar
Project Title: Deep Semantic Segmentation Approach for Agricultural Field Parcel Delineation
to Alleviate Food Insecurity Using Multi-Temporal Remote Sensing Imagery
School: River Hill High School
Grade: 11

Society of Science
2022 DoD STEM Leadership Award

Name: Daniel (Danny) Lawner
Project Title: Parachute Deployment
School: The New Century School
Grade: 8

American Meteorological Society

Name: Mia Schildbach
Project Title: Studying the Ediacaran Period through the examination of a fossil from the Deep
Spring Formation of Nevada
School: Baltimore Polytechnic Institute
Grade: 12

Name: Alexander Yang
Project Title: The Deadliness of Dust
School: Marriotts Ridge High School
Grade: 11