

2011 Alabama Science & Engineering Fair

Special Awards

Alabama Geological Society Award

Junior Division

1st, Rowan El-Qishawi, Islamic Academy of Alabama
"Alabama Shores ... Are you cured?"

2nd, Claire Gibson, Westminster Christian Academy
"How Hard is the Water in Our Area? An Environmental Study"

3rd, Hailey Ravine, Mobile Christian School
"Comparison of Pond Water Filtered Through Sand or Pea Pebbles
Using Gravity Sediment Filtration"

Senior Division

1st, Suranjana Dey, Davidson High School
"Determination of Allelopathy in Kudzu (*Peuraria montana*)"

2nd, Elizabeth Sudeiha, Murphy High School
"Goodbye Crude Oil"

3rd, Mary Morrow, Mary G. Montgomery High School
"Where Did I Come From?"

Alabama Modeling and Simulation Council

Junior Division

1st, Laurie Graves, Hampton Cove Middle School
"The Rocket City Lunar Lander Experiment"

2nd, Jackson Dennis, Liberty Middle School
"Effect of Propeller Size on Thrust Produced"

3rd, Austin Turner, Hampton Cove Middle School

"The Battle of the Hackers"

Senior Division

1st, Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

2nd, John Ashburn, Covenant Christian Academy
"Asteroid Impact Tsunamis: A Continuation"

3rd, Lakshmi Raju, Alabama School of Fine Arts
"Development of an Inexpensive Spectrophotometer and a Matlab Spectral Analysis Program"

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

Junior Division

1st, Aliyah Curry, W.J. Christian
"Right Thru' Me"

2nd, Maclaine Fields, The Altamont School
"Helmet Safety"

3rd, Andrew Robinson, W.J. Christian
"Torque AKA Spin"

Senior Division

1st, Alexis Vance, Alabama School of Fine Arts
"Inside the Mind's Rainbow: A Probability Matrix of Sound and Color Synesthesia"

2nd, Peter Johnsen, The Altamont School
"An Environmentally Friendly Solution for Wastewater Purification and Chemical Disposal: A UV-Visible Spectrophotometric Study of a Copper Modified Fenton Process"

3rd, Naivasha Harris, Murphy High School
"Wind Power"

American Association of University Women

Senior Division

Marie Reuter, Wetumpka High School
"A Pharmacological Study on Heart Healthy Vitamins and *Daphnia magna*"

American Chemical Society, North Alabama Chapter

Junior Division

Aliyah Curry, W.J. Christian
"Right Thru' Me"

Rohan Palanki, Phillips Preparatory Middle School
"Got Milk!"

Senior Division

Pranjal Gupta, Auburn High School
"A Better Anti-Cancer Drug: Superior topoisomerase II-inhibition by DNA Intercalation with a Mitoxantrone Analogue"

Peter Johnsen, The Altamont School
"An Environmentally Friendly Solution for Wastewater Purification and Chemical Disposal: A UV-Visible Spectrophotometric Study of a Copper Modified Fenton Process"

American Institute of Aeronautics and Astronautics

Junior Division

Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

Alexander Finney, Covenant Christian Academy

"Where's Waldo? Precision Location of Acoustic Sources"

Michelle Rule, Life Christian Academy

"Measuring a Change in Luminous Flux of Ionized Noble Gases with Five Different Electrical Power Supplies"

American Meteorological Society

Senior Division

John Ashburn, Covenant Christian Academy

"Asteroid Impact Tsunamis: A Continuation"

Erica Blackstock, Brooks High School

"Light Pollution: How Clear is Clear?"

Anna Pope, Patrician Academy

"Gulf Oil Spill"

American Physical Society

Junior Division

Eric Bean, Liberty Middle School

"Gauss Rifle"

Senior Division

Lakshmi Raju, Alabama School of Fine Arts

"Development of an Inexpensive Spectrophotometer and a Matlab Spectral Analysis Program"

American Psychological Association

Junior Division

Bailey Dewberry, St. Joseph Regional Catholic School

"Mnemonics or Not?"

Senior Division

Sheila Pham, Murphy High School
"Going Back With Mozart"

American Society of Heating, Refrigeration and A/C Engineers

Junior Division

Bettina Lucente and **Isabelle Spence**, Heritage Elementary
"Tina and Izzy's Study of Thermal Conductivity"

Senior Division

Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

American Society of Microbiology

Junior Division

Ryan Harmon, Columbiana Middle School
"Bacteria Banishers"

Senior Division

Rakesh Goli, The Altamont School
"Can a Bacterial Pigment Kill Flesh-Eating Bacteria? A Study on the Cytotoxic Nature of PVP (Pure Violet Pigment) on Multidrug Resistant (MDR) and Methicillin Resistant (MRSA) Strains of *Staphylococcus aureus*: Year III Continuation Study"

Armed Forces Communications and Electronics Association, Educational Foundation

Junior Division

Sean Benson, Clark-Shaw Magnet School
"Recognize It!"

Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

Senior Division

Ellen Price, Jefferson County International Baccalaureate School
"Hidden Sounds: The Effect of Cellular Phone Transmission on Human Voice Harmonic Distributions, Year 3"

James Yarbrough, Alabama School of Fine Arts
"A Mobile Computing Crowd Sourcing Application for Reporting Ecological Disasters"

ASM Materials Education Foundation

Junior Division

Morgan Mango, Hampton Cove Middle School
"Bamboo-zled? NO!"

Andrew Baxley, Murphy High School
"Futbol Fraud"

Association for Women Geoscientists

Junior Division

Ayah Eltoun, Islamic Academy of Alabama
"Herbicide Mechanism of Tamarind"

Senior Division

Arina Ghosh, Alabama School of Fine Arts
"The Effect of Heavy Metals on Porphyrin Ring Compounds Part 3: Leached Mercury into the Base of the Food Chain Near Coal Combustion Waste Disposal Sites"

Boeing Company

Junior Division

Anne Boyle, Duran North Jr. High School
"Weight' a Minute"

Sean Jackson, Cold Springs High School
"Beverage Battles"

Grey Lewis, Patrician Academy
"Heartache: Do Different Concentrations of Ethanol Have an Effect on the Heartbeat of *Daphnia magna*?"

Morgan Mango, Hampton Cove Middle School
"Bamboo-zled? NO!"

Josie Neidermeier, The Altamont School
"Eyewitness Testimony: Guilty or Not Guilty?"

Haley Thompson, Holy Spirit Catholic High School
"Compostable Or Just A Racket?"

Austin Turner, Hampton Cove Middle School
"The Battle of the Hackers"

Bijal Vashi, Phillips Preparatory School
"Biomass to Biogas"

Senior Division

John Ashburn, Covenant Christian Academy
"Asteroid Impact Tsunamis: A Continuation"

Rachel Booth, Covenant Christian Academy
"Fibonacci Numbers in Music"

Rebecca Denson, Murphy High School
"The Transpiration Effect II"

Suranjana Dey, Davidson High School
"Determination of Allelopathy in Kudzu (*Peuraria montana*)"

Rachel England, Demopolis High School
"Determining the True Mussel Man: A Comparison of the Filtration Efficiency of *Lampsilis teres*, *Villosa iris*, and *Lampsilis fasciola*"

Matthew Eskridge, Covenant Christian Academy
"Zoom Into the Future: A Study Into the Digital Enhancement of Vision"

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

John Fletcher, Holy Spirit Catholic High School
"Spin Control: How do Shape and Materials Affect the Electrical Output of a Wind Turbine?"

Rakesh Goli, The Altamont School
"Can a Bacterial Pigment Kill Flesh-Eating Bacteria? A Study on the Cytotoxic Nature of PVP (Pure Violet Pigment) on Multidrug Resistant (MDR) and Methicillin Resistant (MRSA) Strains of *Staphylococcus aureus*: Year III Continuation Study"

William Haselden, Mountain Brook High School
"Exploring Treatments for Epilepsy using an Experimental Animal Model"

Courtney Kloske, Pope John Paul II Catholic High School
"Relationship Between the PINK1 and DJ1 Genes in the Parkinson's Pathway"

Rosalyn Langhinrichsen-Rohling, Murphy High School
"W, Wh, Why Can't I Have the Job?"

Riley Mayes, Mary G. Montgomery High School
"Conductivity of Metals Through Electrochemistry"

Ellen Price, Jefferson County International Baccalaureate School
"Hidden Sounds: The Effect of Cellular Phone Transmission on Human Voice Harmonic Distributions, Year 3"

Marie Reuter, Wetumpka High School
"A Pharmacological Study on Heart Healthy Vitamins and *Daphnia magna*"

Shawn Tuteja, The Altamont School
"Developing More Efficient Models of Titanium Dioxide Dye-Sensitized Solar Cells"

Boeing Special Awards

Junior Division

Matthew Castleberry, Hampton Cove Middle School
"Waves or Watts: Who Makes the Most Power?"

Kaitlyn Cislo, Liberty Middle School
"In What Temperature Does Fog Form Fastest?"

Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

Ariel Herren, Williams Intermediate
"Is Bigger Better?"

Rohan Palanki, Phillips Preparatory Middle School
"Got Milk!"

Senior Division

Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

Douglas Coghlan, Jefferson County International Baccalaureate School
"Das Eco: Research in Wind Powered Vehicles"

Arina Ghosh, Alabama School of Fine Arts
"The Effect of Heavy Metals on Porphyrin Ring Compounds Part 3: Leached Mercury into the Base of the Food Chain Near Coal Combustion Waste Disposal Sites"

Cory Raszeja, Alabama School of Fine Arts
"The Design and Development of a Structural-Based Eco-Sensitive Hydroelectric Generator"

Joel Tinker, Covenant Christian Academy
"Engineering an Affordable Electric Vehicle, Year 2: Range Testing and Optimization"

Adrika Venkatanarayanan, Northridge High School
"The Utilization of Carbon Nanotube-Nanoparticle Heterostructures in

Soft Nanocomposite Fabrication"

Broadcom Masters

Junior Division

August Arnold, Hampton Cove Middle School
"The Electrolyte Challenge"

Katelin Baird, Columbia
"Spare a Watt, Save a Lot"

Eric Bean, Liberty Middle School
"Gauss Rifle"

Kaitlin Beyler and **Ryan Nichols**, Thompson Middle School
"Quality H2O ... Yes or No?"

Sarah Bowman, Phillips Preparatory Middle School
"Snailing Along"

Matthew Castleberry, Hampton Cove Middle School
"Waves or Watts: Who Makes the Most Power?"

Bailey Dewberry, St. Joseph Regional Catholic School
"Mnemonics or Not?"

Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

Rebecca Johnson, Life Christian Academy
"Datapult Returns! Mathematically Modeling a System"

Grey Lewis, Patrician Academy
"Heartache: Do Different Concentrations of Ethanol Have an Effect on the Heartbeat of *Daphnia magna*?"

Dauphin Island Sea Lab, Marine Environmental Sciences Consortium

Junior Division

1st, Sarah Bowman, Phillips Preparatory Middle School
"Snailing Along"

1st, Grey Lewis, Patrician Academy
"Heartache: Do Different Concentrations of Ethanol Have an Effect on the Heartbeat of *Daphnia magna*?"

2nd, Nicholas Dietschweiler, Thompson Middle School
"Bubble, Bubble...This Could Get Me In Big Trouble: H₂O Electrolysis"

Haley Thompson, Holy Spirit Catholic High School
"Compostable Or Just A Racket?"

Senior Division

1st, Anna Pope, Patrician Academy
"Gulf Oil Spill"

2nd, Kayla Gerard, Mary G. Montgomery High School
"A Slick Demise"

Discovery Channel Young Scientist Challenge

Junior Division

August Arnold, Hampton Cove Middle School
"The Electrolyte Challenge"

Eric Bean, Liberty Middle School
"Gauss Rifle"

Sean Benson, Clark-Shaw Magnet School
"Recognize It!"

Kaitlin Beyler and Ryan Nichols, Thompson Middle School
"Quality H₂O ... Yes or No?"

Sarah Bowman, Phillips Preparatory Middle School
"Snailing Along"

Matthew Castleberry, Hampton Cove Middle School

"Waves or Watts: Who Makes the Most Power?"

Aliyah Curry, W.J. Christian

"Right Thru' Me"

Bailey Dewberry, St. Joseph Regional Catholic School

"Mnemonics or Not?"

Alex Dillon, Liberty Middle School

"Remote Access Webcam Suite"

Ayah Eltoun, Islamic Academy of Alabama

"Herbicidal Mechanism of Tamarind"

Ryan Harmon, Columbiana Middle School

"Bacteria Banishers"

Rebecca Johnson, Life Christian Academy

"Datapult Returns! Mathematically Modeling a System"

Grey Lewis, Patrician Academy

"Heartache: Do Different Concentrations of Ethanol Have an Effect on the Heartbeat of *Daphnia magna*?"

Kennedy MacDonald, Phillips Preparatory School

"Cricket Conversations"

Ariel Odom, Phillips Preparatory School

"V.I.PEAS (Vitamins Influence Peas)"

Dr. and Mrs. Graeme Duthie Award

Junior Division

Bettina Lucente and Isabelle Spence, Heritage Elementary

"Tina and Izzy's Study of Thermal Conductivity"

Greater Huntsville Rotary Club

Junior Division

1st, Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

1st, Rebecca Johnson, Life Christian Academy
"Datapult Returns! Mathematically Modeling a System"

Senior Division

1st, David Lofts, Covenant Christian Academy
"The Silk Spider: Development of a Robotic Spider Leg Using a Biomimetic Design"

2nd, Jhett Nordan, South Choctaw Academy
"Killing Vampire Loads"

Huntsville Botanical Gardens

Junior Division

Katie Bohatch, Horizon Elementary
"What Can Poo Do For You?"

Claire Gibson, Westminster Christian Academy
"How Hard is the Water in Our Area? An Environmental Study"

Lillian Rogers, Holy Spirit Catholic High School
"Does the Color of the Greenhouse Affect Plant Growth"

Haley Thompson, Holy Spirit Catholic High School
"Compostable Or Just A Racket?"

Senior Division

Rebecca Denson, Murphy High School
"The Transpiration Effect II"

Rachel Fisher, Pope John Paul II Catholic High School
"Water Quality of Aldridge Creek"

IEEE Huntsville Section

Junior Division

Matthew Castleberry, Hampton Cove Middle School
"Waves or Watts: Who Makes the Most Power?"

Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

Joseph Lee, St. Peter's Academy
"It's Light Part Two"

Austin Turner, Hampton Cove Middle School
"The Battle of the Hackers"

Senior Division

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

Ellen Price, Jefferson County International Baccalaureate School
"Hidden Sounds: The Effect of Cellular Phone Transmission on Human Voice Harmonic Distributions, Year 3"

Lakshmi Raju, Alabama School of Fine Arts
"Development of an Inexpensive Spectrophotometer and a Matlab Spectral Analysis Program"

Michelle Rule, Life Christian Academy
"Measuring a Change in Luminous Flux of Ionized Noble Gases with Five Different Electrical Power Supplies"

Intel - Excellence in Computer Science

Senior Division

Matthew Eskridge, Covenant Christian Academy
"Zoom Into the Future: A Study Into the Digital Enhancement of Vision"

Caitlin Marsh, Alabama School of Fine Arts
"The Development and Integration of Voice Controlled Software with AgentSheets for Children with Motor Disabilities"

Mercury Computer Award

Senior Division

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

Mu Alpha Theta

Senior Division

John Ashburn, Covenant Christian Academy
"Asteroid Impact Tsunamis: A Continuation"

Ellen Price, Jefferson County International Baccalaureate School
"Hidden Sounds: The Effect of Cellular Phone Transmission on Human Voice Harmonic Distributions, Year 3"

NASA Optics

Junior Division

1st, Joseph Lee, St Peter's Academy
"It's Light Part Two"

1st, Will Pannell, The Altamont School
"Assessing the Effects on the Collection of Solar Energy"

2nd, Sam McPheeters, Hampton Cove Middle School
"Turn the Heat On"

Senior Division

1st, Lakshmi Raju, Alabama School of Fine Arts
"Development of an Inexpensive Spectrophotometer and a Matlab Spectral Analysis Program"

2nd, Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

2nd, Michelle Rule, Life Christian Academy
"Measuring a Change in Luminous Flux of Ionized Noble Gases with Five Different Electrical Power Supplies"

National Aeronautics and Space Administration

Junior Division

Laurie Graves, Hampton Cove Middle School
"The Rocket City Lunar Lander Experiment"

Senior Division

Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

Payal Patel, Murphy High School
"Stop! Martian Time!"

Lakshmi Raju, Alabama School of Fine Arts
"Development of an Inexpensive Spectrophotometer and a Matlab Spectral Analysis Program"

Adrika Venkatanarayanan, Northridge High School
"The Utilization of Carbon Nanotube-Nanoparticle Heterostructures in Soft Nanocomposite Fabrication"

National Oceanic and Atmospheric Administration

Junior Division

Kaitlyn Cislo, Liberty Middle School
"In What Temperature Does Fog Form Fastest?"

Senior Division

John Ashburn, Covenant Christian Academy
"Asteroid Impact Tsunamis: A Continuation"

National Society of Professional Engineers

Junior Division

David Whaley, St. Francis Xavier Catholic School
"Cracking Domes"N 61

Senior Division

Cory Raszeja, Alabama School of Fine Arts
"The Design and Development of a Structural-Based Eco-Sensitive Hydroelectric Generator"

National Youth Science Foundation Award

Senior Division

Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

Ricoh Sustainable Development

Junior Division

Bijal Vashi, Phillips Preparatory School
"Biomass to Biogas"

Senior Division

Austin Hardman, Jefferson Co. International Baccalaureate School
"An Alternative Use for Fall Leaves"

Shoals Audubon Society

Junior Division

Erin Cronise, St. John the Baptist Catholic School

"A Bird's Response to Different Color Bird Feeders"

Sigma Xi, UAH Chapter

Junior Division

1st, Ayah Eltoum, Islamic Academy of Alabama
"Herbicidal Mechanism of Tamarind"

HM, Rowan El-Qishawi, Islamic Academy of Alabama
"Alabama Shores...Are you cured?"

HM, Morgan Mango, Hampton Cove Middle School
"Bamboo-zled? NO!"

Senior Division

1st, James Yarbrough, Alabama School of Fine Arts
"A Mobile Computing Crowd Sourcing Application for Reporting Ecological Disasters"

HM, Suranjana Dey, Davidson High School
"Determination of Allelopathy in Kudzu (*Peuraria montana*)"

HM, Anna Pope, Patrician Academy
"Gulf Oil Spill"

Society for Invitro Biology

Senior Division

Rakesh Goli, The Altamont School
"Can a Bacterial Pigment Kill Flesh-Eating Bacteria? A Study on the Cytotoxic Nature of PVP (Pure Violet Pigment) on Multi-drug Resistant (MDR) and Methicillin Resistant (MRSA) Strains of *Staphylococcus aureus*: Year III Continuation Study"

Society of American Military Engineers, Huntsville Post

Junior Division

Joseph Lee, St Peter's Academy
"It's Light Part Two"

Senior Division

Ellen Price, Jefferson County International Baccalaureate School
"Hidden Sounds: The Effect of Cellular Phone Transmission on Human Voice Harmonic Distributions, Year 3"

Soil & Water Conservation Society

Junior Division

1st, Will Pannell, The Altamont School
"Assessing the Effects on the Collection of Solar Energy"

HM, Ayah Eltoum, Islamic Academy of Alabama
"Herbicidal Mechanism of Tamarind"

Senior Division

1st, Amelia Greising, Westminster Christian Academy
"Electro-Coagulation vs. UV-Light in Water Purification Systems"

HM, Austin Hardman, Jefferson Co. Intl. Baccalaureate School
"An Alternative Use for Fall Leaves"

Stateline Sporting Goods Division

Senior Division

Arina Ghosh, Alabama School of Fine Arts
"The Effect of Heavy Metals on Porphyrin Ring Compounds Part 3:
Leached Mercury into the Base of the Food Chain Near Coal
Combustion Waste Disposal Sites"

Teledyne Brown Engineering Award

Junior Division

Eric Bean, Liberty Middle School
"Gauss Rifle"

Senior Division

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

James Yarbrough, Alabama School of Fine Arts
"A Mobile Computing Crowd Sourcing Application for Reporting Ecological Disasters"

Tennessee Valley Authority

Junior Division

1st, Katelin Baird, Columbia
"Spare a Watt, Save a Lot"

1st, Bettina Lucente and Isabelle Spence, Heritage Elementary
"Tina and Izzy's Study of Thermal Conductivity"

1st, Sam McPheeters, Hampton Cove Middle School
"Turn the Heat On"

HM, Bijal Vashi, Phillips Preparatory School
"Biomass to Biogas"

Senior Division

1st, Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

1st, John Fletcher, Holy Spirit Catholic High School
"Spin Control: How do Shape and Materials Affect the Electrical Output of a Wind Turbine?"

1st, Jhett Nordan, South Choctaw Academy
"Killing Vampire Loads"

HM, Chase Laurendine, Pope John Paul II Catholic High School

"Wind Turbines Alternative Designs To Decrease Sound-Pressure"

The Society of Photo-Optical Instrumentation Engineers

Junior Division

1st, Matthew Castleberry, Hampton Cove Middle School
"Waves or Watts: Who Makes the Most Power?"

2nd, Eric Bean, Liberty Middle School
"Gauss Rifle"

3rd, Alex Dillon, Liberty Middle School
"Remote Access Webcam Suite"

3rd, HM, Harrison Turner, Clark-Shaw Magnet School
"Investigating Your Wi-Fi Woes"

Senior Division

1st, Matthew Eskridge, Covenant Christian Academy
"Zoom Into the Future: A Study Into the Digital Enhancement of Vision"

2nd, Shawn Tuteja, The Altamont School
"Developing More Efficient Models of Titanium Dioxide Dye-Sensitized Solar Cells"

3rd, Amelia Greising, Westminster Christian Academy
"Electro-Coagulation vs. UV-Light in Water Purification Systems"

3rd, Ellen Price, Jefferson County International Baccalaureate School
"Hidden Sounds: The Effect of Cellular Phone Transmission on Human Voice Harmonic Distributions, Year 3"

Toyota Motor Manufacturing Company

Junior Division

Nicholas Dietschweiler, Thompson Middle School

"Bubble, Bubble ... This Could Get Me In Big Trouble: H₂O Electrolysis"

Senior Division

Leslie Walker, Patrician Academy
"Don't Waste My Fuel! Phase II"

U.S. Air Force

Junior Division

Matthew Castleberry, Hampton Cove Middle School
"Waves or Watts: Who Makes the Most Power?"

Sahil Patnayakuni, Hampton Cove Middle School
"Guess the Author"

Senior Division

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

David Lofts, Covenant Christian Academy
"The Silk Spider: Development of a Robotic Spider Leg Using a Biomimetic Design"

U.S. Army Science and Engineering Awards Program

Junior Division

1st, Matthew Castleberry, Hampton Cove Middle School
"Waves or Watts: Who Makes the Most Power?"

1st, Rebecca Johnson, Life Christian Academy
"Datapult Returns! Mathematically Modeling a System"

1st, Andrew Robinson, W.J. Christian
"Torque AKA Spin"

HM, Ruaa Aishah, Islamic Academy of Alabama

"Please Don't Cry!"

HM, August Arnold, Hampton Cove Middle School
"The Electrolyte Challenge"

HM, Hanna Becerra, St. Francis Xavier Catholic School
"2% Fat In Your Milk"

HM, Cailan Bevel, Thompson Middle School
"Blowing Bottle Tops: Making Music with Glass Bottles"

HM, Kaitlin Beyler and Ryan Nichols, Thompson Middle School
"Quality H₂O ... Yes or No?"

HM, Danielle Blich, Clark-Shaw Magnet School
"Jawbreaker Disintegration"

HM, Rayna Burkard, Hampton Cove Middle School
"Decking the Right Wood"

HM, Aliyah Curry, W.J. Christian
"Right Thru' Me"

HM, William Damsgard, Thompson Middle School
"Distracted Driving: The Affects of Distractions on Video Game Drivers"

HM, Caleb Davis, Horizon
"Heat Sensing"

HM, Maclaine Fields, The Altamont School
"Helmet Safety"

HM, Ryan Grissett, Flomaton High School
"Robotics"

HM, Mark Johnson, Horizon
"Male or Female? The Effects of Temperature in the Incubation Chamber on Leopard Gecko Hatchlings"

HM, Joseph Lee, St Peter's Academy
"It's Light Part Two"

HM, Benjamin Noel, St. John the Baptist Catholic School
"Candy Chromatography"

HM, Will Pannell, The Altamont School
"Assessing the Effects on the Collection of Solar Energy"

HM, Caitlin Potts, St. John the Baptist Catholic School
"Heart Rate and Calorie Analysis"

HM, Harrison Turner, Clark-Shaw Magnet School
"Investigating Your Wi-Fi Woes"

Senior Division

1st, Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

1st, Pranjal Gupta, Auburn High School
"A Better Anti-Cancer Drug: Superior topoisomerase II-inhibition by DNA Intercalation with a Mitoxantrone Analogue"

1st, David Lofts, Covenant Christian Academy
"The Silk Spider: Development of a Robotic Spider Leg Using a Biomimetic Design"

1st, Sid Nanda, Grissom High School
"Screening for microRNAs in the Genome of the Reniform Nematode"

1st, Lakshmi Raju, Alabama School of Fine Arts
"Development of an Inexpensive Spectrophotometer and a Matlab Spectral Analysis Program"

1st, Marie Reuter, Wetumpka High School
"A Pharmacological Study on Heart Healthy Vitamins and *Daphnia magna*"

1st, Joel Tinker, Covenant Christian Academy
"Engineering an Affordable Electric Vehicle, Year 2: Range Testing and Optimization"

HM, John Ashburn, Covenant Christian Academy
"Asteroid Impact Tsunamis: A Continuation"

HM, Matthew Ashburn, Covenant Christian Academy
"A Variable-Reflectivity Passive Solar Roof Design"

HM, Collis Barefield and Sam Street, Wetumpka High School
"Good Vibrations"

HM, Rachel Booth, Covenant Christian Academy
"Fibonacci Numbers in Music"

HM, Kate Cochran, Brooks High School
"Getting to the ROOT of the Problem"

HM, Rebecca Denson, Murphy High School
"The Transpiration Effect II"

HM, Olivia Dure, The Altamont School
"Brain Plasticity: The Effect Of Age (A Two Year Study)"

HM, Rachel Fisher, Pope John Paul II Catholic High School
"Water Quality of Aldridge Creek"

HM, Pasley Graham and Mark Gacek, McGill Toolen Catholic H.S.
"Shoe Friction Investigation"

HM, Amelia Greising, Westminster Christian Academy
"Electro-Coagulation vs. UV-Light in Water Purification Systems"

HM, Lindsay Grizzard, Murphy High School
"The Silent Killer"

HM, Austin Hardman, Jefferson Co. Intl. Baccalaureate School
"An Alternative Use for Fall Leaves"

HM, Naivasha Harris, Murphy High School
"Wind Power"

HM, William Haselden, Mountain Brook High School
"Exploring Treatments for Epilepsy using an Experimental Animal Model"

HM, Rosalyn Langhinrichsen-Rohling, Murphy High School
"W, Wh, Why Can't I Have the Job?"

HM, Roxanne Lockhart, Alabama School of Fine Arts
"Effect of Genestein, a Phytoestrogen, After Spinal Cord Injury in Male Rats"

HM, Caitlin Marsh, Alabama School of Fine Arts
"The Development and Integration of Voice Controlled Software with AgentSheets for Children with Motor Disabilities"

HM, Zehrgio Mones, Murphy High School
"A Shockin' Discovery"

HM, Mary Morrow, Mary G. Montgomery High School
"Where Did I Come From?"

HM, Devyn Parker and Ashley Yates, Wetumpka High School
"Veggie Cars: Transportation of the Future?!?"

HM, Khushbu Patel, Murphy High School
"Hey Banana, Ripen That Apple!"

HM, Cory Raszeja, Alabama School of Fine Arts
"The Design and Development of a Structural-Based Eco-Sensitive Hydroelectric Generator"

HM, Malika Shettar, Indian Springs School
"DNA Binding and Cleaving of 1,8 Naphthalimide-Linked Nitrogen Onium Salts- Year 2 (Towards the development of a Novel Photodynamic Therapy Reagent for Cancer Treatment"

HM, Lakshmi Subramani, Liberty Middle School
"Fuel of the Future?"

U.S. Metric Association

Senior Division

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

David Lofts, Covenant Christian Academy
"The Silk Spider: Development of a Robotic Spider Leg Using a Biomimetic Design"

U.S. Navy/Marine Corps

Junior Division

William Damsgard, Thompson Middle School
"Distracted Driving: The Affects of Distractions on Video Game Drivers"

Jackson Dennis, Liberty Middle School
"Effect of Propeller Size on Thrust Produced"

Nicholas Dietschweiler, Thompson Middle School
"Bubble, Bubble ... This Could Get Me In Big Trouble: H₂O Electrolysis"

Maclaine Fields, The Altamont School
"Helmet Safety"

Rebecca Johnson, Life Christian Academy
"Datapult Returns! Mathematically Modeling a System"

Galen Lee, Holy Spirit Catholic High School
"Arrow Penetration: Weight Vs. Configuration"

Senior Division

Matthew Eskridge, Covenant Christian Academy
"Zoom Into the Future: A Study Into the Digital Enhancement of Vision"

Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

John Fletcher, Holy Spirit Catholic High School
"Spin Control: How do Shape and Materials Affect the Electrical Output of a Wind Turbine?"

Roxanne Lockhart, Alabama School of Fine Arts
"Effect of Genestein, a Phytoestrogen, After Spinal Cord Injury in Male Rats"

David Lofts, Covenant Christian Academy
"The Silk Spider: Development of a Robotic Spider Leg Using a Biomimetic Design"

Lakshmi Subramani, Liberty Middle School
"Fuel of the Future?"

U.S. Space and Rocket Center

Junior Division

1st, Rebecca Johnson, Life Christian Academy
"Datapult Returns! Mathematically Modeling a System"

HM, Joseph Lee, St. Peter's Academy
"It's Light, Part Two"

HM, Kevin Mai, ASFL
"Earthquake"

HM, Will Pannell, The Altamont School
"Assessing the Effects on the Collection of Solar Energy"

Senior Division

1st, David Lofts, Covenant Christian Academy
"The Silk Spider: Development of a Robotic Spider Leg Using a Biomimetic Design"

HM, Alexander Finney, Covenant Christian Academy
"Where's Waldo? Precision Location of Acoustic Sources"

HM, Lauren Rabren, Wetumpka High School
"Power in the Palm of Your Hand"

Von Braun Astronomical Society

Junior Division

Laurie Graves, Hampton Cove Middle School
"The Rocket City Lunar Lander Experiment"

Senior Division

Erica Blackstock, Brooks High School
"Light Pollution: How Clear is Clear?"

Payal Patel, Murphy High School

"Stop! Martian Time!"

Water Environmental Federation

Senior Division

Rachel England, Demopolis High School

"Determining the True Mussel Man: A Comparison of the Filtration Efficiency of *Lampsilis teres*, *Villosa iris*, and *Lampsilis fasciola*"

Rachel Fisher, Pope John Paul II Catholic High School

"Water Quality of Aldridge Creek"

Kayla Gerard, Mary G. Montgomery High School

"A Slick Demise"

Amelia Greising, Westminster Christian Academy

"Electro-Coagulation vs. UV-Light in Water Purification Systems"

Peter Johnsen, The Altamont School

"An Environmentally Friendly Solution for Wastewater Purification and Chemical Disposal: A UV-Visible Spectrophotometric Study of a Copper Modified Fenton Process"

Cory Raszeja, Alabama School of Fine Arts

"The Design and Development of a Structural-Based Eco-Sensitive Hydroelectric Generator"

Yale Science and Engineering Association

Senior Division

Michelle Rule, Life Christian Academy

"Measuring a Change in Luminous Flux of Ionized Noble Gases with Five Different Electrical Power Supplies"

Malika Shettar, Indian Springs School

"DNA Binding and Cleaving of 1,8 Naphthalimide-Linked Nitrogen Onium Salts- Year 2 (Towards the development of a Novel Photodynamic Therapy Reagent for Cancer Treatment)"

