

2017 ALABAMA SCIENCE ENGINEERING FAIR
Special Award Winners

Award: Alabama Modeling and Simulation Council

Junior Division

1 Z 182 **Impello, Sawyer** **John-Paul Doucet**
Blast Off

Indian Springs School

2 N 72 **Nance, Amy**
Breeze by Degrees

Life Christian Academy

3 Z 181 **Forbes, Alexander**
Armor Angle vs Projectile

Indian Springs School

Senior Division

1 EM 481 **Louw, Danika**
Composites: Transforming T-Beams

Holy Spirit Catholic High School

2 EA 437 **Dublin Jr., Brian**
Which Wind-Turbine "Angle" Will Generate the Most Energy, Part 11

Oakwood Adventist Academy

3 MS 522 **Getman, Eli**
Kinetic Monte Carlo Simulation of Ionic Diffusion in II-VI
Semiconductors

Alabama School of Fine Arts

**Award: Alpha Kappa Alpha - Epsilon Gamma Omega
Chapter, Math & Science Committee**

Junior Division

- 1 ME 155 **Madrid, Arielle**
How Does Exercise Affect Blood Glucose Levels?

Oakwood Adventist Academy
- 2 N 81 **Bray, Katelyn**
Nose Cone Impact on Apogee

Hampton Cove Middle School
- 3 E 105 **Hatcher, Haylee**
Going Green As You Clean Are Green Detergents Less Toxic Than
Conventional

Beverlye Magnet School

Senior Division

- 1 EA 433 **Siggers, Vanessa**
Goo Be Gone! : Cleaning Up Oil Spills with Magnets and
Nanotechnology

Murphy High School
- 2 EA 437 **Dublin Jr., Brian**
Which Wind-Turbine "Angle" Will Generate the Most Energy, Part 11

Oakwood Adventist Academy
- 3 EM 483 **Davis, Jeremiah**
How does the Weight of a Missile's Motor Affect its Launch Distance
Underwater?

Oakwood Adventist Academy

Award: American Association of University Women

Senior Division

1 EM 481 **Louw, Danika**
Composites: Transforming T-Beams

Holy Spirit Catholic High School

Award: American Chemical Society - The North Alabama Chapter

Junior Division

- | | | | | |
|-----------|----|----|--|---------------------------------|
| 1 | CH | 43 | Murphree, Joshua
Culture Corners: Enhancing Biofilm Growth Using 3D Printed Surfaces | Liberty Middle School |
| 2 | CH | 48 | Almatubsi, Yasmeen
Got Any Antioxidants? | Islamic Academy of Alabama |
| 3 | CH | 59 | Stefurak, Lane
Just Brew It | Clark Shaw Magnet Middle School |
| HM | CH | 57 | Cole, Olivia
Tutti Frutti: Tropical Enzymes in Action | Hampton Cove Middle School |

Senior Division

- 1 CH 403 **Forbes, Madeleine**
The Synthesis of Potent and Selective Inhibitors of Protein Phosphate
5
W.P. Davidson High School
- 2 CH 411 **Dunbar, Evan** **Aidan Meador-Woodruff**
The Effects of Various Micronutrients on Escherichia Coli
Indian Springs School
- 3 CH 407 **Sridhar, Varsha**
Generalization of the Marcus Model for in vivo Electron Transfer
Jefferson County International Baccala
- 4 BI 344 **Browning, Will**
Oligonucleotide Reduction of MUC5ac and Associated Genes
W.P. Davidson High School

Award: American Institute of Aeronautics and Astronautics

Junior Division

1 N 84 **Robinson, Samuel** **Riley Jordan**
The Effects of 3D Printing on the Aerodynamics of the F-16 Turbine
Fan Blade

Carver Magnet School

Senior Division

1 ECEP 460 **Patel, Deven**
Long Distance Wireless Energy Transferring for Use in Space

Indian Springs School

Award: American Meteorological Society

Junior Division

1 E 108 **Cato, Reid**
Ice Melters

Agape Academy

1 E 112 **Eltoum, Mustafa**
Saving Water: Drip vs. Automatic Irrigation

Islamic Academy of Alabama

1 E 102 **Freeman, Kayleigh**
Dam Those Floodwaters!

Clark Shaw Magnet Middle School

Senior Division

1 EA 430 **Ashley, William**
Aqueous Ozone, A Solution for Clean Drinking Water."Using
dissolveOzone to Reduce Bacteria in Drinking Water"

Cornerstone Christian Academy

1 EA 437 **Dublin Jr., Brian**
Which Wind-Turbine "Angle" Will Generate the Most Energy, Part 11

Oakwood Adventist Academy

1 EE 500 **Smith, Gavin**
Solar-Powered Accessory For Reducing Internal Car Temperature
During The Summer

St. John Paul II Catholic High School

Award: American Physical Society

Junior Division

1 N 78 **Minnon, Luke**
Liquids at Work: A Study of Hydraulics

Decatur Presbyterian Church School

Senior Division

1 PH 550 **Underwood, Stockton**
"How Light Reacts Around Black Holes"

Wetumpka High School

Award: American Psychological Association

Junior Division

1 BE 7 **Laubenthal, Claire**
Picture Perfect?

Holy Spirit Catholic School

Senior Division

1 BE 327 **Prevost, Bethany**
Cursive vs. Print: The Effects of Writing Style on Reading Speed and
Comprehension

Covenant Christian Academy

Award: American Society of Microbiology

Senior Division

1 CBMI 540

Jeong, Leanne

Tracking of Seasonal Changes of Specific Pathogenic Bacteria
Around Mobile Bay

Alabama School of Mathematics and S

**Award: Arizona State University - Walton Sustainability
Solutions Initiatives**

Senior Division

- 1 EA 430 **Ashley, William**
Aqueous Ozone, A Solution for Clean Drinking Water."Using
dissolveOzone to Reduce Bacteria in Drinking Water"

Cornerstone Christian Academy
- 1 CBMI 540 **Jeong, Leanne**
Tracking of Seasonal Changes of Specific Pathogenic Bacteria
Around Mobile Bay

Alabama School of Mathematics and S
- 1 BHTM 352 **Riggs, Sharee**
Food for the Future: A Study of Insects as a Protein Source

Wetumpka High School
- 1 CH 407 **Sridhar, Varsha**
Generalization of the Marcus Model for in vivo Electron Transfer

Jefferson County International Baccala

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

Junior Division

1 Z 194 **Crocker, Andrew**
Stealthy Shapes

Rainbow Elementary School

1 X 131 **Davis, Benjamin**
Changing Your Location With A Pringles Can?

Auburn Junior High School

Senior Division

1 RI 590 **Dotson, Mackenzie**
Assistive Technology for Quadriplegic Individuals: Voice Commanded
Motorized Wheelchair

Hewitt Trussville High School

1 EE 500 **Smith, Gavin**
Solar-Powered Accessory For Reducing Internal Car Temperature
During The Summer

St. John Paul II Catholic High School

Award: ASEF Directors Award, UA Huntsville

Senior Division

- 1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School
- 1 CBMI 385 **Dey, Nandita**
The Effect of Bitter Melon (*Momordica charantia*) on Melanoma
Cancer Cells in vitro

W.P. Davidson High School
- 1 BECB 420 **Lakhanpal, Amrita**
Meta-Analysis of Microarray Profiling Data to Investigate the Effect of
Chemotherapeutic Drugs on Gene Expression in Cancerous Cells

The Altamont School
- 1 BHTM 352 **Riggs, Sharee**
Food for the Future: A Study of Insects as a Protein Source

Wetumpka High School

Award: ASM Materials Education Foundation

Junior Division

1 N 82 **Mendoza, Kenduie**
Radon Gas?

Grace Lutheran School

Senior Division

1 MS 523 **Lynn, Lucas**
Shear Radial Strength: Combining Web Geometry with Shear
Thickening Fluids to Create a Better Body Armor

Wetumpka High School

Award: Association for Women Geoscientists

Junior Division

1 E 115 **Hackett, Georgie**
What's in your dirt?

Nichols-Lawson Middle School

Senior Division

1 CBMI 540 **Jeong, Leanne**
Tracking of Seasonal Changes of Specific Pathogenic Bacteria
Around Mobile Bay

Alabama School of Mathematics and S

Award: Association of Energy Engineers (AEE)

Junior Division

1 N 83 **Jennings, Javon**
Solar Revolution: Using the Sun for a More Efficient Solar Cooker

Key Destiny Academy

1 E 111 **Skrabanek, Emily**
Resisting the Flow

Rainbow Elementary School

Senior Division

1 EM 484 **Han, Rebecca**
Rapid Infrared Annealing for Fabrication of Perovskite Solar Cells

Northridge High School

1 EM 481 **Louw, Danika**
Composites: Transforming T-Beams

Holy Spirit Catholic High School

1 ECEP 460 **Patel, Deven**
Long Distance Wireless Energy Transferring for Use in Space

Indian Springs School

1 ECEP 453 **Patel, Bela**
Emerging Energy of the Future: An Organic Approach

Indian Springs School

1 EE 500 **Smith, Gavin**
Solar-Powered Accessory For Reducing Internal Car Temperature
During The Summer

St. John Paul II Catholic High School

Award: Award for Positive Community Impact

Senior Division

- 1 EA 430 **Ashley, William**
Aqueous Ozone, A Solution for Clean Drinking Water."Using
dissolveOzone to Reduce Bacteria in Drinking Water"

Cornerstone Christian Academy
- 1 BI 342 **Blacksher, Kelly**
The Effect of Ocean Acidification on Crassostrea virginica Oyster
Reef Development

W.P. Davidson High School
- 1 EE 501 **Jones, Alexis**
The Development of an Algorithm Through the Assessment of
Nutrients in a Recycled Food Supplement for Canines To Reduce
Waste

Auburn High School

Award: BioGENEius Challenge

Senior Division

- 1 EA 430 **Ashley, William**
Aqueous Ozone, A Solution for Clean Drinking Water: "Using
dissolveOzone to Reduce Bacteria in Drinking Water"

Cornerstone Christian Academy
- 1 CBMI 386 **Lim, Jamie**
The Synergistic Effect of Imatinib and Allicin: A Potential Therapeutic
for BCR-ABL1-positive Leukemia

Murphy High School
- 1 BHTM 352 **Riggs, Sharee**
Food for the Future: A Study of Insects as a Protein Source

Wetumpka High School
- 1 EA 433 **Siggers, Vanessa**
Goo Be Gone! : Cleaning Up Oil Spills with Magnets and
Nanotechnology

Murphy High School

Award: Boeing BR&T

Junior Division

- 1 N 81 **Bray, Katelyn**
Nose Cone Impact on Apogee

Hampton Cove Middle School
- 1 BZ 31 **Damon, Ryan**
Plants are Soil's Best Friend

Hampton Cove Middle School
- 1 Z 195 **Kaplan, Kyle**
The Effects of Aerodynamics on a Falling Object

Duran North Junior High
- 1 N 84 **Robinson, Samuel** **Riley Jordan**
The Effects of 3D Printing on the Aerodynamics of the F-16 Turbine
Fan Blade

Carver Magnet School
- 1 N 88 **Sharp, Dawson**
Penny Power

Grace Lutheran School
- 1 ME 117 **Steinman, Isadola**
Phinding Phages: Searching for Viruses in the Environment

The Altamont School

Senior Division

- 1 EM 483 **Davis, Jeremiah**
How does the Weight of a Missile's Motor Affect its Launch Distance Underwater?

Oakwood Adventist Academy
- 1 EA 433 **Siggers, Vanessa**
Goo Be Gone! : Cleaning Up Oil Spills with Magnets and Nanotechnology

Murphy High School

Award: Boeing Company

Junior Division

1 BE	12	Akins, Willa Bunny Bias & Chinchilla Choices: A Look at Confirmation Bias	Hilltop Montessori School
1 Z	191	Hur, Grace Showering With Copper Zinc KDF-55	Mill Creek
1 N	71	Lodree, Aaron Aerodynamics of a Car	Holy Spirit Catholic School
1 BZ	29	Mewes, Marie What Does CO2 REALLY Do?	Holy Spirit Catholic School
1 CH	50	Nasser, Amro Pants On Fire	Huffman Middle School
1 ME	163	Prabhakar, Ashwin Arduuino and Thermoplastic Polymer Based Fluidic DNA Sensor	Rainbow Elementary School
1 X	132	Shurtz, Ryan Cracking the Cube	Rainbow Elementary School
1 E	111	Skrabanek, Emily Resisting the Flow	Rainbow Elementary School

Senior Division

- 1 ESSS 611 **Alexander, Kayleigh**
Verifying Loop Termination of Java "for" Loops

Alabama School of Fine Arts
- 1 AS 301 **Boardwine, Ali**
Leads In Equine Prosthetics

Elmore County High School
- 1 BECB 370 **Breithaupt, Therese**
Helping Hand

St. John Paul II Catholic High School
- 1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School
- 1 ESSS 454 **Guo, Sophie**
Gold Nanodisk Plasmonic Biochemical Sensor for Food Safety
Monitoring

James Clemens High School
- 1 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy
- 1 BE 321 **Huang, Tyler**
Central Nervous System Sensitization is Associated with Chronic Pain
in HIV

Alabama School of Fine Arts
- 1 CBMI 540 **Jeong, Leanne**
Tracking of Seasonal Changes of Specific Pathogenic Bacteria
Around Mobile Bay

Alabama School of Mathematics and S

1	EE	501	Jones, Alexis The Development of an Algorithm Through the Assessment of Nutrients in a Recycled Food Supplement for Canines To Reduce Waste Auburn High School
1	BECB	420	Lakhanpal, Amrita Meta-Analysis of Microarray Profiling Data to Investigate the Effect of Chemotherapeutic Drugs on Gene Expression in Cancerous Cells The Altamont School
1	EA	431	Lange, Noel Factors Effecting the Discharge of Micro-Plastic Fibers from Household Laundry Auburn High School
1	CBMI	386	Lim, Jamie The Synergistic Effect of Imatinib and Allicin: A Potential Therapeutic for BCR-ABL1-positive Leukemia Murphy High School
1	EM	481	Louw, Danika Composites: Transforming T-Beams Holy Spirit Catholic High School
1	PS	573	McCormick, Alexander Hyper Hydroponics St. John Paul II Catholic High School
1	MS	521	Morse, Evan Biodegradable Fish Hook Hewitt Trussville High School
1	BHTM	353	Naylor, Nicole Selective Ablation of Dehydrodolichyl Diphosphate Synthase (Dhdds) Expression in the RPE Decreases Acuity, Sensitivity, and Photoresponse of Photoreceptors Alabama School of Mathematics and S

- 1 ECEP 453 **Patel, Bela**
Emerging Energy of the Future: An Organic Approach

Indian Springs School
- 1 ECEP 460 **Patel, Deven**
Long Distance Wireless Energy Transferring for Use in Space

Indian Springs School
- 1 BI 341 **Sadanand, Karthik**
ClpP: A Novel Target for Antibacterial Drug Discovery

Alabama School of Fine Arts
- 1 BHTM 621 **Schsaetzle, Emma**
Magic Mirror

Holy Spirit Catholic High School
- 1 CH 407 **Sridhar, Varsha**
Generalization of the Marcus Model for in vivo Electron Transfer

Jefferson County International Baccala

Award: Boeing Engineers Award

Junior Division

1 X	134	Elimam, Elamin Don't Feed the Phish	Islamic Academy of Alabama
1 N	70	Gordon, Gabriel 3D "Hologram" Effect: An iPad Reflection Illusion	Life Christian Academy
1 CH	46	Kung, Catherine Glucose, Glucose, Everywhere!	Holy Spirit Catholic School
1 X	130	Patterson, Hannah Algebraic Hot Spots	Clark Shaw Magnet Middle School
1 Z	189	Smith, Carrie Reversing Chlorine: Swimmer's Shampoo vs. Shampoo	Beverlye Magnet School

Senior Division

- 1 CBMI 381 **Baird, Katelin**
Drosophila Melanogaster's Mutant Reaction to UV Radiation with a Link to the p53 Gene

James Clemens High School
- 1 RI 590 **Dotson, Mackenzie**
Assistive Technology for Quadriplegic Individuals: Voice Commanded Motorized Wheelchair

Hewitt Trussville High School
- 1 CBMI 384 **Jiao, Kenneth**
Retain CHD7, an Epigenetic Regulator, in the Nucleus to Combat Breast Cancer Metastasis

Indian Springs School
- 1 EA 434 **Knight, Margaret**
Impact of Ocean Acidification on Relative Fitness and Interspecies Interactions of Picophytoplankton

Alabama School of Fine Arts
- 1 BHTM 352 **Riggs, Sharee**
Food for the Future: A Study of Insects as a Protein Source

Wetumpka High School
- 1 BHTM 620 **Srivastava, Hemant**
ABT263 (Navitoclax) and the IPF-Treatment Drugs for a Healthier Aging

Alabama School of Fine Arts

Award: Boeing SLS Award

Junior Division

1 Z 182 **Impello, Sawyer**
Blast Off

John-Paul Doucet

Indian Springs School

Award: Broadcom Masters

Junior Division

1 CH	51	Aishah, Obada Peels for Wheels	Islamic Academy of Alabama
1 BZ	24	Alford, MaKensey Don't Cross the Line	Phillips Preparatory School
1 BE	6	Blevins, Allison Mixed Messages: How Sensory Input Affects Equilibrium	Decatur Presbyterian Church School
1 Z	194	Crocker, Andrew Stealthy Shapes	Rainbow Elementary School
1 X	134	Elimam, Elamin Don't Feed the Phish	Islamic Academy of Alabama
1 E	112	Eltoum, Mustafa Saving Water: Drip vs. Automatic Irrigation	Islamic Academy of Alabama
1 ME	151	Jasser, Ahmad Curing Funky Feet	Islamic Academy of Alabama
1 CH	46	Kung, Catherine Glucose, Glucose, Everywhere!	Holy Spirit Catholic School

1 BE	7	Laubenthal, Claire Picture Perfect?	
			Holy Spirit Catholic School
1 N	78	Minnon, Luke Liquids at Work: A Study of Hydraulics	
			Decatur Presbyterian Church School
1 X	130	Patterson, Hannah Algebraic Hot Spots	
			Clark Shaw Magnet Middle School
1 BZ	22	Poston, Ella Chlorantraniliprole Effect on Corn Seedling Emergence	
			Covenant Christian Academy
1 ME	163	Prabhakar, Ashwin Arduuino and Thermoplastic Polymer Based Fluidic DNA Sensor	
			Rainbow Elementary School
1 N	84	Robinson, Samuel The Effects of 3D Printing on the Aerodynamics of the F-16 Turbine Fan Blade	Riley Jordan
			Carver Magnet School
1 E	110	Vilardi, Julian Nuisance or Not? Phase 2 "Wood" New Additives Make a Difference?	
			Wetumpka Middle School

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

Junior Division

1 CH	47	Clark, Andrew Go With Flow	Muscle Shoals Middle School
1 E	114	Patil, Suhas Solar Powered Desalination	Clark Shaw Magnet Middle School
HM BZ	21	Darrough, Sophia Barnacle Growth	Clark Shaw Magnet Middle School
HM CH	44	Maher, Matthew Does SPF Matter?	Hampton Cove Middle School
Senior Division			
1 EA	433	Siggers, Vanessa Goo Be Gone! : Cleaning Up Oil Spills with Magnets and Nanotechnology	Murphy High School
HM CBMI	540	Jeong, Leanne Tracking of Seasonal Changes of Specific Pathogenic Bacteria Around Mobile Bay	Alabama School of Mathematics and S

Award: Dr. and Mrs. Graeme Duthie Award

Junior Division

1 N 78 **Minnon, Luke**
Liquids at Work: A Study of Hydraulics

Decatur Presbyterian Church School

Award: Greater Huntsville Rotary

Junior Division

1 N 84 **Robinson, Samuel** **Riley Jordan**
The Effects of 3D Printing on the Aerodynamics of the F-16 Turbine
Fan Blade

Carver Magnet School

2 CH 44 **Maher, Matthew**
Does SPF Matter?

Hampton Cove Middle School

Senior Division

1 RI 590 **Dotson, Mackenzie**
Assistive Technology for Quadriplegic Individuals: Voice Commanded
Motorized Wheelchair

Hewitt Trussville High School

2 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy

Award: Huntsville Botanical Gardens

Junior Division

- 1 BZ 31 **Damon, Ryan**
Plants are Soil's Best Friend

Hampton Cove Middle School
- 1 E 115 **Hackett, Georgie**
What's in your dirt?

Nichols-Lawson Middle School
- 1 E 103 **Mohamed, Amer**
From Trash to Gas

Islamic Academy of Alabama
- 1 BZ 22 **Poston, Ella**
Chlorantraniliprole Effect on Corn Seedling Emergence

Covenant Christian Academy

Senior Division

- 1 EA 432 **Hutsler, Clayton**
Filtering Turbidity of Silt Out of Water

Wetumpka High School
- 1 PS 573 **McCormick, Alexander**
Hyper Hydroponics

St. John Paul II Catholic High School

Award: Huntsville Electro-Optical Society

Junior Division

1 ME 165 **Nameniuk, Zachary**
Dye'n for Blue

Clark Shaw Magnet Middle School

2 N 83 **Jennings, Javon**
Solar Revolution: Using the Sun for a More Efficient Solar Cooker

Key Destiny Academy

Award: IEEE Huntsville Section

Junior Division

- | | | | |
|-----|-----|--|----------------------------|
| 1 N | 81 | Bray, Katelyn
Nose Cone Impact on Apogee | Hampton Cove Middle School |
| 1 E | 112 | Eltoum, Mustafa
Saving Water: Drip vs. Automatic Irrigation | Islamic Academy of Alabama |
| 1 N | 88 | Sharp, Dawson
Penny Power | Grace Lutheran School |
| 1 N | 86 | Tetrault, Elena
Building a Better Household Robot by Sensing Our World | Hampton Cove Middle School |

Senior Division

1 BECB 370 **Breithaupt, Therese**
Helping Hand

St. John Paul II Catholic High School

1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School

1 RI 590 **Dotson, Mackenzie**
Assistive Technology for Quadriplegic Individuals: Voice Commanded
Motorized Wheelchair

Hewitt Trussville High School

1 ESSS 451 **Van Houten, Maya**
Epi-Phone Auto-Locator

Covenant Christian Academy

Award: Intel - Excellence in Computer Science

Senior Division

1 ESSS 611

Alexander, Kayleigh

Verifying Loop Termination of Java "for" Loops

Alabama School of Fine Arts

1 ESSS 455

Lall, Rahul

Battery System Optimization and Development of a Novel Rapid-Response Bioelectronics Device

Auburn High School

Award: International Sustainable World (I-SWEEEP)

Senior Division

1 ESSS 455

Lall, Rahul

Battery System Optimization and Development of a Novel Rapid-Response Bioelectronics Device

Auburn High School

HM EA 431

Lange, Noel

Factors Effecting the Discharge of Micro-Plastic Fibers from Household Laundry

Auburn High School

Award: ISEF Finalists

Senior Division

- 1 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy
- 1 EA 431 **Lange, Noel**
Factors Effecting the Discharge of Micro-Plastic Fibers from
Household Laundry

Auburn High School
- 1 MS 523 **Lynn, Lucas**
Shear Radial Strength: Combining Web Geometry with Shear
Thickening Fluids to Create a Better Body Armor

Wetumpka High School
- 1 BHTM 620 **Srivastava, Hemant**
ABT263 (Navitoclax) and the IPF-Treatment Drugs for a Healthier
Aging

Alabama School of Fine Arts

Award: Junior Grand Awards

Junior Division

- | | | | |
|------|-----|---|------------------------------------|
| 1 CH | 46 | Kung, Catherine
Glucose, Glucose, Everywhere! | |
| | | | Holy Spirit Catholic School |
| 1 N | 78 | Minnon, Luke
Liquids at Work: A Study of Hydraulics | |
| | | | Decatur Presbyterian Church School |
| 1 ME | 163 | Prabhakar, Ashwin
Arduuino and Thermoplastic Polymer Based Fluidic DNA Sensor | |
| | | | Rainbow Elementary School |
| 1 N | 84 | Robinson, Samuel
The Effects of 3D Printing on the Aerodynamics of the F-16 Turbine Fan Blade | Riley Jordan |
| | | | Carver Magnet School |

Award: Mu Alpha Theta

Senior Division

- | | | | |
|------|-----|---|-----------------------------|
| 1 MS | 522 | Getman, Eli
Kinetic Monte Carlo Simulation of Ionic Diffusion in II-VI Semiconductors | Alabama School of Fine Arts |
| 1 PH | 555 | Honeycutt, Tucker
Astronomical Image Processing | Covenant Christian Academy |

Award: NASA EARTH System Science Award

Senior Division

- 1 BI 342 **Blacksher, Kelly**
The Effect of Ocean Acidification on Crassostrea virginica Oyster
Reef Development

W.P. Davidson High School
- 1 EA 434 **Knight, Margaret**
Impact of Ocean Acidification on Relative Fitness and Interspecies
Interactions of Picophytoplankton

Alabama School of Fine Arts

Award: National Aeronautics & Space Administration

Junior Division

1 N 81 **Bray, Katelyn**
Nose Cone Impact on Apogee

Hampton Cove Middle School

Senior Division

1 EM 483 **Davis, Jeremiah**
How does the Weight of a Missile's Motor Affect its Launch Distance Underwater?

Oakwood Adventist Academy

1 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy

1 ECEP 460 **Patel, Deven**
Long Distance Wireless Energy Transferring for Use in Space

Indian Springs School

1 PH 550 **Underwood, Stockton**
"How Light Reacts Around Black Holes"

Wetumpka High School

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

Senior Division

- 1 BI 342 **Blacksher, Kelly**
The Effect of Ocean Acidification on Crassostrea virginica Oyster
Reef Development

W.P. Davidson High School
- 1 EA 434 **Knight, Margaret**
Impact of Ocean Acidification on Relative Fitness and Interspecies
Interactions of Picophytoplankton

Alabama School of Fine Arts

Award: National Youth Science Foundation Award

Senior Division

1 EE 501

Jones, Alexis

The Development of an Algorithm Through the Assessment of
Nutrients in a Recycled Food Supplement for Canines To Reduce
Waste

Auburn High School

Award: Ricoh Americas Corporation

Senior Division

1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School

Award: Society for In Vitro Biology

Senior Division

- 1 CBMI 384 **Jiao, Kenneth**
Retain CHD7, an Epigenetic Regulator, in the Nucleus to Combat
Breast Cancer Metastasis

Indian Springs School
- 1 CBMI 386 **Lim, Jamie**
The Synergistic Effect of Imatinib and Allicin: A Potential Therapeutic
for BCR-ABL1-positive Leukemia

Murphy High School

Award: Soil & Water Conservation Society

Junior Division

1 E 113 **Davis, Jeb**
Soil Erosion

Excel High School

1 E 112 **Eltoum, Mustafa**
Saving Water: Drip vs. Automatic Irrigation

Islamic Academy of Alabama

Senior Division

1 EA 430 **Ashley, William**
Aqueous Ozone, A Solution for Clean Drinking Water. "Using
dissolveOzone to Reduce Bacteria in Drinking Water"

Cornerstone Christian Academy

1 EA 435 **Weldon, Joshua**
The Effect of Land Developments of Phosphorus Pollution in Water

Shoals Christian School

Award: SPIE - The International Society for Optics & Photonics

Junior Division

- 1 X 130 **Patterson, Hannah**
Algebraic Hot Spots

Clark Shaw Magnet Middle School
- 2 Z 194 **Crocker, Andrew**
Stealthy Shapes

Rainbow Elementary School
- 3 N 83 **Jennings, Javon**
Solar Revolution: Using the Sun for a More Efficient Solar Cooker

Key Destiny Academy

Senior Division

- 1 ESSS 454 **Guo, Sophie**
Gold Nanodisk Plasmonic Biochemical Sensor for Food Safety Monitoring

James Clemens High School
- 2 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy
- 3 PH 553 **Blevins, Catherine**
Interpreting Light: Exploring the Emission Spectrum

Decatur Presbyterian Church School

Award: Stockholm Junior Water Prize

Junior Division

1 E 113 **Davis, Jeb**
Soil Erosion

Excel High School

1 E 112 **Eltoum, Mustafa**
Saving Water: Drip vs. Automatic Irrigation

Islamic Academy of Alabama

1 E 101 **Singireddy, Keerthan**
Can Nanotechnology Help Clean Up Oil Spills?

Mill Creek

Senior Division

1 EA 434 **Knight, Margaret**
Impact of Ocean Acidification on Relative Fitness and Interspecies
Interactions of Picophytoplankton

Alabama School of Fine Arts

1 CBMI 541 **Lockett, Paul**
Whats in My Water

Murphy High School

1 EA 435 **Weldon, Joshua**
The Effect of Land Developments of Phosphorus Pollution in Water

Shoals Christian School

Award: Teledyne Brown Engineering Award

Junior Division

1 CH 46

Kung, Catherine

Glucose, Glucose, Everywhere!

Holy Spirit Catholic School

Senior Division

1 EE 501

Jones, Alexis

The Development of an Algorithm Through the Assessment of
Nutrients in a Recycled Food Supplement for Canines To Reduce
Waste

Auburn High School

1 EM 481

Louw, Danika

Composites: Transforming T-Beams

Holy Spirit Catholic High School

Award: Tennessee Valley Authority

Junior Division

- | | | | |
|-----|-----|---|--|
| 1 E | 112 | Eltoum, Mustafa
Saving Water: Drip vs. Automatic Irrigation | Islamic Academy of Alabama |
| 1 E | 102 | Freeman, Kayleigh
Dam Those Floodwaters! | Clark Shaw Magnet Middle School |
| 1 N | 83 | Jennings, Javon
Solar Revolution: Using the Sun for a More Efficient Solar Cooker | Key Destiny Academy |
| 1 N | 78 | Minnon, Luke
Liquids at Work: A Study of Hydraulics | Decatur Presbyterian Church School |
| 1 N | 88 | Sharp, Dawson
Penny Power | Grace Lutheran School |
| 1 N | 87 | Siao, John
Charging Batteries with Shoes | St. John's the Baptist Catholic School |

Senior Division

- 1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School
- 1 ESSS 455 **Lall, Rahul**
Battery System Optimization and Development of a Novel Rapid-
Response Bioelectronics Device

Auburn High School
- 1 EA 431 **Lange, Noel**
Factors Effecting the Discharge of Micro-Plastic Fibers from
Household Laundry

Auburn High School
- 1 EM 481 **Louw, Danika**
Composites: Transforming T-Beams

Holy Spirit Catholic High School
- 1 MS 521 **Morse, Evan**
Biodegradable Fish Hook

Hewitt Trussville High School
- 1 EE 500 **Smith, Gavin**
Solar-Powered Accessory For Reducing Internal Car Temperature
During The Summer

St. John Paul II Catholic High School

Award: Toyota Motor Manufacturing Company

Junior Division

1 N 84 **Robinson, Samuel** **Riley Jordan**
The Effects of 3D Printing on the Aerodynamics of the F-16 Turbine
Fan Blade

Carver Magnet School

Senior Division

1 EM 482 **Fox, Christopher**
Differences in Liquid Penetration Lengths of E85 and Gasoline

Alabama School of Fine Arts

Award: U.S. Air Force

Senior Division

- 1 EM 483 **Davis, Jeremiah**
How does the Weight of a Missile's Motor Affect its Launch Distance Underwater?

Oakwood Adventist Academy
- 1 EM 482 **Fox, Christopher**
Differences in Liquid Penetration Lengths of E85 and Gasoline

Alabama School of Fine Arts
- 1 MS 523 **Lynn, Lucas**
Shear Radial Strength: Combining Web Geometry with Shear Thickening Fluids to Create a Better Body Armor

Wetumpka High School
- 1 EA 438 **Shauku, ZO**
Electromagnetic Radiation: Maybe Not So Rad!

Heritage Academy

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

Junior Division

HM	CH	48	Almatubsi, Yasmeen Got Any Antioxidants? Islamic Academy of Alabama
HM	BE	4	Barfield, Lindsay How Science is Helping Save the Honeybee Excel High School
HM	BE	6	Blevins, Allison Mixed Messages: How Sensory Input Affects Equilibrium Decatur Presbyterian Church School
HM	X	131	Davis, Benjamin Changing Your Location With A Pringles Can? Auburn Junior High School
HM	N	70	Gordon, Gabriel 3D "Hologram" Effect: An iPad Reflection Illusion Life Christian Academy
HM	CH	46	Kung, Catherine Glucose, Glucose, Everywhere! Holy Spirit Catholic School
HM	ME	155	Madrid, Arielle How Does Exercise Affect Blood Glucose Levels? Oakwood Adventist Academy
HM	X	137	Mayalagu, Prabenjan Safer Software Academy for Gifted and Talented

HM N 82 **Mendoza, Kenduie**
Radon Gas?

Grace Lutheran School

HM BZ 29 **Mewes, Marie**
What Does CO2 REALLY Do?

Holy Spirit Catholic School

HM E 103 **Mohamed, Amer**
From Trash to Gas

Islamic Academy of Alabama

HM Z 190 **Sunil, Shreya**
Safeguard Your Identity: Don't Let Them Scan You What Metals
(Metals and Non Metals) That Can Block an RFID Signal From
Distance Away and Does the Size of the Material Matter

Columbia Elementary School

Senior Division

- 1 RI 590 **Dotson, Mackenzie**
Assistive Technology for Quadriplegic Individuals: Voice Commanded Motorized Wheelchair
Hewitt Trussville High School
- 1 MS 523 **Lynn, Lucas**
Shear Radial Strength: Combining Web Geometry with Shear Thickening Fluids to Create a Better Body Armor
Wetumpka High School
- HM AS 308 **Boyer, Dianna**
Fish Memory and Cognitive Skill
St. John Paul II Catholic High School
- HM EM 483 **Davis, Jeremiah**
How does the Weight of a Missile's Motor Affect its Launch Distance Underwater?
Oakwood Adventist Academy
- HM AS 306 **Eiland, Sydney**
Sunny Side Up
Davidson High School
- HM PS 570 **Eltoum, Wamda**
Cinnamon acts as a Rooting Hormone: Hydrophilic or Hydrophobic
Islamic Academy of Alabama
- HM BHTM 356 **Ferrante, Luke**
The Effects of Beets on Endurance
St. John Paul II Catholic High School
- HM RI 592 **Hall, Claude**
The Future Simulation of Mathworks and Simulink
WP Davidson High School

HM PH	551	Johnson, Kelsey Catch 32	Henry Pitts
			Holy Spirit Catholic High School
HM PH	551	Johnson, Kelsey Catch 32	Henry Pitts
			Holy Spirit Catholic High School
HM EE	501	Jones, Alexis The Development of an Algorithm Through the Assessment of Nutrients in a Recycled Food Supplement for Canines To Reduce Waste	
			Auburn High School
HM AS	305	Lee, Jiho The Affects of Macronutrients on Plants	Suma Ejantkar
			Auburn High School
HM AS	305	Lee, Jiho The Affects of Macronutrients on Plants	Suma Ejantkar
			Auburn High School
HM CBMI	386	Lim, Jamie The Synergistic Effect of Imatinib and Allicin: A Potential Therapeutic for BCR-ABL1-positive Leukemia	
			Murphy High School
HM BI	341	Sadanand, Karthik ClpP: A Novel Target for Antibacterial Drug Discovery	
			Alabama School of Fine Arts
HM ECEP	461	Sinak, Samantha The Effect of Various Materials on the Conductivity of a Thermoelectric Generator	
			Jefferson County International Baccala

HM BE 322 **Smith, Brittany**
Do You See What I See?

Brionna Lashae Smith

Stanhope Elmore High School

HM BE 322 **Smith, Brittany**
Do You See What I See?

Brionna Lashae Smith

Stanhope Elmore High School

Award: U.S. Metric Association

Senior Division

1 PH 553 **Blevins, Catherine**
Interpreting Light: Exploring the Emission Spectrum

Decatur Presbyterian Church School

1 EM 482 **Fox, Christopher**
Differences in Liquid Penetration Lengths of E85 and Gasoline

Alabama School of Fine Arts

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

Junior Division

- HM N** 81 **Bray, Katelyn**
Nose Cone Impact on Apogee

Hampton Cove Middle School
- HM Z** 181 **Forbes, Alexander**
Armor Angle vs Projectile

Indian Springs School
- HM N** 86 **Tetrault, Elena**
Building a Better Household Robot by Sensing Our World

Hampton Cove Middle School

Senior Division

- HM EM** 483 **Davis, Jeremiah**
How does the Weight of a Missile's Motor Affect its Launch Distance Underwater?

Oakwood Adventist Academy
- HM EM** 481 **Louw, Danika**
Composites: Transforming T-Beams

Holy Spirit Catholic High School
- HM MS** 523 **Lynn, Lucas**
Shear Radial Strength: Combining Web Geometry with Shear Thickening Fluids to Create a Better Body Armor

Wetumpka High School

Award: U.S. Space and Rocket Center

Junior Division

1 X 136 **Naser, Talal**
Raising The Bars

Islamic Academy Of Alabama

Senior Division

1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School

Award: Von Braun Astronomical Society

Senior Division

1 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy

1 PH 555 **Honeycutt, Tucker**
Astronomical Image Processing

Covenant Christian Academy

Award: Yale Science and Engineering Association

Senior Division

1 RI 591 **Dennis, John**
The Design of a Cost-Effective and Efficient Rover for the Pollination
of Cash Crops

Wetumpka High School

1 ESSS 454 **Guo, Sophie**
Gold Nanodisk Plasmonic Biochemical Sensor for Food Safety
Monitoring

James Clemens High School