

# 2019 ALABAMA SCIENCE ENGINEERING FAIR

## Special Award Winners

### Award: Alabama Geological Society

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#### Junior Division

Participant: Jordan Jennings

Project Cat. and No.: E 82      The Effectiveness Of Raw Bamboo As A Bio-Insulation  
Replacement For Fiber And Cellulose Insulation And  
Sustainable Green Building Design  
Place: **1**  
Key Destiny Academy      Grade: 6

Participant: Jacob Nelson

Project Cat. and No.: E 89      Erosion  
Place: **2**  
Clark-Shaw Magnet Middle School      Grade: 8

Participant: Mark Allison

Project Cat. and No.: E 70      Worming Away Waste  
Place: **3**  
Horizon Elementary School      Grade: 5

#### Senior Division

Participant: Noel Lange

Project Cat. and No.: EE 401      Development Of Innovative Strategies To Protect The Aquatic  
Environment From Household Plastic Microfibers: Application Of  
Electrostatic Water Filtration  
Place: **1**  
Auburn High School      Grade: 12

Participant: Louisa Forbes

Project Cat. and No.: EA 363      The Investigation Of Sustainable And Convenient Methods Of  
Generating Biofuels  
Place: **2**  
W.P. Davidson High School      Grade: 9

Participant: Marie Mewes

Project Cat. and No.: EE 402      One Drop At A Time: Alternative Water Filtration Solutions  
Using pH, TDS, And EC Measurements  
Place: **3**  
Holy Spirit Catholic High School      Grade: 9

## **Award: Alabama Modeling and Simulation Council**

### **Junior Division**

Participant: Alexander Halbesleben

Project Cat. and No.: X 175 Is It Random

Place: 1

Holy Spirit High School

Grade: 8

Participant: William Siao

Project Cat. and No.: E 94 Hone Defense Drone

Place: 2

St. John the Baptist Catholic School

Grade: 7

Participant: Katherine McQuillen

Project Cat. and No.: N 149 Turbines Generating Electricity

Place: 3

Clark Shaw Magnet Middle School

Grade: 8

### **Senior Division**

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping

Place: 1

Auburn High School

Grade: 10

Participant: Reagan Shoop

Project Cat. and No.: BECB 2 Automatic Traumatic Injury and Concussion Alert System (ATICAS)

Place: 2

Hewitt-Trussville High School

Grade: 12

Participant: Victoria Whitehead

Project Cat. and No.: PH 490 G-Force: Angels Making Pilots Go Faster

Place: 3

Holy Spirit High School

Grade: 9

## **Award: American Chemical Society - The North Alabama Chapter**

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### **Junior Division**

Participant: Shivani Babu

Project Cat. and No.: CH 50 Effect Of Temperature On Alum Crystal Formation

Place: **2**

Auburn Junior High School

Grade: 8

Participant: James Possel

Project Cat. and No.: CH 58 Water We Doing

Place: **3**

St. John the Baptist Catholic School

Grade: 7

### **Senior Division**

Participant: Sai Sumedha Bobba

Project Cat. and No.: BI 300 Development Of A Method Towards The Metabolic Monitoring Of TCA Cycle Compounds Using NMR

Place: **1**

James Clemens High School

Grade: 11

Participant: Kameron Brazille

Project Cat. and No.: CH 340 Burn, Baby! Burn!

Place: **1**

St. John Paul II Catholic High School

Grade: 11

Participant: Charity Davis

Naomi Ogunmakin

Project Cat. and No.: CH 342 True Colors

Place: **2**

Holy Family Cristo Rey Catholic High

Grade: 11

Participant: Yewon Lee

Dongwon Lee

Project Cat. and No.: BI 301 Optimizing Bone Marrow Cryopreservation For Primitive Hematopoietic Stem Cell Compartment Studies Using Flow Cytometry Analysis

Place: **2**

James Clemens High School

Grade: 9

## **Award: American Institute of Aeronautics and Astronautics**

### **Junior Division**

Participant: Arjun Iyer Vikram Iyer and Benjamin Shacka  
Project Cat. and No.: E 81 Rover Wheels: Which Works Best?  
Place: 1  
Homewood Middle School - \* Grade: 7

Participant: Samuel Nameniuk  
Project Cat. and No.: E 88 Spinning Toward Efficiency  
Place: 1  
Clark Shaw Magnet Middle School Grade: 8

### **Senior Division**

Participant: Victoria Whitehead  
Project Cat. and No.: PH 490 G-Force: Angels Making Pilots Go Faster  
Place: 1  
Holy Spirit High School Grade: 9

## **Award: American Meteorological Society**

### **Senior Division**

Participant: Suma Ejantkar Jiho Lee  
Project Cat. and No.: CBMI 32 Finding Bacteriophages To Fight Against Ice-Nucleating Bacteria  
Place: 1  
Auburn High School Grade: 12

## **Award: American Physical Society**

### **Junior Division**

Participant: Arian Phillips  
Project Cat. and No.: Z 206 Burning Tree Nuts  
Place: 1  
Williams AGT Middle School Grade: 6

## Senior Division

Participant: Catherine Kung  
Project Cat. and No.: MS 470 Creating A Pectin-Based Temperature-Sensitive Artificial Skin  
Place: 1  
Indian Springs School Grade: 9

## **Award: American Psychological Association**

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## Junior Division

Participant: Sophia Graham  
Project Cat. and No.: BE 3 Are You Smarter Than A 7th Grader?  
Place: 1  
The Altamont School - \* Grade: 7

Participant: Mindy Mitchell  
Project Cat. and No.: BE 8 I Have A Question  
Place: 1  
Holy Spirit High School Grade: 8

## Senior Division

Participant: Sommer Carnes  
Project Cat. and No.: BE 250 Investigation Of Sense Association  
Place: 1  
Jefferson County International Baccalaureate Grade: 10

Participant: Katherine Malone  
Project Cat. and No.: BE 253 Effect Of Chronic Pain Stigma On Chronic Low Back Pain  
Place: 1  
Alabama School of Fine Arts Grade: 12

## **Award: American Society of Microbiology**

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## Junior Division

Participant: Jasmyn Vanterpool  
Project Cat. and No.: CH 63 Can Allium Inhibit Streptococcus And Staphylococcus Hemolytic Enzymes/Toxins? (Part 2)  
Place: 1  
Oakwood Adventist Academy Grade: 7

## Senior Division

Participant: Vanessa Siggers

Project Cat. and No.: CBMI 32 Investigating The Bactericidal And Anti-Biofilm Effects Of  
Naringenin On Enterobacter cloacae

Place: 1

Murphy High School

Grade: 11

## **Award: Armed Forces Communications and Electronics Association (AFCEA) Educational Foundation**

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## Junior Division

Participant: Connor Murphree

Project Cat. and No.: X 176 KEYS TO WISDOM: Do Passwords Get Better Or Worse With  
Age?

Place: 1

Columbia Elementary School

Grade: 5

## Senior Division

Participant: Abbigail Manscill

Project Cat. and No.: ESSS 4 Innovated Crosswalk For Disabled And Elderly Pedestrians

Place: 1

Hewitt Trussville High School

Grade: 12

Participant: Carson McCombs

Jaden Arnold

Project Cat. and No.: ESSS 4 Tabletop-Link

Place: 1

Hewitt Trussville High School

Grade: 12

Participant: Brayden Noh

Project Cat. and No.: ECEP 3 Flexible And High-Powered Supercapacitor From Low-Cost And  
Simple Building Method

Place: 1

Auburn High School

Grade: 10

## **Award: ASEF Director's Scholarship, UAH**

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### **Senior Division**

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air  
Pollution Particles Remediation With Trees  
Place: 1  
Hoover High School Grade: 11

Participant: Catherine Kung

Project Cat. and No.: MS 470 Creating A Pectin-Based Temperature-Sensitive Artificial Skin  
Place: 1  
Indian Springs School Grade: 9

Participant: Jaeyoung Lee

Project Cat. and No.: PH 488 Development Of Single-Input Habitable Zone Formulas  
Place: 1  
Auburn High School Grade: 10

Participant: Jayden Vanterpool

Project Cat. and No.: BI 305 Can Nanotechnology Be A Better Method Of Cancer Therapy?  
Place: 1  
Oakwood Adventist Academy Grade: 10

## **Award: ASM Materials Education Foundation**

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### **Junior Division**

Participant: Ashwin Prabhakar

Project Cat. and No.: E 91 Multifunctional Biodegradable Polymers For Environmental  
Applications  
Place: 1  
Discovery Middle School Grade: 8

### **Senior Division**

Participant: Catherine Kung

Project Cat. and No.: MS 470 Creating A Pectin-Based Temperature-Sensitive Artificial Skin  
Place: 1  
Indian Springs School Grade: 9

## **Award: Association for Women Geoscientists**

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### **Junior Division**

Participant: Abigail Renzelman

Project Cat. and No.: E 92      Warming Our Way to Less Wasteful Future (Styrofoam Composting)

Place: 1

Columbia Elementary School

Grade: 5

### **Senior Division**

Participant: Haley Donovan

Project Cat. and No.: EA 362      Achroia grisella As Effective Decomposers Of Polyethylene

Place: 1

Wetumpka High School

Grade: 12

## **Award: Association of Energy Engineers (AEE)**

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### **Junior Division**

Participant: Jordan Jennings

Project Cat. and No.: E 82      The Effectiveness Of Raw Bamboo As A Bio-Insulation Replacement For Fiber And Cellulose Insulation And Sustainable Green Building Design

Place: 1

Key Destiny Academy

Grade: 6

Participant: Naeim Mahjouri

Project Cat. and No.: N 148      Eddy Current Braking System

Place: 1

Auburn Junior High School

Grade: 8

Participant: Abigail Renzelman

Project Cat. and No.: E 92      Warming Our Way to Less Wasteful Future (Styrofoam Composting)

Place: 1

Columbia Elementary School

Grade: 5



## Senior Division

Participant: Cameron Gallups

Project Cat. and No.: ECEP 3 Step-By-Step Power: Movement Powered Charger For USB  
Place: 1 Devices  
Hewitt-Trussville High School Grade: 12

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air  
Place: 1 Pollution Particles Remediation With Trees  
Hoover High School Grade: 11

Participant: Javon Jennings

Project Cat. and No.: EM 421 The Impact Of Reflective Parabolic Wing Position To  
Place: 1 Concentrating Solar Energy In A CAD Designed Automated  
Key Destiny Academy Arduino Controlled Solar Tracking Absorption Device  
Grade: 9

Participant: Noel Lange

Project Cat. and No.: EE 401 Development Of Innovative Strategies To Protect The Aquatic  
Place: 1 Environment From Household Plastic Microfibers: Application Of  
Auburn High School Electrostatic Water Filtration  
Grade: 12

Participant: Brayden Noh

Project Cat. and No.: ECEP 3 Flexible And High-Powered Supercapacitor From Low-Cost And  
Place: 1 Simple Building Method  
Auburn High School Grade: 10

## **Award: Award for Positive Community Impact**

## Junior Division

Participant: Rishab Samant

Project Cat. and No.: CH 60 Choking Cancer: Evaluating Nutraceuticals For The Prevention  
Place: 1 Of Angiogenesis  
Pizitz Middle School Grade: 8

## Senior Division

Participant: Louisa Forbes

Project Cat. and No.: EA 363 The Investigation Of Sustainable And Convenient Methods Of  
Generating Biofuels  
Place: 1

W.P. Davidson High School

Grade: 9

Participant: Noel Lange

Project Cat. and No.: EE 401 Development Of Innovative Strategies To Protect The Aquatic  
Environment From Household Plastic Microfibers: Application Of  
Electrostatic Water Filtration  
Place: 1

Auburn High School

Grade: 12

## **Award: Boeing - Koch Grand Prize**

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## Junior Division

Participant: Luke Minnon

Project Cat. and No.: N 151 Project A.R.C.S. (Algorithmic Robotic Cube Solver)

Place: 1

Libertas Classical Community

Grade: 8

## Senior Division

Participant: Sai Sumedha Bobba

Project Cat. and No.: BI 300 Development Of A Method Towards The Metabolic Monitoring  
Of TCA Cycle Compounds Using NMR  
Place: 1

James Clemens High School

Grade: 11

Participant: Jaeyoung Lee

Project Cat. and No.: PH 488 Development Of Single-Input Habitable Zone Formulas

Place: 1

Auburn High School

Grade: 10

## **Award: Boeing Engineers Award**

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### **Junior Division**

Participant: Shivani Babu

Project Cat. and No.: CH 50 Effect Of Temperature On Alum Crystal Formation

Place: **HM**

Auburn Junior High School

Grade: 8

Participant: Benjamin Bagwell

Project Cat. and No.: N 141 May The Best Fin Win!

Place: **1**

Columbia Elementary School

Grade: 5

Participant: Harper Beranek

Project Cat. and No.: BZ 21 Determining The Accuracy Of Human Remains Dogs Through  
The Depth And Decomposition Of Human Tissue

Place: **1**

Williams AGT Middle School

Grade: 7

Participant: Sophia Graham

Project Cat. and No.: BE 3 Are You Smarter Than A 7th Grader?

Place: **1**

The Altamont School - \*

Grade: 7

Participant: Makaila Jennings

Project Cat. and No.: Z 199 How Star Luminosity Impacts The Identification Of Exoplanets  
Using Transient Photometry

Place: **1**

Key Destiny Academy

Grade: 6

Participant: Connor Murphree

Project Cat. and No.: X 176 KEYS TO WISDOM: Do Passwords Get Better Or Worse With  
Age?

Place: **1**

Columbia Elementary School

Grade: 5

Participant: Samuel Nameniuk

Project Cat. and No.: E 88 Spinning Toward Efficiency

Place: **HM**

Clark Shaw Magnet Middle School

Grade: 8

Participant: Ethan Peel

Project Cat. and No.: Z 205 Seeing The Unseen

Place: **1**

Beverlye Magnet School

Grade: 7

Participant: Shreya Sunil

Project Cat. and No.: ME 122 Dealing With Diabetes: The Complexities Involved In  
Developing An Artificial Pancreas

Place: 1

Liberty Middle School

Grade: 8

## Senior Division

Participant: SHELBY DAVIS

Project Cat. and No.: PS 501 Seeds vs Detergent

Place: 1

Smiths Station Freshman Center

Grade: 9

Participant: Sarah-Kate Drown

Project Cat. and No.: PH 483 Go With the Flow

Place: 1

Providence Classical School

Grade: 9

Participant: Zichao Jiang

Project Cat. and No.: RI 522 The Application Of Convolutional Neural Network On Plant Image Classification For Agricultural Weed Removal

Place: 1

Indian Springs School

Grade: 11

Participant: Claire Jun

Project Cat. and No.: CH 343 Liposome Nanoparticle For The Treatment Of Vascular Diseases

Place: 1

Hoover High School

Grade: 10

Participant: Catherine Kung

Project Cat. and No.: MS 470 Creating A Pectin-Based Temperature-Sensitive Artificial Skin

Place: 1

Indian Springs School

Grade: 9

Participant: Brayden Noh

Project Cat. and No.: ECEP 3 Flexible And High-Powered Supercapacitor From Low-Cost And Simple Building Method

Place: 1

Auburn High School

Grade: 10

Participant: Reagan Shoop

Project Cat. and No.: BECB 2 Automatic Traumatic Injury and Concussion Alert System (ATICAS)

Place: 1

Hewitt-Trussville High School

Grade: 12

Participant: Vanessa Siggers

Project Cat. and No.: CBMI 32 Investigating The Bactericidal And Anti-Biofilm Effects Of Naringenin On Enterobacter cloacae

Place: 1

Murphy High School

Grade: 11

Participant: Cary Xiao

Project Cat. and No.: ESSS 4 MADSA: Musical Accuracy Development Using Spectral Analysis

Place: 1

Alabama School of Math and Science

Grade: 10

## **Award: Broadcom Masters**

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### **Junior Division**

Participant: Shivani Babu

Project Cat. and No.: CH 50 Effect Of Temperature On Alum Crystal Formation

Place: 1

Auburn Junior High School

Grade: 8

Participant: Brandon Buck Jr.

Project Cat. and No.: BZ 23 Radiant Radish Seeds

Place: 1

Abbeville Elementary/Middle School

Grade: 6

Participant: Madison Burckhartt

Project Cat. and No.: BZ 24 Saving Lettuce

Place: 1

Clark Shaw Magnet Middle School

Grade: 7

Participant: Mohamed Elimam

Project Cat. and No.: X 174 The Geometry Of Soccer

Place: 1

Islamic Academy of Alabama

Grade: 6

Participant: Sophia Graham

Project Cat. and No.: BE 3 Are You Smarter Than A 7th Grader?

Place: 1

The Altamont School - \*

Grade: 7

Participant: Conner Hill

Project Cat. and No.: E 80 ALL ABOARD! Does Weather Affect MAGLEV Trains?

Place: 1

Hampton Cove Middle School

Grade: 6

Participant: Makaila Jennings

Project Cat. and No.: Z 199 How Star Luminosity Impacts The Identification Of Exoplanets Using Transient Photometry

Place: 1

Key Destiny Academy

Grade: 6

Participant: Naeim Mahjouri

Project Cat. and No.: N 148 Eddy Current Braking System

Place: 1

Auburn Junior High School

Grade: 8

Participant: Hala Mallah

Project Cat. and No.: BE 6 Thoughts On Caffiene

Place: 1

Islamic Academy of Alabama

Grade: 7

Participant: Connor Murphree

Project Cat. and No.: X 176 KEYS TO WISDOM: Do Passwords Get Better Or Worse With Age?

Place: 1

Columbia Elementary School

Grade: 5

Participant: Ethan Peel

Project Cat. and No.: Z 205 Seeing The Unseen

Place: 1

Beverly Magnet School

Grade: 7

Participant: Abigail Renzelman

Project Cat. and No.: E 92 Worming Our Way to Less Wasteful Future (Styrofoam Composting)

Place: 1

Columbia Elementary School

Grade: 5

Participant: Rishab Samant

Project Cat. and No.: CH 60 Choking Cancer: Evaluating Nutraceuticals For The Prevention Of Angiogenesis

Place: 1

Pizitz Middle School

Grade: 8

Participant: Courtney Sides

Project Cat. and No.: ME 120 Stretches Of Strength

Place: 1

Eclectic Middle School

Grade: 8

Participant: Shreya Sunil

Project Cat. and No.: ME 122 Dealing With Diabetes: The Complexities Involved In Developing An Artificial Pancreas

Place: 1

Liberty Middle School

Grade: 8



## **Award: Dauphin Island Sea Lab. - Marine Environmental Sciences Consortium**

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### **Junior Division**

Participant: Nadia Batts

Project Cat. and No.: E 71 Water For Life

Place: 1

Beverly Magnet School

Grade: 7

Participant: Ashwin Prabhakar

Project Cat. and No.: E 91 Multifunctional Biodegradable Polymers For Environmental Applications

Place: **HM**

Discovery Middle School

Grade: 8

### **Senior Division**

Participant: Charity King

Project Cat. and No.: AS 235 Apple Snail Invasion

Place: 1

Murphy High School

Grade: 9

Participant: Shemai'ya Peak

Project Cat. and No.: EA 366 The Greenhouse Effect And The Enhanced Greenhouse Effect: Demonstrating And Analyzing Their Effect On Our Environment

Place: **HM**

Stanhope Elmore High School

Grade: 9

## **Award: Genius Olympiad**

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### **Senior Division**

Participant: Claytin Hutsler

Project Cat. and No.: ECEP 3 Testing Lighting As An Alternative Energy Source

Place: 1

Wetumpka High School

Grade: 12

Participant: Noel Lange

Project Cat. and No.: EE 401 Development Of Innovative Strategies To Protect The Aquatic Environment From Household Plastic Microfibers: Application Of Electrostatic Water Filtration

Place: 1

Auburn High School

Grade: 12

## **Award: Gentry-Tinker Most Creative Scientific Award**

### **Junior Division**

Participant: Salihah Daffin

Project Cat. and No.: E 75 Elastic Plastic

Place: 1

Clark Shaw Magnet Middle School

Grade: 8

### **Senior Division**

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air  
Pollution Particles Remediation With Trees

Place: 1

Hoover High School

Grade: 11

## **Award: Greater Huntsville Rotary**

### **Junior Division**

Participant: Shannon Wilson

Gavin Gentry

Project Cat. and No.: CH 65 What Types Of Salt Have What Amounts Of Ammonia

Place: 1

Coppinville Jr High School - \*

Grade: 8

Participant: Arian Phillips

Project Cat. and No.: Z 206 Burning Tree Nuts

Place: 2

Williams AGT Middle School

Grade: 6

### **Senior Division**

Participant: Haley Donovan

Project Cat. and No.: EA 362 Achroia grisella As Effective Decomposers Of Polyethylene

Place: 1

Wetumpka High School

Grade: 12

Participant: Jayden Vanterpool

Project Cat. and No.: BI 305 Can Nanotechnology Be A Better Method Of Cancer Therapy?

Place: 1

Oakwood Adventist Academy

Grade: 10

## **Award: Huntsville Botanical Gardens**

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### **Junior Division**

Participant: Abhishek Emani

Project Cat. and No.: E 78 Nanosilver Vs. Pond Life: Who Will Win?

Place: **HM**

Liberty Middle School

Grade: 7

Participant: Jordan Jennings

Project Cat. and No.: E 82 The Effectiveness Of Raw Bamboo As A Bio-Insulation

Place: **HM** Replacement For Fiber And Cellulose Insulation And Sustainable Green Building Design

Key Destiny Academy

Grade: 6

Participant: Alexander Skowronski

Project Cat. and No.: BZ 31 Growing In The Desert

Place: **HM**

The Altamont School - \*

Grade: 6

Participant: Jon Stephens

Project Cat. and No.: BZ 32 Don't Mow That Grass

Place: **HM**

Clark Shaw Magnet Middle School

Grade: 6

### **Senior Division**

Participant: Christen Li

Project Cat. and No.: PS 502 How Does NMN Affect Plant Germination?

Place: **1**

Oakwood Adventist Academy

Grade: 10

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air

Place: **HM** Pollution Particles Remediation With Trees

Hoover High School

Grade: 11

## **Award: Huntsville Electro-Optical Society**

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### **Junior Division**

Participant: Ashwin Prabhakar

Project Cat. and No.: E 91 Multifunctional Biodegradable Polymers For Environmental Applications  
Place: 1

Discovery Middle School

Grade: 8

Participant: Ethan Peel

Project Cat. and No.: Z 205 Seeing The Unseen

Place: 2

Beverly Magnet School

Grade: 7

Participant: Shivani Babu

Project Cat. and No.: CH 50 Effect Of Temperature On Alum Crystal Formation

Place: 3

Auburn Junior High School

Grade: 8

Participant: Anna Cress

Project Cat. and No.: Z 195 Fiber Optic Communication

Place: 4

Libertas Classical Community

Grade: 8

## Senior Division

Participant: Jaeyoung Lee

Project Cat. and No.: PH 488 Development Of Single-Input Habitable Zone Formulas

Place: **1**

Auburn High School

Grade: 10

Participant: Eshita Yadav

Project Cat. and No.: MS 473 Formation Of Gold Nanoparticles Using Plasma Treatment

Place: **2**

Hoover High School

Grade: 12

Participant: Zichao Jiang

Project Cat. and No.: RI 522 The Application Of Convolutional Neural Network On Plant Image Classification For Agricultural Weed Removal

Place: **3**

Indian Springs School

Grade: 11

Participant: Abbigail Manscill

Project Cat. and No.: ESSS 4 Innovated Crosswalk For Disabled And Elderly Pedestrians

Place: **3**

Hewitt Trussville High School

Grade: 12

## **Award: IEEE Huntsville Section**

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### **Junior Division**

Participant: Madhushalini Balaji

Project Cat. and No.: X 172 Prediction And Analysis Of Heart Diseases Using Azure

Place: 1 Machine Learning

Liberty Middle School

Grade: 7

Participant: Aisha Diallo

Project Cat. and No.: E 77 Solar Mobile

Place: 1

Islamic Academy of Alabama

Grade: 7

Participant: Naeim Mahjouri

Project Cat. and No.: N 148 Eddy Current Braking System

Place: 1

Auburn Junior High School

Grade: 8

Participant: Luke Minnon

Project Cat. and No.: N 151 Project A.R.C.S. (Algorithmic Robotic Cube Solver)

Place: 1

Libertas Classical Community

Grade: 8

## Senior Division

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping  
Place: 1  
Auburn High School Grade: 10

Participant: Catherine Kung

Project Cat. and No.: MS 470 Creating A Pectin-Based Temperature-Sensitive Artificial Skin  
Place: 1  
Indian Springs School Grade: 9

Participant: Aniket Pant

Project Cat. and No.: MS 471 Novel Applications Of Machine Learning in Ultrafast Optics  
Place: 1  
Jefferson County International Baccalaureate Grade: 11

Participant: Cary Xiao

Project Cat. and No.: ESSS 4 MADSA: Musical Accuracy Development Using Spectral Analysis  
Place: 1  
Alabama School of Math and Science Grade: 10

## **Award: Intel - Excellence in Computer Science**

## Senior Division

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping  
Place: 1  
Auburn High School Grade: 10

Participant: Gabriella Hawkes

Project Cat. and No.: ESSS 4 Using The Class Schedule Optimizer To Transform High School Administration By Leveraging Cloud Computing  
Place: 1  
St. John Paul II Catholic High School Grade: 9

## **Award: ISEF Finalists**

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### **Senior Division**

- Participant: Eesha Banerjee  
Project Cat. and No.: PH 480 Optical Characterization Of Fe And Cr Doped ZnSe And ZnS Polycrystals For Mid-IR Lasing Applications  
Place: 1  
Alabama School of Fine Arts Grade: 11
- Participant: Haley Donovan  
Project Cat. and No.: EA 362 Achroia grisella As Effective Decomposers Of Polyethylene  
Place: 1  
Wetumpka High School Grade: 12
- Participant: Suma Ejantkar Jiho Lee  
Project Cat. and No.: CBMI 32 Finding Bacteriophages To Fight Against Ice-Nucleating Bacteria  
Place: 1  
Auburn High School Grade: 12

## **Award: Junior Grand Awards**

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### **Junior Division**

- Participant: Makaila Jennings  
Project Cat. and No.: Z 199 How Star Luminosity Impacts The Identification Of Exoplanets Using Transient Photometry  
Place: 1  
Key Destiny Academy Grade: 6
- Participant: Connor Murphree  
Project Cat. and No.: X 176 KEYS TO WISDOM: Do Passwords Get Better Or Worse With Age?  
Place: 1  
Columbia Elementary School Grade: 5
- Participant: Arian Phillips  
Project Cat. and No.: Z 206 Burning Tree Nuts  
Place: 1  
Williams AGT Middle School Grade: 6
- Participant: Rishab Samant  
Project Cat. and No.: CH 60 Choking Cancer: Evaluating Nutraceuticals For The Prevention Of Angiogenesis  
Place: 1  
Pizitz Middle School Grade: 8



## **Award: Lemelson Early Inventor Prize**

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### **Junior Division**

Participant: Ta'Janae Clinton

Project Cat. and No.: E 74 Educated Learning Efficient, Cunning, Technical, Robot

Place: 1 Assistant (electra)

Admiral Moorer Middle School

Grade: 8

## **Award: Missile Defense Agency Award**

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### **Junior Division**

Participant: Anna Cress

Project Cat. and No.: Z 195 Fiber Optic Communication

Place: 1

Libertas Classical Community

Grade: 8

Participant: Makaila Jennings

Project Cat. and No.: Z 199 How Star Luminosity Impacts The Identification Of Exoplanets

Place: 1 Using Transient Photometry

Key Destiny Academy

Grade: 6

Participant: Ashwin Prabhakar

Project Cat. and No.: E 91 Multifunctional Biodegradable Polymers For Environmental

Place: 1 Applications

Discovery Middle School

Grade: 8

Participant: William Siao

Project Cat. and No.: E 94 Hone Defense Drone

Place: 1

St. John the Baptist Catholic School

Grade: 7

## Senior Division

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping  
Place: 1  
Auburn High School Grade: 10

Participant: Destinie Diggs

Project Cat. and No.: RI 521 LIAM - The Lowcost Intelligent Anthropomorphic Machine  
Place: 1  
Baldwin County Virtual School Grade: 10

Participant: Louisa Forbes

Project Cat. and No.: EA 363 The Investigation Of Sustainable And Convenient Methods Of Generating Biofuels  
Place: 1  
W.P. Davidson High School Grade: 9

Participant: Victoria Whitehead

Project Cat. and No.: PH 490 G-Force: Angels Making Pilots Go Faster  
Place: 1  
Holy Spirit High School Grade: 9

## **Award: Mu Alpha Theta**

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## Senior Division

Participant: Jaeyoung Lee

Project Cat. and No.: PH 488 Development Of Single-Input Habitable Zone Formulas  
Place: 1  
Auburn High School Grade: 10

Participant: Hayden Pilkinton

Project Cat. and No.: MA 460 Are Crowds Really Wise: Testing The Wisdom Of The Crowd  
Place: 1  
Holy Spirit Catholic High School Grade: 9

## **Award: NASA EARTH System Science Award**

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### **Senior Division**

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air  
Pollution Particles Remediation With Trees  
Place: 1  
Hoover High School Grade: 11

Participant: Noel Lange

Project Cat. and No.: EE 401 Development Of Innovative Strategies To Protect The Aquatic  
Environment From Household Plastic Microfibers: Application Of  
Electrostatic Water Filtration  
Place: 1  
Auburn High School Grade: 12

## **Award: National Aeronautics & Space Administration**

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### **Junior Division**

Participant: Emma Blersch

Project Cat. and No.: Z 193 The Effect Of Land Use On Star Visibility  
Place: 1  
Auburn Junior High School Grade: 8

Participant: Makaila Jennings

Project Cat. and No.: Z 199 How Star Luminosity Impacts The Identification Of Exoplanets  
Using Transient Photometry  
Place: 1  
Key Destiny Academy Grade: 6

## Senior Division

Participant: Javon Jennings

Project Cat. and No.: EM 421 The Impact Of Reflective Parabolic Wing Position To  
Concentrating Solar Energy In A CAD Designed Automated  
Place: 1 Arduino Controlled Solar Tracking Absorption Device  
Key Destiny Academy Grade: 9

Participant: MiKayla Johnson

Project Cat. and No.: PH 487 Investigating Metallicity-Redshift Relations Of Different Masses  
To Star Formation Rate  
Place: 1  
Wetumpka High School Grade: 12

Participant: Jaeyoung Lee

Project Cat. and No.: PH 488 Development Of Single-Input Habitable Zone Formulas  
Place: 1  
Auburn High School Grade: 10

### **Award: National Oceanic and Atmospheric Administration - Taking the Pulse of the Planet Award**

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## Senior Division

Participant: Vivian Isaacson

Project Cat. and No.: EA 364 Rain or Shine  
Place: 1  
St. John Paul II Catholic High School Grade: 9

Participant: Shemai'ya Peak

Project Cat. and No.: EA 366 The Greenhouse Effect And The Enhanced Greenhouse Effect:  
Demonstrating And Analyzing Their Effect On Our Environment  
Place: 1  
Stanhope Elmore High School Grade: 9

## **Award: National Youth Science Foundation Award**

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### **Senior Division**

Participant: Lourdes Rodriguez

Project Cat. and No.: BHTM 2 Phenotypic And Genotypic Comparisons Of Rett Syndrome-Causing Genes: Clinical Observational StudOf Epilepsy In Rett Syndrome  
Place: 1

Mountain Brook High School

Grade: 11

Participant: Vanessa Siggers

Project Cat. and No.: CBMI 32 Investigating The Bactericidal And Anti-Biofilm Effects Of Naringenin On Enterobacter cloacae  
Place: **HM**

Murphy High School

Grade: 11

## **Award: Ricoh Americas Corporation**

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### **Junior Division**

Participant: Jordan Jennings

Project Cat. and No.: E 82 The Effectiveness Of Raw Bamboo As A Bio-Insulation Replacement For Fiber And Cellulose Insulation And Sustainable Green Building Design  
Place: 1

Key Destiny Academy

Grade: 6

### **Senior Division**

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air Pollution Particles Remediation With Trees  
Place: 1

Hoover High School

Grade: 11

## **Award: Rising Star Scientist**

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### **Senior Division**

Participant: Catherine Kung

Project Cat. and No.: MS 470 Creating A Pectin-Based Temperature-Sensitive Artificial Skin  
Place: 1

Indian Springs School

Grade: 9

## **Award: Society for In Vitro Biology**

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### **Senior Division**

Participant: Sai Sumedha Bobba

Project Cat. and No.: BI 300 Development Of A Method Towards The Metabolic Monitoring  
Of TCA Cycle Compounds Using NMR

Place: 1

James Clemens High School

Grade: 11

Participant: Nikitha Sridhar

Project Cat. and No.: BI 304 Pharmacokinetic Modeling Of Invitro Diffusion Rates For  
Antiviral Acyclovi

Place: 1

Auburn High School

Grade: 11

## **Award: Society of American Military Engineers (SAME) - Huntsville Post**

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### **Junior Division**

Participant: Naeim Mahjouri

Project Cat. and No.: N 148 Eddy Current Braking System

Place: 1

Auburn Junior High School

Grade: 8

### **Senior Division**

Participant: Brayden Noh

Project Cat. and No.: ECEP 3 Flexible And High-Powered Supercapacitor From Low-Cost And  
Simple Building Method

Place: 1

Auburn High School

Grade: 10

## **Award: Soil & Water Conservation Society**

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### **Junior Division**

Participant: Rosa Sabel

Project Cat. and No.: E 93

Place: 1

Indian Springs School

Examining The Particulate Composition Of The Indian Springs Community

Grade: 8

Participant: Jordan Jennings

Project Cat. and No.: E 82

Place: **HM**

Key Destiny Academy

The Effectiveness Of Raw Bamboo As A Bio-Insulation Replacement For Fiber And Cellulose Insulation And Sustainable Green Building Design

Grade: 6

### **Senior Division**

Participant: Shemai'ya Peak

Project Cat. and No.: EA 366

Place: 1

Stanhope Elmore High School

The Greenhouse Effect And The Enhanced Greenhouse Effect: Demonstrating And Analyzing Their Effect On Our Environment

Grade: 9

Participant: Trisha Bheemanathini

Carol He and James Downs

Project Cat. and No.: EA 360

Place: **HM**

Alabama School of Fine Arts

The Effects Of Nanosilver On Pond Organisms

Grade: 9

**Award: SPIE - The International Society for Optics & Photonics**

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**Senior Division**

Participant: Aniket Pant

Project Cat. and No.: MS 471 Novel Applications Of Machine Learning in Ultrafast Optics

Place: **1**

Jefferson County International Baccalaureate

Grade: 11

Participant: Catherine Blevins

Project Cat. and No.: PH 482 Capital X: Designing And Testing A Procedure For Building An Inexpensive X-ray Generator

Place: **2**

Covenant Christian Academy

Grade: 11

Participant: Eesha Banerjee

Project Cat. and No.: PH 480 Optical Characterization Of Fe And Cr Doped ZnSe And ZnS Polycrystals For Mid-IR Lasing Applications

Place: **3**

Alabama School of Fine Arts

Grade: 11



## **Award: Stockholm Junior Water Prize**

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### **Senior Division**

Participant: Will Christopher

Project Cat. and No.: EA 361 Keep Toxic Lotion Out Of The Ocean

Place: 1

Patrician Academy

Grade: 10

Participant: Suma Ejantkar

Jiho Lee

Project Cat. and No.: CBMI 32 Finding Bacteriophages To Fight Against Ice-Nucleating Bacteria

Place: 1

Auburn High School

Grade: 12

Participant: Noel Lange

Project Cat. and No.: EE 401 Development Of Innovative Strategies To Protect The Aquatic Environment From Household Plastic Microfibers: Application Of Electrostatic Water Filtration

Place: 1

Auburn High School

Grade: 12

Participant: Marie Mewes

Project Cat. and No.: EE 402 One Drop At A Time: Alternative Water Filtration Solutions Using pH, TDS, And EC Measurements

Place: 1

Holy Spirit Catholic High School

Grade: 9

## **Award: Teledyne Brown Engineering Award**

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### **Junior Division**

Participant: Ashwin Prabhakar

Project Cat. and No.: E 91 Multifunctional Biodegradable Polymers For Environmental Applications

Place: 1

Discovery Middle School

Grade: 8

## Senior Division

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping

Place: 1

Auburn High School

Grade: 10

Participant: Destinie Diggs

Project Cat. and No.: RI 521 LIAM - The Lowcost Intelligent Anthropomorphic Machine

Place: 1

Baldwin County Virtual School

Grade: 10

## **Award: Toyota Motor Manufacturing Company**

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## Junior Division

Participant: Naeim Mahjouri

Project Cat. and No.: N 148 Eddy Current Braking System

Place: 1

Auburn Junior High School

Grade: 8

## Senior Division

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping

Place: 1

Auburn High School

Grade: 10

## **Award: U.S. Air Force**

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## Junior Division

Participant: Anna Cress

Project Cat. and No.: Z 195 Fiber Optic Communication

Place: 1

Libertas Classical Community

Grade: 8

Participant: Samuel Nameniuk

Project Cat. and No.: E 88 Spinning Toward Efficiency

Place: 1

Clark Shaw Magnet Middle School

Grade: 8

## Senior Division

Participant: Destinie Diggs

Project Cat. and No.: RI 521 LIAM - The Lowcost Intelligent Anthropomorphic Machine

Place: 1

Baldwin County Virtual School

Grade: 10

Participant: Gabriella Hawkes

Project Cat. and No.: ESSS 4 Using The Class Schedule Optimizer To Transform High School  
Administration By Leveraging Cloud Computing

Place: 1

St. John Paul II Catholic High School

Grade: 9

## **Award: U.S. Army Science and Engineering Awards Program**

### **Junior Division**

Participant: Shreya Sunil

Project Cat. and No.: ME 122 Dealing With Diabetes: The Complexities Involved In  
Developing An Artificial Pancreas

Place: 1

Liberty Middle School

Grade: 8

Participant: Jasmyn Vanterpool

Project Cat. and No.: CH 63 Can Allium Inhibit Streptococcus And Staphylococcus Hemolytic  
Enzymes/Toxins? (Part 2)

Place: 1

Oakwood Adventist Academy

Grade: 7

Participant: Savannah Ashley

Project Cat. and No.: ME 110 Good Vibez

Place: **HM**

William James Christian School

Grade: 8

Participant: Beau Brister

Project Cat. and No.: BE 1 Spiroglyphic Art: Revealing Images Through Color & Distance

Place: **HM**

Mill Creek Elementary School

Grade: 5

Participant: Beau Brister

Project Cat. and No.: BE 1 Spiroglyphic Art: Revealing Images Through Color & Distance

Place: **HM**

Mill Creek Elementary School

Grade: 5

Participant: Lucine Carsen

Caitlin Cornelius

Project Cat. and No.: ME 111 A Family Affair: Genetic Differences In Family Groups

Place: **HM**

The Altamont School

Grade: 7

Participant: Mary Katherine Gunn

Project Cat. and No.: BE 4 ACT Scores: Do They Matter?

Place: **HM**

Summerdale School

Grade: 8

Participant: Mary Katherine Gunn

Project Cat. and No.: BE 4 ACT Scores: Do They Matter?

Place: **HM**

Summerdale School

Grade: 8

Participant: Gabriel Madrid II  
 Project Cat. and No.: E 85 Which Method Of Water Purification Is More Efficient?  
 Place: **HM**  
 Oakwood Adventist Academy Grade: 7

Participant: Hala Mallah  
 Project Cat. and No.: BE 6 Thoughts On Caffiene  
 Place: **HM**  
 Islamic Academy of Alabama Grade: 7

Participant: Hala Mallah  
 Project Cat. and No.: BE 6 Thoughts On Caffiene  
 Place: **HM**  
 Islamic Academy of Alabama Grade: 7

Participant: Andrew McIntosh  
 Project Cat. and No.: BE 7 The Brain-Body Connection: Can Exercise Really Make Our  
 Brains Work Better?  
 Place: **HM**  
 Oakwood Adventist Academy Grade: 8

Participant: Andrew McIntosh  
 Project Cat. and No.: BE 7 The Brain-Body Connection: Can Exercise Really Make Our  
 Brains Work Better?  
 Place: **HM**  
 Oakwood Adventist Academy Grade: 8

Participant: BreAnn Morris  
 Project Cat. and No.: E 86 Filtering Creek Water  
 Place: **HM**  
 Holtville Middle School Grade: 7

Participant: Hudson Parson  
 Project Cat. and No.: BE 11 Do You See What "Eye See"?  
 Place: **HM**  
 Holtville Middle school Grade: 7

Participant: Hudson Parson  
 Project Cat. and No.: BE 11 Do You See What "Eye See"?  
 Place: **HM**  
 Holtville Middle school Grade: 7

Participant: Rishab Samant

Project Cat. and No.: CH 60

Place: **HM**

Pizitz Middle School

Choking Cancer: Evaluating Nutraceuticals For The Prevention Of Angiogenesis

Grade: 8

Participant: Rishab Samant

Project Cat. and No.: CH 60

Place: **HM**

Pizitz Middle School

Choking Cancer: Evaluating Nutraceuticals For The Prevention Of Angiogenesis

Grade: 8

Participant: William Siao

Project Cat. and No.: E 94

Place: **HM**

St. John the Baptist Catholic School

Hone Defense Drone

Grade: 7

Participant: Clayton Thole

Project Cat. and No.: E 95

Place: **HM**

Veritas Classical School

Blocking The Signal, Part 2

Grade: 8

Participant: Krishna Wilby

Project Cat. and No.: CH 64

Place: **HM**

The Altamont School

Water Fuel

Grade: 6

## Senior Division

Participant: Abhinav Gullapalli

Project Cat. and No.: EE 400 Creating A Java Based Decision Model To Evaluate Air  
Pollution Particles Remediation With Trees  
Place: **1**  
Hoover High School Grade: 11

Participant: Jayden Vanterpool

Project Cat. and No.: BI 305 Can Nanotechnology Be A Better Method Of Cancer Therapy?  
Place: **2**  
Oakwood Adventist Academy Grade: 10

Participant: Cary Xiao

Project Cat. and No.: ESSS 4 MADSA: Musical Accuracy Development Using Spectral Analysis  
Place: **2**  
Alabama School of Math and Science Grade: 10

Participant: Catherine Blevins

Project Cat. and No.: PH 482 Capital X: Designing And Testing A Procedure For Building An  
Inexpensive X-ray Generator  
Place: **HM**  
Covenant Christian Academy Grade: 11

Participant: Luke Burford

Lucas Campbell and Alex Litwin

Project Cat. and No.: EM 420 Gravity Generator  
Place: **HM**  
Hewitt Trussville High School Grade: 12

Participant: Sommer Carnes

Project Cat. and No.: BE 250 Investigation Of Sense Association  
Place: **HM**  
Jefferson County International Baccalaureate Grade: 10

Participant: Sommer Carnes

Project Cat. and No.: BE 250 Investigation Of Sense Association  
Place: **HM**  
Jefferson County International Baccalaureate Grade: 10

Participant: Eric Cheng

Project Cat. and No.: CBMI 32 The Effect Of Inhibition DNA-Protein Kinase And ADP Ribose  
Polymerase On Head And Neck Squamous Cell Carcinoma  
Survivability  
Place: **HM**  
Alabama School of Fine Arts Grade: 12

Participant: Garrison Clark  
Project Cat. and No.: BHTM 2 Recipe For Success: Creatine Monohydrate  
Place: **HM**  
Wetumpka High School Grade: 12

Participant: Benjamin Davis  
Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping  
Place: **HM**  
Auburn High School Grade: 10

Participant: Destinie Diggs  
Project Cat. and No.: RI 521 LIAM - The Lowcost Intelligent Anthropomorphic Machine  
Place: **HM**  
Baldwin County Virtual School Grade: 10

Participant: Haley Donovan  
Project Cat. and No.: EA 362 Achroia grisella As Effective Decomposers Of Polyethylene  
Place: **HM**  
Wetumpka High School Grade: 12

Participant: Javon Jennings  
Project Cat. and No.: EM 421 The Impact Of Reflective Parabolic Wing Position To Concentrating Solar Energy In A CAD Designed Automated Arduino Controlled Solar Tracking Absorption Device  
Place: **HM**  
Key Destiny Academy Grade: 9

Participant: Claire Jun  
Project Cat. and No.: CH 343 Liposome Nanoparticle For The Treatment Of Vascular Diseases  
Place: **HM**  
Hoover High School Grade: 10

Participant: Charity King  
Project Cat. and No.: AS 235 Apple Snail Invasion  
Place: **HM**  
Murphy High School Grade: 9

Participant: Brantley Laney  
Project Cat. and No.: EM 422 Device To Accurately Measure Hydraulic Fluid In Tractors And Utility Vehicles  
Place: **HM**  
Central Freshman Academy - \* Grade: 9



Participant: Arielle Madrid  
 Project Cat. and No.: CH 345 Do Natural Drinks Provide More Electrolytes Than The Leading Brand Sports Drinks?  
 Place: **HM**  
 Oakwood Adventist Academy Grade: 10

Participant: Katherine Malone  
 Project Cat. and No.: BE 253 Effect Of Chronic Pain Stigma On Chronic Low Back Pain  
 Place: **HM**  
 Alabama School of Fine Arts Grade: 12

Participant: Abbigail Manscill  
 Project Cat. and No.: ESSS 4 Innovated Crosswalk For Disabled And Elderly Pedestrians  
 Place: **HM**  
 Hewitt Trussville High School Grade: 12

Participant: Raj Mehta  
 Project Cat. and No.: BHTM 2 The Effect Of Different Dilutions Of Pomegranate Juice, Pineapple Juice, Orange Juice, And Coconut Milk On The Growth Of HT29 And OVCAR8 Cancer Cell Lines  
 Place: **HM**  
 Davidson High School Grade: 12

Participant: Camille Mitchell Krystal Britt  
 Project Cat. and No.: CBMI 32 Let's Talk About DNA!  
 Place: **HM**  
 Northview High School Grade: 9

Participant: Shemai'ya Peak  
 Project Cat. and No.: EA 366 The Greenhouse Effect And The Enhanced Greenhouse Effect: Demonstrating And Analyzing Their Effect On Our Environment  
 Place: **HM**  
 Stanhope Elmore High School Grade: 9

Participant: Veronica Sanders  
 Project Cat. and No.: BHTM 2 The Effectiveness Of Kitchen Disinfectants  
 Place: **HM**  
 Central High School Grade: 12

Participant: Victoria Whitehead  
 Project Cat. and No.: PH 490 G-Force: Angels Making Pilots Go Faster  
 Place: **HM**  
 Holy Spirit High School Grade: 9

Participant: Katherine Wilson

Project Cat. and No.: BHTM 2 Intra-Subject Variability And Nycthemeral Rhythms Of Ocular  
Perfusion Pressure (OPP) As Characterized By 24-Hour  
Place: **HM** Telemetry In Nonhuman Primates (NHPs)  
Alabama School of Fine Arts Grade: 12

## **Award: U.S. Metric Association**

### **Senior Division**

Participant: Brayden Noh

Project Cat. and No.: ECEP 3 Flexible And High-Powered Supercapacitor From Low-Cost And  
Simple Building Method  
Place: **1**  
Auburn High School Grade: 10

Participant: Eshita Yadav

Project Cat. and No.: MS 473 Formation Of Gold Nanoparticles Using Plasma Treatment  
Place: **1**  
Hoover High School Grade: 12

## **Award: U.S. Navy and Marine Corps - Office of Naval Research**

### **Junior Division**

Participant: Madhushalini Balaji

Project Cat. and No.: X 172 Prediction And Analysis Of Heart Diseases Using Azure  
Machine Learning  
Place: **1**  
Liberty Middle School Grade: 7

Participant: Sohana Caplash

Project Cat. and No.: X 173 Robot Sensor Maze  
Place: **1**  
The Altamont School Grade: 6

Participant: Gabriel Madrid II

Project Cat. and No.: E 85 Which Method Of Water Purification Is More Efficient?  
Place: **1**  
Oakwood Adventist Academy Grade: 7

## Senior Division

Participant: Benjamin Davis

Project Cat. and No.: RI 520 Development And Comparison Of Different Pathfinding Algorithms In Obstacle Mapping

Place: 1

Auburn High School

Grade: 10

Participant: Alexis Schelte

Project Cat. and No.: BE 255 A Comparison Of The Goals, Traits, And Mental Health Of Military Children And Civilians

Place: 1

Central High School

Grade: 12

Participant: Victoria Whitehead

Project Cat. and No.: PH 490 G-Force: Angels Making Pilots Go Faster

Place: 1

Holy Spirit High School

Grade: 9

## **Award: U.S. Space and Rocket Center**

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## Junior Division

Participant: Luke Minnon

Project Cat. and No.: N 151 Project A.R.C.S. (Algorithmic Robotic Cube Solver)

Place: 1

Libertas Classical Community

Grade: 8

## Senior Division

Participant: Ryleigh Hamm

Project Cat. and No.: BE 252 Which Way Is Up?

Place: 1

Wetumpka High School

Grade: 11

## **Award: Yale Science and Engineering Association**

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### **Senior Division**

Participant: Catherine Blevins

Project Cat. and No.: PH 482 Capital X: Designing And Testing A Procedure For Building An  
Inexpensive X-ray Generator  
Place: 1

Covenant Christian Academy

Grade: 11

Participant: Lourdes Rodriguez

Project Cat. and No.: BHTM 2 Phenotypic And Genotypic Comparisons Of Rett Syndrome-  
Causing Genes: Clinical Observational StudOf Epilepsy In Rett  
Syndrome  
Place: 1

Mountain Brook High School

Grade: 11