
2017 Alabama Science and Engineering Fair

Category Award Winners

Category

Place

Proj. No.

Name

School

Project Title

Junior Division

Behavioral & Social Sciences

1	BE	6	Blevins, Allison Mixed Messages: How Sensory Input Affects Equilibrium	Decatur Presbyterian Church School
2	BE	7	Laubenthal, Claire Picture Perfect?	Holy Spirit Catholic School
3	BE	9	Ahmed, Sura The Effect of Sleep Duration on Memory	Islamic Academy of Alabama
3	BE	2	Legg, Emily Battle of the Reflexes	Eclectic Middle School
3	BE	10	Ratliff, Emily The Effect of the Tempo of Music on Muscular Endurance	Auburn Junior High School
4	BE	4	Barfield, Lindsay How Science is Helping Save the Honeybee	Excel High School
4	BE	8	Keel, Jeb Texting vs. Talking	Eclectic Middle School

Category

Place	Proj. No.	Name	School
Project Title			
4 BE	5	McGill, Frederick Let the Testing Begin!	
			Hampton Cove Middle School
4 BE	13	Wilkerson, Danny The Effects of Hand and Eye Dominance on Basketball Free Throw Percentage	
			Shoals Christian School
HM BE	12	Akins, Willa Bunny Bias & Chinchilla Choices: A Look at Confirmation Bias	
			Hilltop Montessori School
HM BE	15	Ashouri, Mohammad The Myth of Multitasking	Saliou Jalloh
			Islamic Academy of Alabama
HM BE	11	Jones, Carson What's Trending?	
			Clark Shaw Magnet Middle School
HM BE	3	Koppineedi, Nehariki Herd Mentality	
			Mill Creek
HM BE	1	Naphade, Riya Apparent Motion in Animation	
			Mill Creek
HM BE	16	Thompson, Alyssa Biased Bunches	
			Hampton Cove Middle School
HM BE	14	Wallace, Nathan Hold The Front Door	
			Clark Shaw Magnet Middle School

Category**Place****Proj. No.****Name****School****Project Title**

Botany & Zoology

1 BZ	22	Poston, Ella Chlorantranilprole Effect on Corn Seedling Emergence	
			Covenant Christian Academy
2 BZ	24	Alford, MaKensey Don't Cross the Line	
			Phillips Preparatory School
3 BZ	20	Cowan, Ryan Ant Farm	
			Muscle Shoals Middle School
3 BZ	21	Darrough, Sophia Barnacle Growth	
			Clark Shaw Magnet Middle School
3 BZ	26	Walker, Emily Pansy Perspiration	
			Clark Shaw Magnet Middle School
4 BZ	31	Damon, Ryan Plants are Soil's Best Friend	
			Hampton Cove Middle School
4 BZ	30	Ewing, Sarah The Rise of Robotany	
			Horizon Elementary School
4 BZ	32	Singley, Julianna Powerful Nuts	
			Beverly Magnet School
4 BZ	33	Smith, Gabbi Doggy Drod vs. Human Spit	
			Hampton Cove Middle School

Category

<u>Place</u>	<u>Proj. No.</u>	<u>Name</u> <u>Project Title</u>	<u>School</u>
HM BZ	25	Appling, Benjamin Escherichia Coli Contamination of Feline Water Bowls	Indian Springs School
HM BZ	29	Mewes, Marie What Does CO2 REALLY Do?	Holy Spirit Catholic School
HM BZ	28	Smith, Evelyn Space Seeds	Opelika Middle School
HM BZ	23	Van Rensselaer, Miranda Does Basil need Soil to Grow?	Muscle Shoals Middle School

Chemistry

1 CH	46	Kung, Catherine Glucose, Glucose, Everywhere!	Holy Spirit Cathdic School
2 CH	51	Aishah, Obada Peels for Wheels	Islamic Academy of Alabama
3 CH	55	Chopade, Neha What's on the Menu, Anaerobes?	Columbia Elementary School
4 CH	52	Eljishi, Widad Poisonous lipstick?	Islamic academy of Alabama
HM CH	48	Almatubsi, Yasmeen Got Any Antioxidants?	Islamic Academy of Alabama

<u>Category</u>				
<u>Place</u>	<u>Proj. No.</u>	<u>Name</u>	<u>Project Title</u>	<u>School</u>
HM CH	45	Banks, Sarah	Evaporation Rates of Alcohols Compared to Water	Alexis Hosmer
				East Limestone Middle School
HM CH	47	Clark, Andrew	Go With Flow	
				Muscle Shoals Middle School
HM CH	57	Cole, Olivia	Tutti Frutti: Tropical Enzymes in Action	
				Hampton Cove Middle School
HM CH	53	Cowan, Sarah	That's Balm	
				Muscle Shoals Middle School
HM CH	41	Ginn, Rani	Berry Full of DNA	
				Hampton Cove Middle School
HM CH	58	Hamill, Aislinn	The Spicy Life of Bacteria	
				Hampton Cove Middle School
HM CH	44	Maher, Matthew	Does SPF Matter?	
				Hampton Cove Middle School
HM CH	49	Mason, Halle	Ice Ice Baby	
				Holy Spirit Cathdic School
HM CH	42	Mekdad, Ismael	Built of Iron	
				Islamic Academy of Alabama
HM CH	43	Murphree, Joshua	Culture Corners: Enhancing Biofilm Growth Using 3D Printed Surfaces	
				Liberty Middle School

Category

Place	Proj. No.	Name	School
Project Title			
HM CH	50	Nasser, Amro Pants On Fire	
			Huffman Middle School
HM CH	161	Rameshbabu, Vishal This Project Stinks!	
			Mill Creek
HM CH	54	Schneider, Rachel What is the Best Recipe for Silly Putty?	
			St. John the Baptist Catholic School
HM CH	59	Stefurak, Lane Just Brew It	
			Clark Shaw Magnet Middle School
HM CH	40	Truesdail, Sydney Baking Soda Volcano 2.0	
			Horizon Elementary School
HM CH	56	Zibas, Olivia Which Whitening Toothpaste Works Best on Stains?	
			St. John the Baptist Catholic School

Engineering

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
2 N	78	Minnon, Luke Liquids at Work: A Study of Hydraulics	
			Decatur Presbyterian Church School
3 N	74	Chopade, Puja Gear Up for Ratios	
			Columbia Elementary School

Category

<u>Place</u>	<u>Proj. No.</u>	<u>Name</u> <u>Project Title</u>	<u>School</u>
3 N	88	Sharp, Dawson Penny Power	
			Grace Lutheran School
3 N	87	Siao, John Charging Batteries with Shoes	
			St. John's the Baptist Catholic School
4 N	80	Elbahrawi, Shurooq Making BioPlastic	
			Islamic Academy of Alabama
4 N	83	Jennings, Javon Solar Revolution: Using the Sun for a More Efficient Solar Cooker	
			Key Destiny Academy
4 N	72	Nance, Amy Breeze by Degrees	
			Life Christian Academy
4 N	73	Paul, Connor Brushless DC Motors	
			Chaffee Elementary
HM N	81	Bray, Katelyn Nose Cone Impact on Apogee	
			Hampton Cove Middle School
HM N	77	Falconer, Liam Knot What I Expected	
			Hilltop Montessori School
HM N	76	Fulford, Justin Keepin it Cool! Yeti or No? Which Materials Will Make the Best Insulators to Build a Cooler?	
			Geneva Middle School
HM N	70	Gordon, Gabriel 3D "Hologram" Effect: An iPad Reflection Illusion	
			Life Christian Academy

Category

Place	Proj. No.	Name	School
Project Title			
HM N	75	Grant, Dominic How Reservoir Height Affects Hydroelectric Power Production	
			Phenix City Intermediate School
HM N	71	Lodree, Aaron Aerodynamics of a Car	
			Holy Spirit Catholic School
HM N	89	Mansur, Ramy Wood vs Acid Rain	
			Islamic Academy of Alabama
HM N	82	Mendoza, Kenduie Radon Gas?	
			Grace Lutheran School
HM N	85	Swindall, Lee The Perfect Pass	
			Shoals Christian School
HM N	86	Tetrault, Elena Building a Better Household Robot by Sensing Our World	
			Hampton Cove Middle School
HM N	79	Wilson, Charlie Magnetic Mayhem (Homo-Polar Train)	
			Muscle Shoals Middle School

Environmental

1 E	110	Vilardi, Julian Nuisance or Not? Phase 2 "Wood" New Additives Make a Difference?	
			Wetumpka Middle School
2 E	112	Eltoum, Mustafa Saving Water: Drip vs. Automatic Irrigation	
			Islamic Academy of Alabama

Category

Place	Proj. No.	Name	School
Project Title			
3 E	106	Balaji, Madhushalini How Can Nano Technology Prevent Hot Car Deaths	Heritage Elementary School
3 E	109	Pilkinton, Hayden Litter, Litter, Everywhere! Does Access to Recycling Affect Roadside Litter?	Holy Spirit Catholic School
3 E	101	Singireddy, Keerthan Can Nanotechnology Help Clean Up Oil Spills?	Mill Creek
4 E	115	Hackett, Georgie What's in your dirt?	Nichols-Lawson Middle School
4 E	114	Patil, Suhas Solar Powered Desalination	Clark Shaw Magnet Middle School
4 E	111	Skrabanek, Emily Resisting the Flow	Rainbow Elementary School
4 E	116	Worley, Ashton Food Digestion	Horizon Elementary School
HM E	108	Cato, Reid Ice Melters	Agape Academy
HM E	113	Davis, Jeb Soil Erosion	Excel High School
HM E	102	Freeman, Kayleigh Dam Those Floodwaters!	Clark Shaw Magnet Middle School

Category

Place	Proj. No.	Name Project Title	School
HM E	118	Hamren, Alyse What's InYour Water?	Hampton Cove Middle School
HM E	105	Hatcher, Haylee Going Green As You Clean Are Green Detergents Less Toxic Than Conventional	Beverlye Magnet School
HM E	103	Mohamed, Amer From Trash to Gas	Islamic Academy of Alabama
HM E	104	Nance, Joseph Geometry in the Breeze	Life Christan Academy
HM E	107	Satheesh, Pranaav How Clean is Your Drinking Water?	Columbia Elementary School
HM E	100	Taylor, Alexis Best Rifles?	Clark Shaw Magnet Middle School

Math & Computers

1 X	134	Elimam, Elamin Don't Feed the Phish	Islamic Academy of Alabama
2 X	130	Patterson, Hannah Algebraic Hot Spots	Clark Shaw Magnet Middle School
3 X	135	Ahmad, Arsalan Let's Map This Out	Islamic Academy of Alabama

Category

Place	Proj. No.	Name	School
Project Title			
3 X	137	Mayalagu, Prabenjan Safer Software	
			Academy for Gifted and Talented
4 X	136	Naser, Talal Raising The Bars	
			Islamic Academy Of Alabama
4 X	132	Shurtz, Ryan Cracking the Cube	
			Rainbow Elementary School
HM X	133	Allen, Isaac Does Temperature Affect Air Pressure?	
			Horizon Elementary School
HM X	131	Davis, Benjamin Changing Your Location With A Pringles Can?	
			Auburn Junior High School

Medicine & Health Sciences

1 ME	163	Prabhakar, Ashwin Arduuino and Thermoplastic Polymer Based Fluidic DNA Sensor	
			Rainbow Elementary School
2 ME	151	Jasser, Ahmad Curing Funky Feet	
			Islamic Academy of Alabama
3 ME	160	Eloubeidi, Ola The Natural Synthetic Myth	
			Islamic Academy of Alabama
3 ME	157	Fillmore, Isabel The Air We Breathe	
			Clark Shaw Magnet Middle School

Category

Place	Proj. No.	Name	School
Project Title			
3 ME	117	Steinman, Isadola Phinding Phages: Searching for Viruses in the Environment	The Altamont School
4 ME	155	Madrid, Arielle How Does Exercise Affect Blood Glucose Levels?	Oakwood Adventist Academy
4 ME	165	Nameniuk, Zachary Dye'n for Blue	Clark Shaw Magnet Middle School
4 ME	153	Phillips, Laura Gymnast Strorg	Hampton Cove Middle School
HM ME	159	Bedsole, Taylor The Mystery of Taste	Geneva Middle School
HM ME	154	Bullard, Judson How Caffeine Affects Your Heart Rate	Holy Spirit Catholic School
HM ME	152	Harden, Claire Grow With Your Gut	Wetumpka Middle School
HM ME	164	Markert, Hooper Keep Calm and Test Your Glucose	Indian Springs School
HM ME	156	Preston, Peyton Medical Solubility	Beverlye Magnet School
HM ME	158	Rhonemus, Elizabeth The Cost of Clean: Acidity Levels in Vinegar	Hampton Cove Middle School

Category**Place****Proj. No.****Name****School****Project Title**

HM ME 150 **Schovel, Nicholas**
A Pattern of Genetics

St. John the Baptist Catholic School

HM ME 162 **Stewart, Justin**
What's In Your Cup?!

Clark Shaw Magnet Middle School

Physical Science

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

Rainbow Elementary School

2 Z 188 **Bagwell, Will**
Phantom Power That Haunts You!

Columbia Elementary School

3 Z 191 **Hur, Grace**
Showering With Copper Zinc KDF-55

Mill Creek

3 Z 185 **Porter, Connor**
Electromagnets

Muscle Shoals Middle School

3 Z 189 **Smith, Carrie**
Reversing Chlorine: Swimmer's Shampoo vs. Shampoo

Beverly Magnet School
John-Paul Doucet

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

Indian Springs School

4 Z 199 **Meyer, Maria**
What Materials If Any Will Shield A Magnet?

East Limestone Middle School

Category

Place	Proj. No.	Name	School
Project Title			
4 Z	200	Patel, Krupa What Went Wrong with the Proteins?	Greenville Middle School
4 Z	197	Pilkinton, Alexander Trap This! Which Makes a Better Bullet Trap?	Holy Spirit Catholic School
HM Z	196	Auld, Jacob The Heat is On	Phillips Preparatory School
HM Z	180	Cron, Garett All Lit Up	Holy Spirit Catholic School
HM Z	198	Faust, Joseph What Materials Block Wi-Fi	St. John the Baptist Catholic School
HM Z	181	Forbes, Alexander Armor Angle vs Projectile	Indian Springs School
HM Z	187	Gurganus, Michael How Efficient is the Yeti Cup?	Clark Shaw Magnet Middle School
HM Z	193	Hanumante, Shaunak Solar Panel Angling	Mill Creek
HM Z	201	Holmes, Benjamin Pop Time	Duran North Junior High
HM Z	183	Jernigan, Haley Does Temperature Effect the Height a Ball Will Bounce?	Phenix City Intermediate School

Category

Place	Proj. No.	Name	School
Project Title			
HM Z	195	Kaplan, Kyle The Effects of Aerodynamics on a Falling Object	Duran North Junior High
HM Z	184	Leverette, Christian Electrolyte Challenge: Sports Drinks vs Orange Juice	Beverly Magnet School
HM Z	192	Smith, Wyatt Solar Cell Enhancement Using Fluorescent Materials and Quantum Dots	St. John the Baptist Catholic School
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
HM Z	186	Tuggle, Jeffery Gaming in the Outdoors: Measuring Long Range WiFi	St. John the Baptist Catholic School

Category**Place****Proj. No.****Name****School****Project Title**

**Senior Division
Animal Science**

1 AS	304	McFeely, Alexis The Effect of Dog Saliva on Common Wound Bacteria: A Two-Phase Study	St. John Paul II Catholic High School
2 AS	301	Boardwine, Ali Leads In Equine Prosthetics	Elmore County High School
3 AS	303	Ledvina, Alek Morphological and Population Changes in Two Crayfish Species During Reproductive Season	Miles Robinson
4 AS	308	Boyer, Dianna Fish Memory and Cognitive Skill	Indian Springs School
4 AS	302	Connolly, Catherine Maze? Ready or not	St. John Paul II Catholic High School
HM AS	306	Eiland, Sydney Sunny Side Up	Shoals Christian School
HM AS	307	Katzer, Austin The Bee's Knees II: The Production and Implementation of Terpenoid Based Synthetic <i>Apis mellifera</i> Pheromones and its Adverse Effects on <i>Drosophila melanogaster</i>	Davidson High School Jason Smith
HM AS	305	Lee, Jiho The Affects of Macronutrients on Plants	Plano West Senior High School Suma Ejantkar
			Auburn High School

Category**Place****Proj. No.****Name****School****Project Title**

Behavioral & Social Sciences

1	BE	321	Huang, Tyler Central Nervous System Sensitization is Associated with Chronic Pain in HIV	Alabama School of Fine Arts
2	BE	324	Zhu, Matthew Influence of Anti-Bullying Media on the Passivity of Cyberbystanders	Alabama School of Fine Arts
3	BE	323	Fairley, Lauren Will the Outcome of Test Answers Change When There is Positive Reinforcement?	W.P. Davidson High School
3	BE	328	Healey, Robert Two is Red: An Academic Study of Artificial Synesthesia	Wetumpka High School
3	BE	327	Prevost, Bethany Cursive vs. Print: The Effects of Writing Style on Reading Speed and Comprehension	Covenant Christian Academy
4	BE	325	Blum, Zander Frame of Mind	Central Freshman Academy
4	BE	326	Kimminau, Jemma The Qualities in Cat People vs. Dog People	St. John Paul II Catholic High School
4	BE	320	Locker Jr., William Attitudes Toward the Gender of Political Candidates: A Comparison of Young and Old Voters	Murphy High School
4	BE	322	Smith, Brittany Do You See What I See?	Brionna Lashae S
				Stanhope Elmore High School

Category**Place****Proj. No.****Name****School****Project Title**

Biochemistry

1	BI	341	Sadanand, Karthik ClpP: A Novel Target for Antibacterial Drug Discovery	Alabama School of Fine Arts
2	BI	344	Browning, Will Oligonucleotide Reduction of MUC5ac and Associated Genes	W.P. Davidson High School
3	BI	342	Blacksher, Kelly The Effect of Ocean Acidification on Crassostrea virginica Oyster Reef Development	W.P. Davidson High School
4	BI	340	Kloske, Alexa Artificial Selection of Nannochloropsis for Increased Lipid Production	St. John Paul II Catholic High School
HM	BI	343	Wallace, Natalie Metabolic Rate of Yeast	Danville High School

Biomedical & Health Sciences / Translational Medical Science

1	BHTM	620	Srivastava, Hemant ABT263 (Navitoclax) and the IPF-Treatment Drugs for a Healthier Aging	Alabama School of Fine Arts
2	BHTM	352	Riggs, Sharee Food for the Future: A Study of Insects as a Protein Source	Wetumpka High School
3	BHTM	354	Massey, Brooklyn The Effects of Technology on the Older Population in Maintaining Medications Easily	Davidson High School

Category

<u>Place</u>	<u>Proj. No.</u>	<u>Name</u>	<u>School</u>
<u>Project Title</u>			
3	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 Science
4	BHTM 351	Bonner, Britney Caffeine and Heart Rate	Patrician Academy
4	BHTM 350	Stamp, Banks Brave New World: The Effects of Technology on Vision	Central High School
HM	BHTM 356	Ferrante, Luke The Effects of Beets on Endurance	St. John Paul II Catholic High School
HM	BHTM 355	Gade, Anushree DIY Sunscreen: Does It Block UV Rays?	Vaishnavi Mantrar
HM	BHTM 621	Schsaetzle, Emma Magic Mirror	James Clemens High School
			Holy Spirit Catholic High School

Biomedical Engineering / Computational Biology and Bioinformatics

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
2	BECB 370	Breithaupt, Therese Helping Hand	St. John Paul II Catholic High School

Category**Place****Proj. No.****Name****School****Project Title**

Cellular & Molecular Biology / Microbiology

1	CBMI	384	Jiao, Kenneth Retain CHD7, an Epigenetic Regulator, in the Nucleus to Combat Breast Cancer Metastasis	Indian Springs School
2	CBMI	386	Lim, Jamie The Synergistic Effect of Imatinib and Allicin: A Potential Therapeutic for BCR-ABL1-positive Leukemia	Murphy High School
3	CBMI	381	Baird, Katelin Drosophila Melanogaster's Mutant Reaction to UV Radiation with a Link to the p53 Gene	James Clemens High School
3	CBMI	540	Jeong, Leanne Tracking of Seasonal Changes of Specific Pathogenic Bacteria Around Mobile Bay	Alabama School of Mathematics and Science
4	CBMI	382	Bhadkamkar, Tanvi Mechanical Signaling in PMVECs and PAECs	W.P. Davidson High School
4	CBMI	385	Dey, Nandita The Effect of Bitter Melon (Momordica charantia) on Melanoma Cancer Cells in vitro	W.P. Davidson High School
HM	CBMI	387	Adavoody, Bahar DNA Scale	Murphy High School Lakin Luckie
HM	CBMI	383	Brawley, Taylor OnionA	Wetumpka High School
HM	CBMI	541	Lockett, Paul Whats in My Water	Murphy High School

Category

Place	Proj. No.	Name	School
HM CBMI	380	Turner, Ay'lanna Are We What We Eat? At Least For A Little While!	Stanhope Elmore High School
HM CBMI	388	Wiley, Alaina Music to Bacterial Ears	Danville High School

Chemistry

1 CH	404	Spence, Jacob Water, Water Everywhere But Not A Drop To Drink?	East Limestone High School
2 CH	406	Sheffer, Eli What Percent of the Air is Oxygen?	Holy Spirit Cathdic High School
3 CH	407	Sridhar, Varsha Generalization of the Marcus Model for in vivo Electron Transfer	Jefferson County International Baccalaureate
4 CH	401	Williams, Josiah NFL Deflategate: Footballs for Thought	Covenant Christian Academy Laela Lee
HM CH	412	Armstrong, Arianna On the Road to Retreat, Salty and Sweet	The Calhoun School
HM CH	405	Brown, Branden What Is The Fastest Way To Make Ice Cream?	Oakwood Adventist Academy
HM CH	409	Dees, Julie Verifying the Purity of Isopentyl Acetate	WP Davidson High School

Category

<u>Place</u>	<u>Proj. No.</u>	<u>Name</u> <u>Project Title</u>	<u>School</u>
HM CH	411	Dunbar, Evan The Effects of Various Micronutrients on Escherichia Coli	Aidan Meador-Woo Indian Springs School
HM CH	403	Forbes, Madeleine The Synthesis of Potent and Selective Inhibitors of Protein Phosphate 5	 W.P. Davidson High School
HM CH	400	Parr, Olivia Dissolving Packing Peanuts	Alyssa Reaves
HM CH	410	Reaves, Alyssa Dissolving Packing Peanuts	Carroll High School Olivia Parr
HM CH	408	Smith, Rory Put Out the Fire: Preventing Freezer Burn	Carroll High School St. John Paul II Catholic High School

Earth & Environmental Sciences

1 EA	431	Lange, Noel Factors Effecting the Discharge of Micro-Plastic Fbers from Household Laundry	 Auburn High School
2 EA	436	Pinkston, Emily The Effects of Ocean Acidification on Callinectes Sapidus	 Wetumpka High School
3 EA	430	Ashley, William Aqueous Ozone, A Solution for Clean Drinking Water."Using dissolveOzone to Reduce Bacteria in Drinking Water"	 Cornerstone Christian Academy
3 EA	434	Knight, Margaret Impact of Ocean Acidification on Relative Fitness and Interspecies Interactions of Picophytoplankton	 Alabama School of Fine Arts

Category

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<u>Project Title</u>			
3 EA	433	Siggers, Vanessa Goo Be Gone! : Cleaning Up Oil Spills with Magnets and Nanotechnology	Murphy High School
4 EA	437	Dublin Jr., Brian Which Wind-Turbine "Angle" Will Generate the Most Energy, Part 11	Oakwood Adventist Academy
4 EA	432	Hutsler, Clayton Filtering Turbidity of Silt Out of Water	Wetumpka High School
4 EA	438	Shauku, ZO Electromagnetic Radiation: Maybe Not So Rad!	Heritage Academy
4 EA	435	Weldon, Joshua The Effect of Land Developments of Phosphorus Pollution in Water	Shoals Christian School
HM EA	520	Campbell, Carson Backpackers' Delimma	Wetumpka High School

Embedded Systems / Systems Softwarwe

1 ESSS	451	Van Houten, Maya Epi-Phone Auto-Locator	Covenant Christian Academy
2 ESSS	455	Lall, Rahul Battery System Optimization and Development of a Novel Rapid-Response Bioelectronics Device	Auburn High School
3 ESSS	611	Alexander, Kayleigh Verifying Loop Termination of Java "for" Loops	Alabama School of Fine Arts

Category

Place **Proj. No.** **Name** **School**
Project Title

3 ESSS 450 **Willard, Spenser**
Applying the Internet of Things to the Care of the Elderly and Early
Alzheimer's Disease Patients

St. John Paul II Catholic High School

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

James Clemens High School

Energy: Chemical / Energy: Physical

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

Indian Springs School

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

Indian Springs School

3 ECEP 461 **Sinak, Samantha**
The Effect of Various Materials on the Conductivity of a
Thermoelectric Generator

Jefferson County International Baccalaureate

3 ECEP 462 **Wiggins, Ella**
Understanding Faraday's Law And its Possible Use For Cleaner
Energy

Dothan High School

4 ECEP 452 **McClanahan, Kasandra**
Electricity In Your Fruit and Vegetables

Wetumpka High School

Engineering: Mechanics

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

Holy Spirit Catholic High School

Category

<u>Place</u>	<u>Proj. No.</u>	<u>Name</u> <u>Project Title</u>	<u>School</u>
2 EM	482	Fox, Christopher Differences in Liquid Penetration Lengths of E85 and Gasoline	Alabama School of Fine Arts
3 EM	484	Han, Rebecca Rapid Infrared Annealing for Fabrication of Perovskite Solar Cells	Northridge High School
4 EM	485	Ferguson, Matthew Generating Electricity from the Force of Magnets	Cornerstone Christian Academy
HM EM	483	Davis, Jeremiah How does the Weight of a Missile's Motor Affect its Launch Distance Underwater?	Oakwood Adventist Academy
HM EM	480	Standaert, Ryan Canine Activity Tracker	Benjamin Standaer Indian Springs School

Environmental Engineering

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
2 EE	500	Smith, Gavin Solar-Powered Accessory For Reducing Internal Car Temperature During The Summer	St. John Paul II Catholic High School

Materials Science

1 MS	521	Morse, Evan Biodegradable Fish Hook	Hewitt Trussville High School
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Category**Place****Proj. No.****Name****School****Project Title**

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

Wetumpka High School

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

Alabama School of Fine Arts

Physics & Astronomy

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

Covenant Christian Academy

2 PH 556 **Hale, Emily**
Solar Cell Demonstration

St. John Paul II Catholic High School

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

Decatur Presbyterian Church School

4 PH 551 **Johnson, Kelsey**
Catch 32

Henry Pitts

Holy Spirit Catholic High School

HM PH 552 **Dudeck, Noel**
Examining the Polymorphs of Single Crystal Paracetamol under High
Pressure

Alabama School of Fine Arts

HM PH 554 **Oliver, Lathen**
Friction and Ballistics

Central High School

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

Wetumpka High School

Category**Place****Proj. No.****Name****School****Project Title**

Plant Sciences

1	PS	575	Jenkins, Eleanor Supportive Soils	St. John Paul II Catholic High School
2	PS	574	Arnston, Phillip Increasing the Lipid Content of Chlorella Algae with Duckweed	St. John Paul II Catholic High School
3	PS	570	Eltoum, Wamda Cinnamon acts as a Rooting Hormone: Hydrophilic or Hydrophobic	Islamic Academy of Alabama
3	PS	573	McCormick, Alexander Hyper Hydroponics	St. John Paul II Cathdic High School
4	PS	571	Cherry, Ryana Does The Amount Of Nitrogen In Fertilizer Affect Plant Growth?	Oakwood Adventist Academy
4	PS	572	Wingard, Hunter How Does Your Garden Grow?	Wetumpka High School
HM	PS	576	Harrelson, Zachary CO2 Concentrations and Effects on Quercus Virginiana	W.P. Davidson High School

Robotics and Intelligent Machines

1	RI	590	Dotson, Mackenzie Assistive Technology for Quadriplegic Individuals: Voice Commanded Motorized Wheelchair	Hewitt Trussville High School
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Category**Place****Proj. No.****Name****School****Project Title**

2 RI

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

Wetumpka High School

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Hall, Claude**The Future Simulation of Mathworks and Simulink**

WP Davidson High School