

Alachua

Junior *Animal Sciences*

Emlyn M Arner J0113	Westwood Middle School How Music Affects Ant Productivity	Mrs. Christine Floyd
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Fourth Place

Junior *Behavioral & Social Sciences*

David K Cagle J0215	Oak View Middle School Bullying: Does Information Influence Perception?	Mr. Eric Perez
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Second Place

Junior *Biomedical & Health Sciences*

Akash Verma J0319	Abraham Lincoln Middle School A Novel Study to Evaluate the Possible Effects of RF Radiation on Human Brain Waves and Testing Innovative Strategies to Lower RF Levels from RF-emitting Devices	Ms. Maureen Shankman
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Division Grand Award Winner And First Place

Junior *Chemistry*

Eric N Hoffman J0530	Fort Clarke Middle School Burning Desire	Ms. Andrea Anderson
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Fourth Place

Matthew M Settles J0531	Westwood Middle School How Do Different Combinations of Synthetic Flour Affect How Bread Dough Rises?	Ms. Sara Charbonnet
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Fourth Place

Junior *Earth & Environmental Sciences*

Elizabeth S Nowicki J0629	Oak View Middle School What's In Your Tea?	Mrs. Elizabeth Thompson
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Recognition

Junior *Engineering*

Carlos Rinaldi-Rivera J0729	Howard W. Bishop Middle School Automated Orchid Watering Machine	Mrs. Tonya Bervaldi-Camaratta
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Fourth Place

Junior *Environmental Engineering*

Angela L Gao J0824	Abraham Lincoln Middle School Evaluation and Optimization of Photocatalytic Ability of Graphitic Carbon Nitride for Contaminant Removal	Ms. Maureen Shankman
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Fourth Place

Lucy J Stanton J0825	Westwood Middle School Hydro Farming: How Does Farming Certain Plants on Water Affect Nitrate and Phosphate Levels?	Mr. Curtis Ericson
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Fourth Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Ahan B Mishra J0919	Abraham Lincoln Middle School Smartphone Based Biomedical App for the Elderly	Ms. Maureen Shankman
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Fourth Place

Junior *Mathematics & Computational Sciences*

Vicky H Jung J1013	Howard W. Bishop Middle School Trisecting an Angle	Mr. Paul Jost
Fourth Place		
Junior <i>Microbiology</i>		
Zoey L Evans J1113	Howard W. Bishop Middle School Drool Rules: Can Dog Drool Kill Bacteria on the Human Body?	Mrs. Tonya Bervaldi-Camaratta
Fourth Place		
Junior <i>Physics & Astronomy</i>		
Josie M Kirwan J1235	Howard W. Bishop Middle School Ball 3: Throw a Strike, Get it Right!	Dr. Chloe Winant
Recognition		
Senior <i>Animal Sciences</i>		
Janani S Kumaran S0113	Gainesville High School Collection and Identification of Mosquitoes: A Precursor to Understanding Insecticide Resistance.	Mr. Erik Shuping
Fourth Place		
Senior <i>Biomedical & Health Sciences</i>		
Himanshi Verma S0325	Eastside High School Therapeutic Potential of Natural Products Like Centella Asiatica and Resveratrol Against Chemically Induced Mitochondrial Dysfunction in Ocular Manifestations of Schizophrenia and Parkinson's Disease	Mrs. Adrienne Thieke
Fourth Place		
Senior <i>Cellular/Molecular Biology & Biochemistry</i>		
Brindha P Rathinasabapathi S0420	Eastside High School Developing Diagnostic Tools For Vascular Disease Using RNA Markers- Year 2	Mrs. Adrienne Thieke
Fourth Place		
Senior <i>Chemistry</i>		
Helena Jiang S0513	F. W. Buchholz High School Novel Colorimetric Sensors for Detecting Chemicals in Vapor, Liquid, and Solid Phases	Mr. Marc Moody
Division Grand Award Winner And First Place		
Senior <i>Earth & Environmental Sciences</i>		
Ani I Veltcheva S0627	Gainesville High School Is Global Warming Making the Earth Greener?	Mr. Erik Shuping
Recognition		
Senior <i>Intelligent Machines, Robotics, & Systems Software</i>		
Jad A Helmy S0917	Gainesville High School Sonario: Remote Detection of Falls and Emergencies Using Ultrasound in Smartphones	Mr. Erik Shuping
Fourth Place		
Senior <i>Mathematics & Computational Sciences</i>		
Aditi A Shukla S1015	F. W. Buchholz High School Landscape of Adolescent Obesity in the United States: Anthropometry, Perception and a Prediction Model for Finding Solutions.	Mr. Marc Moody
Recognition		
Senior <i>Physics & Astronomy</i>		

Third Place

21 awards for Alachua Region

Bay Haven

Junior *Engineering*

Luke S Elmore	Bay Haven Charter Academy	Dr. Rebecca Ward
J0706	Can't Handle the Pressure	

Recognition

Nathan J Holmes	Bay Haven Charter Academy	Dr. Rebecca Ward
J0706	Can't Handle the Pressure	

Recognition

2 awards for Bay Haven Region

Big Springs

Junior *Behavioral & Social Sciences*

Diana Gegaj	The Villages Charter Middle School	Mrs. Shelbie Wiley
J0214	The Ranschburg Effect: Is the Ranschburg Effect More Prevalent in Older or Younger Adults?	

Honorable Mention

Junior *Biomedical & Health Sciences*

Hannah G Kennedy	The Villages Charter Middle School	Mrs. Shelbie Wiley
J0316	Now You See It, Now You Don't: Chromatic Adaptation	

Recognition

Junior *Earth & Environmental Sciences*

Camille A Duma	Howard Middle School	Mrs. Erin Lewis-Espinoza
J0627	Breakfast Rubbish... May not be Rubbish After All!: An Experiment on the Effects of Fertilizers on Grass Seeds and Water	

First Place

Junior *Engineering*

Ellison S Conrad	The Cornerstone School	Ms. Sydney Norwood
J0726	Year Two: Aerodynamics for the Trucking Industry	

Third Place

Vivek S Sandrapaty	Howard Middle School	Mr. Stephen Hamby
J0727	Take a Dive into the Future of Water Safety: An Idea for the Next Generation Electronic Device that May Prevent Drowning Accidents in Swimming Pools- Year 2	

First Place

Junior *Environmental Engineering*

Wyatt T Amodeo	The Cornerstone School	Mr. Daniel Peterson
J0822	RRC - Reinforced Recycled Concrete	

Third Place

Junior *Microbiology*

Kendall E Dean	Grace Christian School	Mr. Bryan Pyle
J1109	Which Hand Soaps Eliminate the Most Bacteria?	

Recognition

Junior *Plant Sciences*

Luke D Meiers	Osceola Middle School, Ocala	Mr. John Campbell
J1320	Magnetic Field Effects on Plant Growth	

Honorable Mention

Rylee A Shirley	South Sumter Middle School	Mrs. Shelly Paulinyce
J1321	Fish Species' Effect in Aquaponics Farming	

Fourth Place

Senior *Animal Sciences*

Kaitlyn B Taylor	The Villages Charter High School	Ms. Monica Vinas
S0112	How Do SuperDFM Strong Microbials Affect Varrod Destructor in Relation to Lactobacillus within <i>Apis mellifera</i> ?	

First Place

Senior *Cellular/Molecular Biology & Biochemistry*

Angela Shar	Vanguard High School	Mrs. Candace Roy
S0418	A Novel Study on Lactose Intolerance: The Correlation between the Chirality of Isomer d-lactose and Observed Rotation of Polarized Light	

Recognition

Senior *Chemistry*

Andy Shar	Vanguard High School	Mrs. Candace Roy
S0511	Bucky Paper: Investigating the Viability of Multi-Walled Carbon Nanotubes in Sensors for the Detection of Various Gases	

Third Place

Kindle S Hon	South Sumter High School	Ms. Emily Keeler
S0512	Extracting Polysaccharides from Rhodophyta Plantae to Make Biodegradable Plastic	

Fourth Place

Taylor A Hubbard	South Sumter High School	Ms. Emily Keeler
S0512	Extracting Polysaccharides from Rhodophyta Plantae to Make Biodegradable Plastic	

Fourth Place

Chloe L Johnson	South Sumter High School	Ms. Emily Keeler
S0512	Extracting Polysaccharides from Rhodophyta Plantae to Make Biodegradable Plastic	

Fourth Place

Senior *Earth & Environmental Sciences*

Matthew T Yates	South Sumter High School	Ms. Emily Keeler
S0626	Efficacy of Plant Parasitic Nematodes	

Third Place

Senior *Engineering*

Nicholas A Ruppel	Forest High School	Mrs. Korie Grimsley
S0722	First Response Medical Drone	

Fourth Place

Senior *Environmental Engineering*

Karrah L Christensen	South Sumter High School	Ms. Emily Keeler
S0820	Rubber Roads..... Take Me Home!!	

Recognition

Tyler R Higginbotham	South Sumter High School	Ms. Emily Keeler
S0820	Rubber Roads..... Take Me Home!!	

Recognition

Taylor R Powell	South Sumter High School	Ms. Emily Keeler
S0820	Rubber Roads..... Take Me Home!!	

Recognition

Senior *Microbiology*

Caleb S Brock	The Villages Charter High School	Ms. Monica Vinas
S1119	The Influence of Lytic Bacteriophages on Bacterial Infections	

Recognition

Senior *Physics & Astronomy*

Haylee A Darling	Saint John Lutheran School	Mrs. Jennifer Fontaine
S1216	Sustainable Energy: Can this be Accomplished with a Permanent Magnet Generator?	

Recognition

Senior *Plant Sciences*

Recognition

23 awards for Big Springs Region

Brevard: Intracoastal

Junior *Behavioral & Social Sciences*

Logan W Silvea	Tropical Elementary School	Ms. Deborah Skinner
J0213	Correlation between Ocular Amplitude and Saccade Behavior Measured through the Perceived Intensity of the Moire Effect	

First Place

Junior *Biomedical & Health Sciences*

Carlo J Fraley	Edgewood Jr/Sr High School	Ms. Meredith Spencer
J0315	Novel Antibiotics among Plants	

Fourth Place

Junior *Cellular/Molecular Biology & Biochemistry*

Jessica R Watkins	Herbert H. Hoover Middle School	Ms. Michelle Zimmerman
J0411	The Effects of Pteroylmonoglutamic Acid, Folic Acid, and Vitamin B12 on <i>Danio rerio</i> Embryos- Year 2	

Third Place

Junior *Chemistry*

Amelia B Curran	Herbert H. Hoover Middle School	Ms. Michelle Zimmerman
J0529	A Comparison of The Energy Content and Yield of <i>Hydrilla verticillata</i> and <i>Lemna minor</i> Biodiesels	

Second Place

Junior *Earth & Environmental Sciences*

Brianna S Jones	Edgewood Jr/Sr High School	Ms. Meredith Spencer
J0625	<i>Pestalotiopsis microspora</i> Breaking Down Plastic	

Second Place

Junior *Engineering*

Sammy M Habboub	Herbert H. Hoover Middle School	Ms. Michelle Zimmerman
J0725	Harvesting Piezoelectric Energy Using Zinc Oxide Nanowires	

Second Place

Junior *Environmental Engineering*

Lavanya S Natarajan	DeLaura Middle School	Ms. Deborah Austin
J0821	An Engineered Solution to Optimize the Hydraulic Conductivity of Highly Permeable Landfill Liners	

Third Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Madhumita Subbiah	Edgewood Jr/Sr High School	Ms. Meredith Spencer
J0918	Emergency Alerts	

Third Place

Junior *Mathematics & Computational Sciences*

Noah A Lutchansky	DeLaura Middle School	Ms. Deborah Austin
J1012	Don't Be Blue about Microwaves	

Third Place

Junior *Physics & Astronomy*

Aaron M Finch J1232	Thomas Jefferson Middle School Aerodynamic Lift of Aircraft Inside a Wind Tunnel	Mrs. Maryann Kulenguski
Second Place		
Junior <i>Plant Sciences</i>		
Jacob H Wolfe J1319	Edgewood Jr/Sr High School What Variance of Light Intensity Affects the Chloroplast Reproduction in a Plant?	Ms. Meredith Spencer
Honorable Mention		
Senior <i>Animal Sciences</i>		
Emily G Zook S0111	Edgewood Jr/Sr High School Clams on Acid- Year 2	Mr. Ryan Cilsick
Honorable Mention		
Senior <i>Behavioral & Social Sciences</i>		
Alyssa Russell S0210	Satellite High School Reminiscing: Music and Memory- Year V	Mr. Joe Scott
Second Place		
Senior <i>Biomedical & Health Sciences</i>		
Kelly B Berkowitz S0321	Edgewood Jr/Sr High School What's Your Gut Feeling?: Can the Usage of a Natural Plant Extract Create a Conducive Environment for Prebiotics to Work? - Year 2	Mr. Ryan Cilsick
Recognition		
Senior <i>Cellular/Molecular Biology & Biochemistry</i>		
Nina Reddy S0417	Satellite High School Personalized Cancer Cell Weapons Using CRISPR Genetic Engineering- Year 3	Mr. Joe Scott
Division Grand Award Winner And First Place		
Senior <i>Chemistry</i>		
Osamah Nafadi S0510	Satellite High School Photothermic Steam Generation Enabled by Carbon Nanoparticles	Mrs. Lisa Scott
Honorable Mention		
Senior <i>Earth & Environmental Sciences</i>		
Angelina M Guerra S0625	Edgewood Jr/Sr High School Novel Unmanned Environmental DNA Collection Technique	Mr. Ryan Cilsick
Division Grand Award Winner And First Place		
Senior <i>Engineering</i>		
Caspian Chaharom S0720	Edgewood Jr/Sr High School Solar Powered Plane	Mr. Ryan Cilsick
Honorable Mention		
Joshua Stern S0721	Satellite High School Hermetic Sealing of 3D Printed Plastics	Mrs. Lisa Scott
Recognition		
Senior <i>Intelligent Machines, Robotics, & Systems Software</i>		
Zack Hohl S0915	Edgewood Jr/Sr High School Drones for Invasive Species Monitoring	Mr. Ryan Cilsick
Second Place		

Senior *Mathematics & Computational Sciences*

Madison Versaggi	Satellite High School	Mr. Joe Scott
S1013	Fractals in Nature	

Honorable Mention

Senior *Microbiology*

Maximus Schieman	Satellite High School	Mr. Joe Scott
S1118	Resisting the Nucleotide in Oligonucleotide-Directed Mutagenesis- Year IV	

Fourth Place

Senior *Plant Sciences*

Jieli A Wegerif	Edgewood Jr/Sr High School	Mr. Ryan Cilsick
S1317	The Uptake and Fate of Antibiotics in Plant Systems	

Second Place

23 awards for Brevard: Intracoastal Region

Brevard: Mainland

Junior *Behavioral & Social Sciences*

Tristen Haggerty J0207	Lyndon B. Johnson Middle School Mental Practice vs Physical Practice	Mrs. Susan O'hern
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Fourth Place

Kiri Haggerty J0207	Lyndon B. Johnson Middle School Mental Practice vs Physical Practice	Mrs. Susan O'hern
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Fourth Place

Junior *Earth & Environmental Sciences*

Jasmine Bohannon J0614	McNair Magnet Middle School Determining the Effects of Clay Flocculation of Brown Algae, <i>Dictyota</i>	Ms. Cheryl Graham
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Recognition

Junior *Engineering*

Johan Rafeek J0716	Lyndon B. Johnson Middle School How Does Pitch, Diameter, Number of Blades on a Drone Propeller Affect the Drone's Thrust Force?	Mrs. Susan O'hern
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Fourth Place

Junior *Environmental Engineering*

Robert J Zrallack J0812	St. Teresa Catholic School Can an Aeration and Agitation System be Used to Treat Canal Runoff Water to Decrease the Amount of Phosphorus and Nitrate Levels that Enter the Indian River.	Mrs. Patricia Taurasi
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Fourth Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Maddison P Orlandi J0911	Lyndon B. Johnson Middle School House Design vs Hurricane	Mr. Greg Stauffer
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Honorable Mention

Senior *Biomedical & Health Sciences*

Tyler (Julia) A Audino S0315	Viera High School Hormone Replacement Therapy - Year 2	Ms. Elizabeth Youngs
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Fourth Place

Senior *Cellular/Molecular Biology & Biochemistry*

Benjamin B Scarpino S0410	Astronaut High School What Is the Efficacy of Iminosugars in Inhibiting Glucosylceramide Synthase in Canine Macrophages?	Mr. Samuel Cunningham
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Fourth Place

Senior *Earth & Environmental Sciences*

Esther R Francom S0615	Viera High School Microplastics Spoiling Spoil Islands of the Indian River Lagoon	Ms. Elizabeth Youngs
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Second Place

Senior *Environmental Engineering*

Kyle W Bramblett S0813	Titusville High School A Concrete Solution for Oyster Recruitment and Growth: Designing an Artificial Structure to Increase Oyster Shell Growth and Oyster Spat Settlement Using Calcite Media	Mrs. Jennifer Cotton
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First Place

Senior *Microbiology*

Om D Patel	Eau Gallie High School	Ms. Chelsea George
S1114	What Is the Minimum Concentration of Piper Betel Leaf Oil and Holy Basil Oil that has an Inhibitory Effect on <i>Bacillus megaterium</i> , <i>Micrococcus luteus</i> , and <i>Serratia marcescens</i> Bacterial Strains?	

Third Place

Senior *Physics & Astronomy*

Jozette L Conti	Eau Gallie High School	Ms. Chelsea George
S1211	Cloud Chamber Saturation Does the Varying Level of Supersaturation within a Cloud Chamber Affect the Particles Originating from Cosmic Rays?	

Recognition

12 awards for Brevard: Mainland Region

Brevard: South

Junior *Animal Sciences*

Annabelle Donald	Stone Magnet Middle School	Mr. Richard Regan
J0120	The Effects of 470 nm Blue Light and 660 nm Red Light on Tissue Regeneration in the Brown Planarian, <i>Dugesia tigrina</i>	

Third Place

Junior *Biomedical & Health Sciences*

Aidan J Meyers	West Shore Junior/Senior High School	Mrs. Magdalena Molledo
J0327	Determining the Prophylactic Effects of Melanin and Various Essential Oils Against Erythema and Photocarcinogenesis Simulated Using <i>Saccharomyces cerevisiae</i> - Year 2	

Second Place

Junior *Cellular/Molecular Biology & Biochemistry*

Laya Damaraju	West Shore Junior/Senior High School	Mrs. Magdalena Molledo
J0416	The Effectiveness of Gold Nanoparticles Radiated by Near-Infrared (NIR) Light on the Cell Viability of <i>Saccharomyces cerevisiae</i>	

Second Place

Junior *Chemistry*

Bianka A Albert	West Shore Junior/Senior High School	Mrs. Mary Schropp
J0537	Removal of Methylene Blue from Wastewater	

Recognition

Junior *Earth & Environmental Sciences*

Ava J Auter	West Shore Junior/Senior High School	Mrs. Magdalena Molledo
J0647	The Effect of Anoxic Conditions on Water Chemistry in the Indian River Lagoon (A Second Year Study)	

Third Place

Junior *Engineering*

Cooper Thomson	Stone Magnet Middle School	Mr. Richard Regan
J0742	Testing Boundary Layer Ingesting Engine Cowling Designs as a Method of Reducing Drag	

Recognition

Junior *Environmental Engineering*

Adit Agarwal	Stone Magnet Middle School	Mr. Richard Regan
J0829	Developing and Testing a Remotely Operated Vehicle Designed to Detect and Reduce Harmful Algae Blooms Caused by <i>Gymnodinium</i>	

Second Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Faith E Collins	West Shore Junior/Senior High School	Mrs. Magdalena Molledo
J0925	Using Machine Learning to Develop an Image Steganography Detection Software	

First Place

Junior *Mathematics & Computational Sciences*

Elianna Sanchez	Stone Magnet Middle School	Mr. Richard Regan
J1019	Epidemiology: A Mathematical Model of Disease Transmission	

Honorable Mention

Junior *Microbiology*

Rahul Tummuru	Stone Magnet Middle School	Mr. Richard Regan
J1117	A Study of the Antimicrobial Effects of <i>Moringa oleifera</i> Extracts on the Growth of the Gram-Negative Bacteria, <i>Escherichia coli</i> and the Gram-Positive Bacteria, <i>Staphylococcus epidermidis</i>	

First Place

Junior *Physics & Astronomy*

Nathan J Boonsangan	West Shore Junior/Senior High School	Mrs. Magdalena Molledo
J1243	Dual Axis Solar Tracker Using Arduino Uno Controller (Low Voltage 5 - 12V Electrical Circuit)	

Third Place

Junior *Plant Sciences*

Madison A Uhlmeyer	West Shore Junior/Senior High School	Mrs. Magdalena Molledo
J1330	Determining the Impact of Sterilized <i>Oreochromis niloticus</i> <i>dermis</i> on <i>Buxus microphylla japonica</i> Cellular Regeneration	

Fourth Place

Senior *Behavioral & Social Sciences*

Luke T Geiger	Bayside High School	Mr. Aaron Mitchell
S0216	Hotheads in Nature: Thermal Stress-Prompted Transgenerational Epigenetic Inheritance of Aggressive Behavior in a Population of <i>Drosophila melanogaster</i>	

Second Place

Senior *Biomedical & Health Sciences*

Madeline E Huberman	West Shore Junior/Senior High School	Ms. Paula Ladd
S0341	Prevalence of Fusobacterium Nucleatum in Colonic Adenomas and its Localization in Areas of High Grade Dysplasia/Carcinoma In-Situ	

Third Place

Senior *Cellular/Molecular Biology & Biochemistry*

Ritika Jeloka	Melbourne High School	Mrs. Kayla Carpenter
S0430	The Role of Aging, Antioxidants, and Mutant Huntingtin Lowering in the Oxidative Stress Response of HD Neurons	

Third Place

Senior *Chemistry*

Lasya Damaraju	West Shore Junior/Senior High School	Ms. Paula Ladd
S0528	UiO-66 Metal Organic Frameworks (MOFs) Decorated with Cadmium Sulfide Quantum Dots: An Investigation of the Effectiveness of MOFs as a Drug Delivery System for Melanoma	

Fourth Place

Senior *Earth & Environmental Sciences*

Minaal Murshid	West Shore Junior/Senior High School	Ms. Paula Ladd
S0643	Investigating the Ecotoxicology of Copper Oxide Nanoparticles Encased in Alginate Hydrogel Capsules Designated to Remediate Phosphate Contamination in Water: Year II	

Third Place

Senior *Engineering*

Brooke C Rentschler	West Shore Junior/Senior High School	Ms. Paula Ladd
S0741	Fabricating a Novel Bioplastic Contrived of Chondrus Macroalgae Extract for the Purpose of Determining its Structural Integrity Compared to PETE Plastic	

Third Place

Senior *Mathematics & Computational Sciences*

Nathan Foo	West Shore Junior/Senior High School	Ms. Paula Ladd
S1020	Statistical Regression Analysis for Population Ecology: Mitigation of Invasive Lionfish (<i>Pterois volitans/miles</i>)	

Fourth Place

Senior *Physics & Astronomy*

Mahmood H Syed	West Shore Junior/Senior High School	Ms. Paula Ladd
S1224	Enhancing Fiber Optic Channel Bandwidth by Integrating Spatial Domain Multiplexing and Pulse Amplitude Multiplexing (PAM4) Signals: Year 5	

Fourth Place

Senior *Plant Sciences*

Pooja S Shah	West Shore Junior/Senior High School	Ms. Paula Ladd
S1325	Density Dependent Signaling in the Model Eukaryote- <i>Chlamydomonas reinhardtii</i>	

Second Place

21 awards for Brevard: South Region

Broward

Junior *Biomedical & Health Sciences*

Kayla Bello	Driftwood Middle School	Mrs. Patricia Pascatore
J0321	Comparison of Embryonic STEM Cells, Mesenchymal STEM Cells and Induced Pluripotent STEM Cells Ability to Differentiate into Insulin Producing Cells Which Could Be the Cure for Type I Diabetes	

Second Place

Ellaheh Gohari	American Heritage School	Mrs. Leya Mathew Joykutty
J0322	Obstructive Sleep Apnea and Sleep Quality: The Impact on Cardio-Metabolic Risk in Spinal Cord Injury	

Honorable Mention

Junior *Cellular/Molecular Biology & Biochemistry*

Carla del Rio	American Heritage School	Mrs. Leya Mathew Joykutty
J0413	The Effects of Variations of Solute Concentration of the Surrounding Solution on the Cell's Survival of the Freezing Process	

Third Place

Junior *Earth & Environmental Sciences*

Alejandra S Abramson	American Heritage School	Mrs. Leya Mathew Joykutty
J0633	The Effect of Common Pesticides on <i>Drosophila melanogaster</i> in Comparison to Neurodegenerative Diseases, Learning Disorders, and Birth Defects in Humans	

First Place

Khushi Desai	Crystal Lake Community Middle School	Ms. Lenecia McCrary
J0634	Evaluation of a Natural Eco-Friendly Bio-Coagulant Moringa Oleifera Compared to Traditional Synthetic Chemical Coagulants for Treatment of Surface Water	

Second Place

Trevor O Overton	Pioneer Middle School	Mrs. Jerilyn Habenicht
J0635	Carbon Dioxide's Impact on Temperature	

Fourth Place

Sobheet Rath	American Heritage School	Mrs. Leya Mathew Joykutty
J0636	Lead Content in Broward County Residential Tap Water and the Effectiveness of Filters to Remove Lead from Water	

Honorable Mention

Tamara L Faor	Alazhar School	Mrs. Lubna Hamad
J0638	The Effect of Different pH levels on Green, Red, & Brown Algae	

Second Place

Aleyna G Tunc	Alazhar School	Mrs. Lubna Hamad
J0638	The Effect of Different pH levels on Green, Red, & Brown Algae	

Second Place

Junior *Engineering*

Maria E Suberviola	American Heritage School	Mrs. Leya Mathew Joykutty
J0732	Effectiveness of Bifacial Photovoltaic Cells on Maximizing the Absorption of Reflected Sunlight	

Third Place

Alexandros Rapanos	Beachside Montessori Village	Ms. Catrina Liptak
J0733	Testing Concrete Performance	

Honorable Mention

Junior *Intelligent Machines, Robotics, & Systems Software*

Mia T Respeto	Nativity Catholic School	Mrs. Gloria Gibson
J0922	Which Common Roomba Algorithm Gets the Best Room Coverage?	
Honorable Mention		
Junior <i>Mathematics & Computational Sciences</i>		
Rebecca D Adler	Pine Crest School	Ms. Jennifer Gordinier
J1015	The Derivation of the Virgo Constant with Respect to Hubble's Constant	
Second Place		
Senior <i>Behavioral & Social Sciences</i>		
Eniya Krishnaraj	American Heritage School	Mrs. Leya Mathew Joykutty
S0213	Investigating the Effect of Up-regulating the GABA and NO/cGMP/PKG Pathways as a Potential Therapy for Epilepsy Using <i>Caenorhabditis elegans</i> as a Model Organism.	
Honorable Mention		
Senior <i>Biomedical & Health Sciences</i>		
Jared E Gould	Pine Crest School	Ms. Jennifer Gordinier
S0331	Adult Stem Cells for Musculoskeletal Tissue Regeneration	
Fourth Place		
Anam Ahmed	American Heritage School	Mrs. Leya Mathew Joykutty
S0333	Development of a PCR Assay for Identification of Chronic Autoimmune Inflammation in Type 1 Diabetes	
Third Place		
Katherine L Heatzig	Pine Crest School	Ms. Jennifer Gordinier
S0335	The Connection between Rhes and Mitochondria in Huntington's Disease Models	
Recognition		
Laura S Allen	Western High School	Mrs. Gina Cory
S0336	Near Infrared Light Photobiomodulation and <i>C. longa</i> Mitigates the Expression of Mutant Amyloid-Beta Precursor Protein Pathway in <i>D. melanogaster</i>	
Second Place		
Hoang C Le	Western High School	Mrs. Gina Cory
S0336	Near Infrared Light Photobiomodulation and <i>C. longa</i> Mitigates the Expression of Mutant Amyloid-Beta Precursor Protein Pathway in <i>D. melanogaster</i>	
Second Place		
Senior <i>Cellular/Molecular Biology & Biochemistry</i>		
Diya K Jayram	American Heritage School	Mrs. Leya Mathew Joykutty
S0423	A Novel Approach to Combating Inflammation in Obesity: Identifying and Targeting the Antigen Presentation of Adipocytes and the Secretion of Autoantibodies	
Honorable Mention		
Albert Ting	American Heritage School	Mrs. Leya Mathew Joykutty
S0424	Development of a Two Pronged Treatment Targeting the NF-KB and MGMT Pathways by Creating a Novel Drug Cocktain Using Temozolomide, Zinc, and Disulfiram to Treat Newly Diagnosed Glioblastoma	
Honorable Mention		
Senior <i>Chemistry</i>		
Angelin T Mathew	American Heritage School	Mrs. Leya Mathew Joykutty
S0515	Developing a Multifaceted Smart Scaffold for Application in Tissue Engineering, Organoid Development, and Islet Cell Transplantation: Integrating an Oxygen Generating System to Mitigate Hypoxia and Leveraging the Properties of Bacterial Cellulose	
Second Place		

Senior *Earth & Environmental Sciences*

Rajat Ramesh S0631	American Heritage School	Mrs. Leya Mathew Joykutty
The Utilization of a Modified Wastewater-Based Medium as a Feedstock for Engineered <i>Saccharomyces cerevisiae</i> for the Novel Biological Production of Fatty-Acid Derived Alcohols and Carboxylic Acids		

Second Place

Emilin M Mathew S0632	American Heritage School	Mrs. Leya Mathew Joykutty
Identification of a Novel Biomarker for Pollutant induced Acute Kidney injury and Evaluation of Multifaceted Therapies to Ameliorate Post Injury Fibrosis from Progressing to Coronary Artery Disease		

Recognition

Senior *Engineering*

Alexander Divoux S0729	American Heritage School	Mrs. Leya Mathew Joykutty
Tesla Polymorphic Structures		

Third Place

Hans C Ehrnrooth S0730	Pine Crest School	Ms. Jennifer Gordinier
Improving the Efficacy of Modern Airlines with the Co-Flow Jet Airfoil		

Second Place

Daniela Velez S0732	American Heritage School	Mrs. Leya Mathew Joykutty
The Facilitation of Communication for People with Disabilities through the Easyspin Keyboard		

Recognition

Senior *Intelligent Machines, Robotics, & Systems Software*

Juliette A Koval S0920	Pine Crest School	Ms. Jennifer Gordinier
The Development of a Data Pipeline to Improve Cancer Diagnosis Using Convolutional Neural Networks		

Third Place

Fabio Ibanez S0921	Miramar High School	Mrs. Tamekia Thompson
Development of Software for Mental Illness Diagnostics: Facial Classification through Machine Learning		

Second Place

Geela Margo M Ramos S0921	Miramar High School	Mrs. Tamekia Thompson
Development of Software for Mental Illness Diagnostics: Facial Classification through Machine Learning		

Second Place

Senior *Mathematics & Computational Sciences*

Peyton W Robertson S1017	Stanford Online High School	Mr. Johnathan Robertson
A Heuristic for Optimal Buoy Placement		

Third Place

Senior *Physics & Astronomy*

Emily L Pallack S1220	American Heritage School	Mrs. Leya Mathew Joykutty
Genetic Consequences of Stiff-Conditioned and Soft-Conditioned Fibroblasts		

Honorable Mention

Megan N Mondek S1221	Saint Thomas Aquinas High School	Mrs. Diane Enten
The Differences of Impact Shock and Force in Pelvic and Mid-Upper Body Tackling		

Recognition

33 awards for Broward Region

Capital

Junior *Cellular/Molecular Biology & Biochemistry*

Farhana M Rafi J0410	Deerlake Middle School Catalyst at Work	Mrs. Marla Blair
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Fourth Place

Junior *Chemistry*

Ava L Jones J0527	Swift Creek Middle School Galvanic Wars	Mr. David Rodriguez
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Third Place

Junior *Environmental Engineering*

Shilpa M Shiju J0819	Deerlake Middle School Development of an Organic Super Capacitor Using Sugar Polymers and Tannin	Mrs. Marla Blair
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Fourth Place

Junior *Microbiology*

Chloe R Thompson J1107	Tallahassee School of Math and Science <i>E. Coli</i> , or Eco-lies? Comparing the Presence of Coliforms in Packaged versus Non-packaged Foods	Ms. Anngela Cervera
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Third Place

Senior *Biomedical & Health Sciences*

Tanvi Haladiya S0319	James S. Rickards High School Exploring Mechanisms Underlying Temporal Lobe Epilepsy: An Analysis of the Neuron-Astrocyte-Microglia Triad	Dr. Paula Hall
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Third Place

Neha R Iyer S0320	Lawton Chiles High School Collagen Production in Keloid Fibroblasts upon Steroid Treatment	Mrs. Angela Breza-Pierce
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Recognition

Senior *Cellular/Molecular Biology & Biochemistry*

Jason J Zhang S0413	Lawton Chiles High School Determining the Role of Checkpoint Protein BUBI in DNA Replication	Mrs. Angela Breza-Pierce
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Third Place

Parul R Singh S0414	Lawton Chiles High School Histone Acetylation Levels in H3.3 Mutant Childhood Glioblastoma Cells	Mrs. Angela Breza-Pierce
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Fourth Place

Dhenu P Patel S0415	Maclay School The Development of Zika Virus Pseudoparticles: A Novel Model for the Future	Ms. Ariel Simonton
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Third Place

Senior *Earth & Environmental Sciences*

Nirmay V Bhandari S0622	Maclay School How Different Factors Affect Radon Levels in Homes	Ms. Ariel Simonton
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Recognition

Ananda Chatterjee S0622	Maclay School How Different Factors Affect Radon Levels in Homes	Ms. Ariel Simonton
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Recognition

Senior *Engineering*

Akhil K Shiju	Lawton Chiles High School	Mrs. Angela Breza-Pierce
S0719	Development of a Novel Biohybrid Nanorobot for Detection and Treatment of Disease	

First Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Sameer V Ponnaluri	Maclay School	Ms. Ariel Simonton
S0914	Application Program Interface with Data-Driven Machine-Learning to Predict Waitlist and Survival in Organ Transplantation	

Honorable Mention

Senior *Mathematics & Computational Sciences*

Dennis Jiang	Lawton Chiles High School	Mrs. Angela Breza-Pierce
S1012	Diagnosis of Liver Cancer Using Deep Neural Network: Applied into Application Software	

Third Place

Andy Jiang	Lawton Chiles High School	Mrs. Angela Breza-Pierce
S1012	Diagnosis of Liver Cancer Using Deep Neural Network: Applied into Application Software	

Third Place

Senior *Plant Sciences*

Max L Ngnepieba	James S. Rickards High School	Dr. Paula Hall
S1316	Does the Different pH of Solutions Impact the Rate of Germination of <i>Cucurbita pepo</i> Seeds When They All Occur at the Same Temperature?	

Recognition

16 awards for Capital Region

Citrus

Junior *Mathematics & Computational Sciences*

Allison M Harder	Crystal River Middle School	Ms. Cynthia Jones
J1006	Proving Picks	

Fourth Place

Junior *Physics & Astronomy*

Riley R Lutes	Citrus Springs Middle School	Ms. Annaliese Leazott
J1215	Line Abrasion Test	

Third Place

Senior *Cellular/Molecular Biology & Biochemistry*

Truman J Roland	Citrus High School	Ms. Amanda McKenna
S0405	Chemo-enzymatic Synthesis of Poly-N-Acetyllactosamine (Poly-LacNAc) and Sialylated Glycans on GlcNAc-CATCH(4+) Peptides	

Honorable Mention

Senior *Engineering*

Nicole L Moran	Academy of Environmental Science	Mr. Ward Cooper
S0709	Homemade Arms	

Recognition

Senior *Plant Sciences*

Jetta Zakaria	Lecanto High School	Mr. Ryan Campbell
S1306	Which Nitrogen-Fixing Bacteria, <i>Rhodococcus rhodochrous</i> or <i>Rhizobium leguminosarum</i> , Will Help <i>Trifolium hybridum</i> Grow?	

Honorable Mention

5 awards for Citrus Region

Clay Rotary

Junior *Animal Sciences*

Keegan W Emanuel	Green Cove Springs Junior High School	Mr. Christopher Nooney
J0118	Baiting Beach Mice	

Third Place

Junior *Engineering*

Brady G White	Green Cove Springs Junior High School	Mr. Christopher Nooney
J0740	Could Induction Be Used to Power Electric Vehicles in Motion?	

Recognition

Junior *Physics & Astronomy*

Sydney E Hayes	Orange Park Junior High School	Mr. Benjamin Swann
J1240	Radiation Penetration	

Honorable Mention

Senior *Biomedical & Health Sciences*

Sebastian D Kouchakjy	Orange Park High School	Ms. Amanda George
S0340	Pneumatic Chest Compressor	

Fourth Place

Senior *Engineering*

Gavin A Baker	Fleming Island High School	Mr. Matthew Ely
S0736	It's Getting Hot in Here!	

Honorable Mention

5 awards for Clay Rotary Region

Collier

Junior *Biomedical & Health Sciences*

Angela E Yu	Pine Ridge Middle School	Mr. Gregory Anthony
J0308	Productive Planaria	

Third Place

Junior *Cellular/Molecular Biology & Biochemistry*

Anya Joshi	Pine Ridge Middle School	Mr. Patrick Heath
J0418	Sugars in Your Smoothies	

Recognition

Junior *Chemistry*

Benno S Hermans	Pine Ridge Middle School	Mr. Gregory Anthony
J0510	Additives for Maintaining Bioplastic Tensile Strength Over Time	

First Place

Junior *Earth & Environmental Sciences*

Jonny F Sobczak	Pine Ridge Middle School	Mr. Gregory Anthony
J0610	Impacts of Aeration on a Freshwater Body	

Honorable Mention

Junior *Engineering*

Sabyne A Brisson	Pine Ridge Middle School	Mr. Gregory Anthony
J0711	A Stitch to Save a Surgery	

Third Place

Junior *Environmental Engineering*

Kiernan R Dally	Pine Ridge Middle School	Mr. Gregory Anthony
J0807	Storm Drain vs. Amount of Water/Pieces of Plastic	

Third Place

Senior *Cellular/Molecular Biology & Biochemistry*

Anabella Maria D Galang	Home School	Dr. Kenneth Galang
S0406	Effects of Genetic Manipulation of Nodal Expression on ER + Breast Cancer Cell Morphology, Proliferation, Invasion and Migration	

Fourth Place

7 awards for Collier Region

Dr. Nelson Ying Expo - Orange

Junior *Behavioral & Social Sciences*

Sarah S Felo	Leaders Preparatory School	Mrs. Ayesha Mirza
J0220	Gender Aggression	

Recognition

Junior *Biomedical & Health Sciences*

Ashna Mathur	Orlando Science School	Ms. Jill Piontkowski
J0328	Are Homemade Fruit Juices a Better Source of Electrolytes and Carbohydrates than Sports Drinks for Kids?	

Third Place

Junior *Chemistry*

Ramsey O Zeidan	Orlando Science School	Mrs. Emine Demir
J0538	The "C" In Chlorophyll	

First Place

Junior *Earth & Environmental Sciences*

Sydney V Wright	Lake Eola Charter School	Mr. Bob Madewell
J0648	Good Up High, Bad Nearby	

Honorable Mention

Junior *Engineering*

Anya B Stewart	Avalon Middle School	Ms. Fadia Ahmed Hussien
J0743	Newton's Cradle: Does Ball Size Matter? Part II	

Fourth Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Ivan A Goponenko	Lake Nona Middle School	Mrs. Michelle Menard
J0926	What AI is the Best at Chess?	

Recognition

Junior *Mathematics & Computational Sciences*

Jessica C Zhou	Maitland Middle School	Dr. Anne Albright
J1020	A Statistical Study Comparing Charter and Traditional Public Schools in Florida Using a Log-Linear Model	

Honorable Mention

Junior *Microbiology*

Zachary R Rediske	Maitland Middle School	Dr. Anne Albright
J1118	The Effect of Natural vs Household Cleaning Products on Bacterial Growth	

Fourth Place

Junior *Physics & Astronomy*

Zachary H Bridenbaugh	Wedgfield School	Dr. Mark Rozmarynowicz
J1244	Foiling Plan(e)s	

Fourth Place

Junior *Plant Sciences*

Isabella M Fulbright	International Community School	Mrs. Terry Davis
J1331	Impacting Indoor Morning Seed Growth Rate through Seed Manipulation	

First Place

Senior *Animal Sciences*

Varun R Madan	Lake Highland Preparatory School	Mrs. Zasha A. Mickey
S0122	Year 2: Understanding the Effects of Bifidobacterium Infantis on Honeybee Gut Parasite <i>Nosema ceranae</i>	

Second Place

Senior *Biomedical & Health Sciences*

Setareh K Gooshvar	Trinity Preparatory School	Mr. Michael Arney
S0342	Effect of Conductive Inks in Silicone Based Wearable Technology on the Human Body	

Second Place

Senior *Chemistry*

Alexandria L Bias	Lake Nona High School	Ms. Joann Bukovey
S0529	Reducing Global Warming by Analyzing Storage Capabilities of Mechanically Synthesized Compounds	

Third Place

Senior *Earth & Environmental Sciences*

Saahithya K Nagulapalli	Trinity Preparatory School	Mr. Michael Arney
S0644	Episodic Toxicity of Zinc to <i>Daphnia magna</i> : Implications for Regulation of Industrial Wastewater Discharge	

Honorable Mention

Senior *Engineering*

Aidan L McLaughlin	Trinity Preparatory School	Mr. Michael Arney
S0742	Carbon Dioxide Capture with Liquids in Microgravity	

Fourth Place

Senior *Environmental Engineering*

Julia J Wu	Lake Highland Preparatory School	Ms. Zasha Mickey
S0832	Development of Photoacid Protonated Polyaniline Polymer as a Conductor	

Recognition

Zijie Yang	Trinity Preparatory School	Mr. Michael Arney
S0833	UV-Catalyzed Fenton Processes for Hydroxyl Oxidation of Aqueous Amoxicillin	

Fourth Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Varun N Aggarwal	Lake Highland Preparatory School	Mr. Chris Goodwin
S0926	Exploring a Novel Method of Foveated Rendering in Virtual Reality with an Object Based Approach	

Recognition

Senior *Microbiology*

Sanjana R Konda	Lake Highland Preparatory School	Mr. Chris Goodwin
S1128	Evaluation of the Antibacterial Efficacy and Cytotoxicity of Chitosan Nanoparticles	

Fourth Place

Senior *Physics & Astronomy*

Levon N Tabirian	Trinity Preparatory School	Mr. Michael Arney
S1225	Non-Doppler Redshifts due to Light-Matter Interactions as a Solution for Redshift Controversies	

Third Place

20 awards for Dr. Nelson Ying Expo - Orange Region

East Panhandle

Junior *Animal Sciences*

EllaGrace Clinger	Meigs Middle School	Mr. Jared Hill
J0104	Is There a Colorful Solution to Light Pollution?	

Recognition

Junior *Chemistry*

Gabriel P Lerner-Sperow	Okaloosa STEMM Academy	Mrs. Sarah Wilson
J0507	Fueling the Future: The Effect of Oxidation Prone Metal Variance on the Rate of Hydrogen Gas Production in the Reaction of a Metal and Hydrochloric Acid	

Third Place

Therese B Sherwin	C. W. Ruckel Middle School	Mrs. Lisa Nall
J0508	Reverse Filter: The Future of Science	

Honorable Mention

Junior *Earth & Environmental Sciences*

Marisol R Enguidanos	Okaloosa STEMM Academy	Mrs. Sarah Wilson
J0604	Is it Possible to Reduce the Environmental Effects Causing Coral Bleaching?	

Second Place

Grace M Hebson	Saint Mary Catholic School	Mrs. Laura McNeill
J0605	Got Algae? Suppressing Harmful Algal Blooms with Calcium Chloride	

Third Place

Junior *Engineering*

Aaron M Wilmoth	Walton Middle School	Mrs. Sandra Thorson
J0710	Squishy Robots	

Second Place

Sophia C Cafarelli	C. W. Ruckel Middle School	Mrs. Cheryl Duty
J0721	Can Polystyrene Fly?	

Honorable Mention

Junior *Intelligent Machines, Robotics, & Systems Software*

Samuel E Knight	Okaloosa STEMM Academy	Mrs. Sarah Wilson
J0907	AI Obstacle Course	

Fourth Place

Junior *Microbiology*

Alexander M Fagan	Okaloosa STEMM Academy	Mrs. Sarah Wilson
J1103	Honey, Are You Cured?	

Recognition

Junior *Physics & Astronomy*

Joel P Dotter	C. W. Ruckel Middle School	Mrs. Lisa Nall
J1209	Does Adding Tubercles to a Wind Turbine Affect the Energy Output?	

Third Place

Alysha L Miner	Saint Mary Catholic School	Mrs. Laura McNeill
J1210	Capacitive Coupling Wireless Power Transmission : Electric Car Mobility Charging of the Future	

Third Place

Jackson R Odom	Okaloosa STEMM Academy	Mrs. Sarah Wilson
J1211	Detecting Shapes with Light Instead of Radar	
Recognition		
William O Emiro	Okaloosa STEMM Academy	Mrs. Sarah Wilson
J1221	Ultrasonic Levitation	
Recognition		
Junior	<i>Plant Sciences</i>	
Mori L McCain	Rocky Bayou Christian School	Mr. Brian Alldredge
J1306	Soil, Hydroponics, Aeroponics: What Would A Plant Choose to Grow in?	
Second Place		
Senior	<i>Animal Sciences</i>	
Alexandra Manion	Fort Walton Beach High School	Mrs. Tavia Marez
S0106	To Test Photobiological Light Emissions from Living Organisms and Concluding if the Foundations Are there to Support Photobiological Hydrogen Production	
Honorable Mention		
Senior	<i>Engineering</i>	
Michael J A Panarisi	Niceville High School	Ms. Melissa Bridges
S0708	A PROP-O-SITION: Cut the Drag!	
Second Place		
Senior	<i>Environmental Engineering</i>	
Niamh E Ordner	Niceville High School	Mr. Jamie LaFollette
S0811	Investigations Toward a Novel, More Efficient Route for the Synthesis of Gelatin-Derived Bioplastics from Agroindustrial Residues	
Recognition		
Senior	<i>Mathematics & Computational Sciences</i>	
James M Baker	Choctawhatchee High School	Mrs. Joyce Gruber
S1005	Applications of Hyperdimensional Linear Algebra and Complex Analysis	
Second Place		
Senior	<i>Physics & Astronomy</i>	
John W Baker	Choctawhatchee High School	Mrs. Joyce Gruber
S1206	Using Thermoelectric Couplers and the Seebeck Effect to Convert Environmental and Waste Heat into a Useful Renewable Power Source: Green Energy from Heat	
Fourth Place		
Emily S Daldine	Fort Walton Beach High School	Mrs. Laura McNeill
S1207	Bubbles Continue to Implode: A Four-Year Study on Sonoluminescence	
Fourth Place		

20 awards for East Panhandle Region

Heartland

Junior *Animal Sciences*

John W Williamson, II	Yearling Middle School	Ms. Marcie Farrell
J0119	Protein Power- Investigating the Effect of Different Protein Feeds on the Growth of U.S. Farm-Raised Catfish - A Two-Year Study	

Third Place

Junior *Biomedical & Health Sciences*

Janessa D Whidden	Osceola Middle School	Mrs. Richonda Winner-Manson
J0326	Influence of Acidic Beverages on Tooth Erosion	

Recognition

Junior *Cellular/Molecular Biology & Biochemistry*

Devam Patel	Hill-Gustat Middle School	Ms. Cathy Hardesty
J0415	Role of Sugar in Cardiovascular Disease	

Honorable Mention

Junior *Chemistry*

John W Cornell	Hardee Junior High School	Mrs. Kimberly R McGuckin
J0535	Do Surfactants Have an Effect on the Uptake of Foliar Applied Imidacloprid in <i>Citrus sinensis</i> ? Year 3	

Honorable Mention

Will W Cornell	Hardee Junior High School	Mrs. Kimbra Hanshaw
J0536	Do Surfactants Affect the Uptake of Soil Applied Imidacloprid in Young <i>Citrus sinensis</i>	

Fourth Place

Junior *Earth & Environmental Sciences*

Zander R Yeomans	Hardee Junior High School	Mrs. Kimberly R McGuckin
J0645	Does Salinity Affect the Amount of Dissolved Oxygen in Peace River?	

Honorable Mention

Junior *Intelligent Machines, Robotics, & Systems Software*

Adam J Moore	Yearling Middle School	Ms. Marcie Farrell
J0924	Drone Tug-a-War	

Recognition

Junior *Plant Sciences*

Gavin C Sharp	Hardee Junior High School	Mrs. Kimberly R McGuckin
J1329	Does Rootstock of <i>Citrus sinensis</i> Affect Brix?	

Recognition

Senior *Earth & Environmental Sciences*

Karson J Goodwyn	Hardee Senior High School	Mr. Robert Beatty
S0642	Determination of Ascorbic Acid Toxicity in Marine Flora and Fauna- Year 2	

Recognition

Senior *Engineering*

Camila Rimoldi Ibanez	Sebring High School	Mrs. Deena Wright
S0738	Is Your Smart Phone Leaking? A Four Year Project	

Recognition

Senior *Environmental Engineering*

Pranav Ananthan	Sebring High School	Mrs. Vanessa Sinness
S0829	Enzymatic Degradation of Bioplastic	

Fourth Place

Senior *Plant Sciences*

Rohin P Patel	Sebring High School	Mrs. Vanessa Sinness
S1324	Novel Anti-Cancer, Anti-Bacterial, and Anti-Inflammatory Properties of the Rare Plants of the Florida Ridges Implicates Urgency of Conservation	

Third Place

12 awards for Heartland Region

Hernando

Junior *Biomedical & Health Sciences*

Harsh Mehta	Challenger K8 School of Science and Mathematics	Mr. Mike Fye
J0314	Most Detrimental Juice for Type 1 and Type 2 Diabetes	
Fourth Place		

Junior *Chemistry*

Andrew Mecklenburg	Challenger K8 School of Science and Mathematics	Mr. Chris Haab
J0528	Plop,Plop Fizz, Fizz - Can You Change How Fast It Is? The Effect of the Size of an Alka-Seltzer Tablet on the Rate of a Reaction	
Third Place		

Junior *Earth & Environmental Sciences*

Brennan A Butler	Challenger K8 School of Science and Mathematics	Ms. Rebecca Carr
J0622	Filter Funk	
Recognition		

Junior *Physics & Astronomy*

Deegan J David	D. S. Parrott Middle School	Mrs. Kristin Foulks
J1225	Delete the Heat	
Honorable Mention		

Holden M Casson	Challenger K8 School of Science and Mathematics	Mr. Chris Haab
J1226	Are You Keepin' It Cool? The Effects of Thermal Energy on Different Types of Insulation	
Honorable Mention		

Jonah B Gibson	Challenger K8 School of Science and Mathematics	Mr. Mike Fye
J1227	Drone Zone: The Effect of Weight on Drone Battery Life	
Fourth Place		

Ronan J Mowrey	Challenger K8 School of Science and Mathematics	Ms. Rebecca Carr
J1228	How Does Water Depth Affect Water Velocity?	
Fourth Place		

Senior *Earth & Environmental Sciences*

Haven R Anderson	Hernando High School	Ms. Christina Makris-Buttelman
S0624	"Mercury"ous about Mycelium: The Effect of the Strain of Oyster Mycelium on the Biosorption of Mercury (Hg) from H ₂ O	
Second Place		

8 awards for Hernando Region

Hillsborough

Junior *Animal Sciences*

Shloke N Patel	Carrollwood Day School	Mrs. Carrie Prieto
J0116	Testing the Efficacy of Biological Control Measure in Preventing the Re-infection of Citrus Greening Disease and its Validation Through qPCR Technique- Year 2	

Second Place

Junior *Biomedical & Health Sciences*

Uma Panchal	Liberty Middle School	Mr. Rodger Lawson
J0320	The Vitamin C Integrity Project	

Fourth Place

Junior *Chemistry*

Shrey Gupta	Williams Middle Magnet School	Ms. Kristy Weg
J0532	Yeast - Feast on the "Rising" Beast	

Third Place

Junior *Engineering*

Lila T Cueva	Sunlake Academy of Math and Science	Ms. Peggy Goodreau
J0731	Radiation and Our Smartphone	

Honorable Mention

Junior *Environmental Engineering*

Makana O Salim-Uesi	Williams Middle Magnet School	Ms. Kristy Weg
J0826	Let's Go RCV H2O!	

Recognition

Junior *Intelligent Machines, Robotics, & Systems Software*

Camelia Bhattacharya	Farnell Middle School	Mr. Scott Milinder
J0921	Computer Vision to Detect Handwritten Digits and Human Face Using Raspberry Pi	

Fourth Place

Khwahish Jain	Farnell Middle School	Mr. Scott Milinder
J0921	Computer Vision to Detect Handwritten Digits and Human Face Using Raspberry Pi	

Fourth Place

Junior *Mathematics & Computational Sciences*

Brady Fitzpartrick	Coleman Middle School	Ms. Christina Christopher-Lewis
J1014	The Risk of Dehydration in NFL Positions	

Recognition

Junior *Plant Sciences*

Elena A Glow	Williams Middle Magnet School	Mrs. Judy Grieco
J1325	Allelopathic Effect of <i>Cymbopogon citratus</i> on the Cultivation of <i>Oryza sativa</i>	

Fourth Place

Senior *Behavioral & Social Sciences*

Saketh Katta	Strawberry Crest High School	Mrs. Dianne Schroeder
S0212	Optimization of Pathophysiological Databases for Enhanced User Experience- Year 2	

Third Place

Senior *Cellular/Molecular Biology & Biochemistry*

Mark T Thivierge	Homeschool	Mrs. Elena Thivierge
S0422	Development of PCR-amplified Microsatellite Markers for Genetic Analysis of Bay Scallop (<i>Argopecten irradians</i>) Populations: A New Tool for Restoration Efforts	

Recognition

Senior *Chemistry*

Rajat K Doshi	Henry B. Plant High School	Mrs. Lindsay Tait
S0514	Experimentally Designing Sustainable Clay-based Adsorbents to Remove Arsenic from Drinking Water	

Fourth Place

Senior *Earth & Environmental Sciences*

Krishna M Vekariya	Strawberry Crest High School	Ms. Christina Rutledge
S0630	The Use of Ultraviolet-C Light to Combat Eutrophication	

Recognition

Senior *Engineering*

Katherine A McCaffrey	Carrollwood Day School	Mrs. Carrie Prieto
S0728	Construction and Performance of a Silicone-Graphene Nanocomposite Strain Gauge	

Third Place

Senior *Environmental Engineering*

Huzefa Johar	C. Leon King High School	Mrs. Nicole Richards-Works
S0826	Nanoformulations: More in Less	

Third Place

SriVarsha Katoju	C. Leon King High School	Mrs. Nicole Richards-Works
S0826	Nanoformulations: More in Less	

Third Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Srikar Parsi	Strawberry Crest High School	Mrs. Dianne Schroeder
S0919	The Encryption and Decryption of Messages With an Intelligent Chatbot Through the Usage of Polygraphs	

Recognition

Senior *Mathematics & Computational Sciences*

Raphael R Brosula	Strawberry Crest High School	Mrs. Dianne Schroeder
S1016	Analysis of the Error Convergence and Efficiency of Numerical Quadrature Algorithms for Approximating Different Integrals	

Honorable Mention

Senior *Microbiology*

Aksheta S Kanuganti	Carrollwood Day School	Mrs. Carrie Prieto
S1123	Estimation of Antibody Titers in Duffy Binding Protein (DBP) Immunized Mice and Sequencing DBP-Species B-Cells	

Third Place

19 awards for Hillsborough Region

Indian River

Junior *Behavioral & Social Sciences*

Andrew R Bickel	Storm Grove Middle School	Ms. Ashley Rollin
J0202	Can an Instructional Warning Reduce the Occurrence of False Memories?	

Fourth Place

Junior *Biomedical & Health Sciences*

Wil R Blackburn	Saint Edwards School	Mr. Leslie Rogers
J0304	Salvation of the Photoreceptors	

Third Place

Junior *Environmental Engineering*

William J Myers	Gifford Middle School	Mrs. Melissa Sleeper
J0804	The Fuel of the Future	

Honorable Mention

Junior *Mathematics & Computational Sciences*

Zadie S Diniz	Gifford Middle School	Mrs. Melissa Sleeper
J1002	Can a Ratio Make You Happy?	

Third Place

Junior *Plant Sciences*

Lily K Gunter	Gifford Middle School	Mrs. Melissa Sleeper
J1303	Be the Solution to Water Pollution	

Third Place

Senior *Animal Sciences*

Kiran S Arain	Saint Edwards School	Dr. Kerryanne Monahan
S0103	Management of <i>Singhiella simplex</i> Using <i>Curinus coeruleus</i> and <i>Isaria fumosorosea</i>	

Third Place

Senior *Environmental Engineering*

Griffin M Wagner	Vero Beach High School	Dr. Nicole Mosblech
S0805	A Holistic Engineering Plan Incorporating Predictive Data Modeling Into the Process of Remediating Cyanophyta Algae Blooms and Applying Photoautotrophic Prokaryotes Biomass to Improve Agricultural Outcomes	

Second Place

Senior *Physics & Astronomy*

Lauren M Amos	Vero Beach High School	Dr. Nicole Mosblech
S1204	Optimization of Drone Flight Patterns for Use in Extraterrestrial Cave Mapping	

Fourth Place

Sydney A Tran	Vero Beach High School	Dr. Nicole Mosblech
S1204	Optimization of Drone Flight Patterns for Use in Extraterrestrial Cave Mapping	

Fourth Place

9 awards for Indian River Region

Lake

Junior *Earth & Environmental Sciences*

Brooke M Buchanan J0615	Gray Middle School Are We Walking on Star Dust?	Mrs. Veronica Dau
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Fourth Place

Junior *Engineering*

Alexandra B Clow J0717	Umatilla Middle School Forgotten Baby Syndrome Year Two	Mrs. Stacey Bowcott
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Division Grand Award Winner And First Place

Junior *Environmental Engineering*

Claire C Classon J0813	Montessori at Roseborough Engineering Efficient Compost Irrigation	Mrs. Fawn Stam
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Fourth Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Victoria J Usrey J0912	Windy Hill Middle School Vroom, Beep Whirr! VEX-IQ	Mr. Dennis Doherty
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Fourth Place

Senior *Engineering*

Cole E Kainz S0712	Mount Dora Christian Academy What Type of Wing Design Produces the Least Drag?	Mrs. Michele Baker
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Honorable Mention

5 awards for Lake Region

Manatee STEM Competition

Senior *Behavioral & Social Sciences*

Nicolas R Giraldo	Bradenton Christian School	Mrs. Regina Hays
S0209	R U Focused?	

Recognition

Zack Vanzant	Bradenton Christian School	Mrs. Regina Hays
S0209	R U Focused?	

Recognition

Senior *Mathematics & Computational Sciences*

Emma A Johnston	Manatee High School	Ms. Patricia L. Zalo
S1011	Statistical Evaluation of Three Computer Models to Determine the Minimum Size of a Large Population Which Remains in Hardy-Weinberg Equilibrium	

Recognition

Senior *Physics & Astronomy*

Madison E Burt	Manatee High School	Ms. Patricia L. Zalo
S1213	Orbital Speeds of Jupiter and Saturn's Moons Relating to Distance and Diameter	

Third Place

4 awards for Manatee STEM Competition Region

Martin

Junior *Microbiology*

Nira Goyal	Hidden Oaks Middle School	Mr. David Hill
J1112	Essential Oils: Next Generation Antibiotics	

Honorable Mention

Junior *Physics & Astronomy*

Gisele C Crary	Saint Joseph Catholic School	Mrs. Norma Kuehn
J1234	What Is the Sun Made of?	

Fourth Place

Senior *Engineering*

Steven C Vokoun	South Fork High School	Mr. David Hill
S0724	A Study on Solar- Cones Are No Longer Just For Ice Cream Pt. 3	

Fourth Place

Senior *Environmental Engineering*

Rohan S Jakhete	South Fork High School	Mr. David Hill
S0822	Saving our Waterways: Autonomous Dissolved Oxygen Generation Vehicle	

Second Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Varun A Lakshmanan	South Fork High School	Mr. David Hill
S0916	A Novel Diagnostic Method for Manifestations of Disease in the Fingernails through a Machine Learning Model Ensemble and Computer Vision System	

Third Place

5 awards for Martin Region

Monroe

Junior *Cellular/Molecular Biology & Biochemistry*

Kara J Norman

May Sands Montessori School

Ms. Lindsey Reisz

J0412

The SCTL D Crisis

Recognition

1 awards for Monroe Region

Northeast Florida

Junior *Animal Sciences*

Alexa Loschiavo	James Weldon Johnson College Preparatory Middle School	Mrs. Jeanne Murphy
J0117	How Does Magnetism Affect Planarian Regeneration	

Fourth Place

Shalini Mehra	James Weldon Johnson College Preparatory Middle School	Mrs. Jeanne Murphy
J0117	How Does Magnetism Affect Planarian Regeneration	

Fourth Place

Junior *Cellular/Molecular Biology & Biochemistry*

Tirth Shah	Twin Lakes Academy Middle	Mr. Angelo Dimitrakopoulos
J0414	An Investigation of an Interaction between Alpha-Amylase and Phaseolamin, a Derivative of the White Kidney Beans in the Presence of Carbohydrates	

Third Place

Junior *Earth & Environmental Sciences*

Adriana V Dugo	Saint Joseph Catholic School	Mrs. Lizette Woodward
J0639	Eutrophication	

Recognition

Jennifer C Holley	Sacred Heart Catholic School	Dr. Arsenio Yumul
J0640	What Is the Most Effective Filtration Method to Remove <i>Escherichia coli</i> from Water Collected from the St. Johns River?	

Third Place

Juliana R Namen, Jr.	San Jose Catholic School	Mr. Patrick Madigan
J0641	Using a Proposed Biochar Briquette Filter to Reduce the Concentration of Diethylene Dioxide in River Water Compared to Reverse Osmosis	

First Place

Junior *Engineering*

Emily M Malzahn	Saint Joseph Catholic School	Mrs. Lizette Woodward
J0738	Mighty Myocytes Meet Their Match: The Effect of Electricity on Artificial Muscles	

Third Place

Benjamin M York	Twin Lakes Academy Middle	Mr. Angelo Dimitrakopoulos
J0739	Moving Water-Optimizing the Pitch of an Archimedes Screw	

Fourth Place

Junior *Mathematics & Computational Sciences*

Chace R Caven	Julia Landon College Preparatory Middle School	Mr. Stephen Nye
J1016	Designing Ligands as a Potential Intervention For Parkinson's Disease	

First Place

Zachary W Joiner	Christ the King Catholic School	Mr. Alex Underhill
J1017	Cubed	

Recognition

Emma C Lee	James Weldon Johnson College Preparatory Middle School	Mrs. Jeanne Murphy
J1018	Decryption Connoption: Which Attack Strategy Used to Decrypt a Caesar Cipher Is the Most Efficient?	

Second Place

Junior *Microbiology*

Elizabeth H Brown	San Jose Catholic School	Mr. Patrick Madigan
J1116	Algaecides Effects on Algae; Sodium Carbonate Peroxyhydrate, Potassium Permanganate, and Endothall on Volvox Globator	
Third Place		
Junior <i>Physics & Astronomy</i>		
Claire Huang	James Weldon Johnson College Preparatory Middle School	Mrs. Jeanne Murphy
J1237	The Effect of Windows on Photovoltaic Cell Efficiency	
Second Place		
Senior <i>Animal Sciences</i>		
Cole H Nigro	Episcopal School of Jacksonville	Mrs. Marion Zeiner
S0117	The Effects of Methylparaben on the Health of <i>Palaemonetes paludosus</i>	
Fourth Place		
Senior <i>Biomedical & Health Sciences</i>		
Marc C Pappas	SPARK Mayo Clinic	Dr. John Copland
S0337	Novel Small Molecule Targeted Combination Therapy for Metastatic Prostate Cancer (mPCa)	
Second Place		
Kavitha Vudatha	SPARK Mayo Clinic	Dr. John Copland
S0338	Using a Crispr-Cas9 Method to Knockout the Aurora Kinase A Gene Expression in Pancreatic Cancer Cell Lines	
Third Place		
Kaya L Olszewski	Episcopal School of Jacksonville	Mrs. Marion Zeiner
S0339	Vape on Planaria Regeneration	
Honorable Mention		
Senior <i>Cellular/Molecular Biology & Biochemistry</i>		
Sarah E Barksdale	Episcopal School of Jacksonville	Mrs. Marion Zeiner
S0425	Comparing the Effectiveness of Nano-pesticides and Traditional Pesticides on Spinach Plants and Aphid Mortality	
Honorable Mention		
Mailene G Miranda	Bishop Kenny High School	Mrs. Vicki Schmitt
S0426	Physicochemical Properties of Various Fibers of <i>Musa acuminata</i> and <i>Ananas comosus</i>	
Recognition		
Ashton E Body	Episcopal School of Jacksonville	Mrs. Marion Zeiner
S0427	Targeted Drug Delivery for Drug Resistant Cancer	
Second Place		
Raha Riazati	SPARK Mayo Clinic	Dr. John Copland
S0428	The Effect of Interaction with Neural Stem Cells on the Migration, Proliferation, and Proteome of GBM Cells	
Fourth Place		
Senior <i>Chemistry</i>		
Spencer B Huie	Episcopal School of Jacksonville	Mrs. Marion Zeiner
S0516	Carbon Dioxide Electrochemical Reduction and Effect on pH in an Ocean-Like Environment	
Recognition		
Avani M Bansal	The Bolles School	Dr. Kathryn Halloran
S0517	Optimizing Water Filtration with Carbon Materials	
Fourth Place		

Lily G England S0519	Bishop Kenny High School	Mrs. Victoria Schmitt
The Effects of a Hydrophilic Substance on Polymer Chains and Cross Links		

Honorable Mention

Lauren M Massais S0519	Bishop Kenny High School	Mrs. Victoria Schmitt
The Effects of a Hydrophilic Substance on Polymer Chains and Cross Links		

Honorable Mention

Senior *Earth & Environmental Sciences*

Hannah M Tesh S0633	Darnell Cookman Middle/High School of Medical Arts	Dr. Scott Sowell
The Effect of Increased Salinity on the Growth of <i>Lemna minor</i>		

Fourth Place

Michael J Barker S0634	Episcopal School of Jacksonville	Mrs. Marion Zeiner
The Effects of Cell Phone Radiation on the Regeneration of Cells		

Third Place

Julia M Kagileri S0635	Episcopal School of Jacksonville	Mrs. Marion Zeiner
The Phytoremediation of Soil Contaminated with Motor Oil Using <i>Uniola paniculata</i> C		

Fourth Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Sofia E Klostermeyer S0922	Douglas Anderson School of the Arts	Mrs. Nancy Bodge
A Decentralized Consensus Algorithm for Equitably Serializing Blockchain Transactions		

Recognition

MaryAlice D Young S0923	Bishop Kenny High School	Mrs. Victoria Schmitt
Using a Computer Program Applied to an Electromagnetic Walking Apparatus to Simulate Earth's Gravity in Space		

First Place

Senior *Microbiology*

Alexander J Tun S1125	The Bolles School	Dr. Kathryn Halloran
Anti-PD-1 Immune Checkpoint Blockade Therapy to Simulate T-Cell Activating Properties of Dendritic Cells		

Fourth Place

Senior *Plant Sciences*

Julia E Downes S1320	Episcopal High School of Jacksonville	Mrs. Marion Zeiner
Examining the Effects of High Concentrations of Potassium Iodide on the Iodine Biofortification of <i>Lactuca sativa</i> L. and <i>Spinacia oleracea</i> L. Grown in a Hydroponic System		

Third Place

Nicole E Stover S1321	Samuel W. Wolfson Senior High School	Ms. Anastasia Speers
The Metabolic Effect of Dissolved Oxygen Augmentation on Hydroponic Cultivation of <i>Solanum lycopersicum</i>		

Fourth Place

33 awards for Northeast Florida Region

Osceola

Junior *Biomedical & Health Sciences*

Avery E Thomas	Neptune Middle School	Mrs. Rachel Brescia
J0311	To Dissolve or Not Dissolve?	

Fourth Place

Junior *Engineering*

Madeline J Perry	Neptune Middle School	Mrs. Rachel Brescia
J0718	Tethered Technology	

Third Place

2 awards for Osceola Region

Palm Beach

Junior *Animal Sciences*

Alexa K Ernce	The Weiss School	Mr. Kevin Simmons
J0101	The Effects of Various Pesticides and Fertilizers on <i>Daphnia</i> Behavior and Mortality	

Division Grand Award Winner And First Place

Junior *Behavioral & Social Sciences*

Mariella G Brueck	A.D. Henderson University School	Ms. Suzette Milu
J0201	Does the Usage of Your iPhone Affect Your Academics?	

Third Place

Junior *Chemistry*

Samer A Elhoushy	The Weiss School	Mr. Kevin Simmons
J0501	The Effects of Ultraviolet Radiation on Elemental Metals, Alloys, and Polyethylene Materials in a Simulated Lunar Regolith Environment	

Fourth Place

Junior *Engineering*

Makayla L Giggey-Duncan	A.D. Henderson University School	Ms. Suzette Milu
J0701	Developing and Testing an Activity Monitor as a Component in a Colony Monitoring Sensor System	

Second Place

Junior *Environmental Engineering*

Vinu S Suthakaran	A.D. Henderson University School	Ms. Suzette Milu
J0801	How Can an ROV with a Sediment Filter be Used in Order to Filter Sediment Out of the Ocean?	

Third Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Arman S Alexis	A.D. Henderson University School	Ms. Suzette Milu
J0901	How Does VR Education Correlate to Academic Improvement?	

Second Place

Victoria Parra	Loggers' Run Middle School	Mr. Richard Kabinoff
J0902	Using SQL Injections to Hack Databases and How to Prevent Them	

Third Place

Junior *Physics & Astronomy*

Patrick M O'Leary	A.D. Henderson University School	Ms. Suzette Milu
J1201	Can a Computer Classify Craters on the Moon?	

Recognition

Russell J Widder	The Weiss School	Mr. Kevin Simmons
J1202	Optimization of a Nitinol Hinge for Use on a Lunar Rover	

Division Grand Award Winner And First Place

Junior *Plant Sciences*

Kyle D Bartenslager	Western Pines Middle	Ms. Danielle Hendrix
J1301	Comparing the Net Primary Productivity of Brown and Green <i>Sargassum</i>	

Recognition

Riley Jones	Jupiter Middle School	Mrs. Cheryl Huey
J1302	Guppies Green Thumb	

Third Place

Senior *Animal Sciences*

Abigail D Sherry	Palm Beach Central High School	Mr. William Bartenslager
S0101	The Effect of Neonicotinoids on the Tunnel-Building Patterns of Ants	

Third Place

Emily J Weimer	Palm Beach Central High School	Mr. William Bartenslager
S0102	The Examination of Animal Sleep Patterns Using <i>Cassiopea</i>	

Recognition

Senior *Behavioral & Social Sciences*

Courtney E Sgaliardich	Palm Beach Central High School	Mr. William Bartenslager
S0201	Can Autistic Genes Be Found In <i>Apis mellifera</i> ?	

Honorable Mention

Senior *Biomedical & Health Sciences*

Hannah D Herbst	Florida Atlantic University High School	Dr. Tricia Meredith
S0301	Quantitative Analysis of Marine Fouling and Bacterial Settlement on InVitro Shark Skin; Biomimetic Bandage Proof-of-Concept to Reduce Bacterial Contamination in Medical Facilities	

Division Grand Award Winner And First Place

Maryam Imran	American Heritage School of Boca/Delray	Mrs. Iris Thompson
S0302	The Antibacterial Effects of Carrots, Garlic, Kale, and Broccoli on <i>Escherichia coli</i>	

Recognition

Senior *Cellular/Molecular Biology & Biochemistry*

Julianna Lian	Florida Atlantic University High School	Mrs. Robin Barks
S0402	Exploring the Effect of Polyphenol-Rich <i>Sargassum</i> on Reactive Oxygen Species in the Stomata of a Plant Model	

Third Place

Senior *Chemistry*

John-Mark A Phillips	Seminole Ridge High School	Mrs. Lyn Slygh
S0501	Synthesis of C60 Buckminsterfullerene Derivatives for DEL, SPS and HTS	

Second Place

Senior *Earth & Environmental Sciences*

Dylan Carman	William T. Dwyer High School	Mrs. Nanette Bradley
S0601	Can Electrochemistry Help Reduce Nitrates in Florida Waterways?	

Third Place

Glenn M Grimmett	American Heritage School of Boca/Delray	Mrs. Iris Thompson
S0602	Carbon Capture Using Solid Sorbents. CO ₂ /N ₂ Selectivity with Amine-Tethered Polystyrene and Polyacrylic Polymers.	

First Place

Senior *Engineering*

Eeshani Behara	American Heritage School of Boca/Delray	Mrs. Iris Thompson
S0701	Smart Microfluidics-based Impedance Aggregometry Biosensor for Detection of Platelet Hyperaggregation	

Division Grand Award Winner And First Place

Alexis M Base	Florida Atlantic University High School	Mrs. Robin Barks
S0743	Developing a Solution to Ocean Acidification using Excess CO ₂ from Power Plants	

Second Place

Senior *Environmental Engineering*

Marina Karki	Palm Beach Central High School	Mr. William Bartenslager
S0801	Effect of Ring Opening Polymerization Using 2-Deoxy-ribose Sugar and Captured Carbon on the Production of Biodegradable Plastic	

Fourth Place

Vithulan Suthakaran	Florida Atlantic University High School	Dr. Tricia Meredith
S0803	Developing a Biologically Based Artificial Leaf to Filter and Transform Carbon Dioxide Emissions into Oxygen via Photosynthesis	

Third Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Karen A Copeland	Alexander W. Dreyfoos School of the Arts	Mr. Stephen Anand
S0901	Using Three-Dimensional Modeling to Analyze the Vascular System and Radiation-Induced Lung Damage	

Third Place

Senior *Mathematics & Computational Sciences*

Ben L Myers	Alexander W. Dreyfoos School of the Arts	Mr. Stephen Anand
S1001	Toeplitz and the Square Peg Conjecture	

Recognition

Anish Ravichandran	American Heritage School of Boca/Delray	Mrs. Iris Thompson
S1003	Developing a Histopathological Image-Based Tool for Accurate Prognosis of Pancreatic Adenocarcinoma by Implementing Deep Structured Learning	

Third Place

Senior *Microbiology*

Tushar S Shenoy	American Heritage School of Boca/Delray	Mrs. Iris Thompson
S1103	Utilizing Kefir Bacteria to Target NF-KB and the Bax Gene to Induce Apoptosis in Colorectal Adenocarcinoma Cells - Year 2	

Third Place

Senior *Physics & Astronomy*

Subhash C Kantamneni	Suncoast Community High School	Mr. Jeffrey Laufer
S1201	Characterizing the WLM Galaxy Using RR Lyrae Variable Stars	

Second Place

Senior *Plant Sciences*

Ana S Vanegas	Palm Beach Central High School	Mr. William Bartenslager
S1303	Resource Conservation Exhibited by Kin Recognition in Arabidopsis	

Honorable Mention

30 awards for Palm Beach Region

Pasco

Junior *Biomedical & Health Sciences*

Frederic I Bowen J0309	Charles S. Rushe Middle School The Pharmaceutical Impact on the Environment	Ms. Joyce Naar
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Honorable Mention

Kaori R Martin J0309	Charles S. Rushe Middle School The Pharmaceutical Impact on the Environment	Ms. Joyce Naar
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Honorable Mention

Junior *Chemistry*

Hristos Pavlides J0516	Dayspring Academy Middle School Which Oil Creates Less Heat?	Mr. Keith Duncan
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Second Place

Karolina S Porcelli J0517	Dayspring Academy Middle School Yes to Iron! No to Anemia!	Mr. Keith Duncan
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Recognition

Senior *Earth & Environmental Sciences*

Avanthi S Puvvala S0614	Saddlebrook Preparatory School Does Microplastic Pollution Impact Aquatic Systems?	Mr. Ed Braddy
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Third Place

Senior *Mathematics & Computational Sciences*

Roshan Warman S1008	Academy at the Lakes Generalization of Bridge Length to Other Cartan-Killing Forms	Mrs. Colleen McCormick
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First Place

Senior *Plant Sciences*

Chase A Olivanti S1308	Wiregrass Ranch High School Using Guaiacol to Measure the Effect of a Natural Hormone (N-Acetyl-5-Methoxytryptamine) and Artificial Substitutes on the Rate of Enzymatic Reactions in Plant Cells via Peroxidase Reactions and Oxygen Production- Year 3	Mr. Branden L. Anglin
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Honorable Mention

Shruti Patel S1309	J. W. Mitchell High School Examining the Anticarcinogenic Properties of Diferuloylmethane by Inhibiting Mitosis in Onion Meristematic Tissue	Mr. Andrew Hughett
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Fourth Place

8 awards for Pasco Region

Pinellas

Junior *Chemistry*

Rowan M Miller J0520	Espiritu Santo Catholic School Do Scents Make Sense?	Mrs. Molly Staggs
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Recognition

Junior *Engineering*

Mahmoud O Abed J0720	Saint Cecelia Catholic School Traffic Strap	Ms. Heather Manter
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Honorable Mention

Junior *Environmental Engineering*

Alexander (Sasha) T Fiola J0815	Canterbury School of Florida The Effect of Solar Panel Tracking on How Much Power Is Being Produced 2.0	Ms. Laura Fauver
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Honorable Mention

Junior *Intelligent Machines, Robotics, & Systems Software*

Aanya Bhandari J0914	Joseph L. Carwise Middle School Robotic Hand	Ms. Pamela Himmel
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Second Place

Junior *Physics & Astronomy*

Drake D Saltarelli J1220	Saint Cecelia Catholic School Reducing the Severity of Impact to a Football Player's Head	Ms. Heather Manter
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Fourth Place

Junior *Plant Sciences*

Kyla A Grady J1310	Espiritu Santo Catholic School The Study of Plant Height	Mrs. Molly Staggs
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Honorable Mention

Hannah A Herbst J1311	Plato Academy Palm Harbor How Does the Amount of TDS in Water Affect the Growth Rate of Bean Plants?	Ms. Linzy Reinders
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Fourth Place

Senior *Earth & Environmental Sciences*

Anna-Sophie Breitreuz S0618	Countryside High School Oil Degradation by <i>Bacillus subtilis</i>	Ms. Ann McNicol
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Honorable Mention

Alec M Latzke S0618	Countryside High School Oil Degradation by <i>Bacillus subtilis</i>	Ms. Ann McNicol
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Honorable Mention

Senior *Engineering*

Kaitlyn F Yu S0713	Indian Rocks Christian School Bring on the Heat! From Bimaterial Strip to Off-Grid Heat Sensor	Mr. Benjamin Futoran
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Honorable Mention

Senior *Plant Sciences*

John P Oleksak S1311	Indian Rocks Christian School The Use of Plants Grown in Florida as a Natural Insecticide to Kill Mosquito Larvae	Mrs. Tracy Springman
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Fourth Place

11 awards for Pinellas Region

Polk

Junior *Behavioral & Social Sciences*

Lucy K Lazenby	Resurrection Catholic School	Mrs. Lisa Schaal
J0204	Sister Symmetry	

Honorable Mention

Junior *Cellular/Molecular Biology & Biochemistry*

Connor D McLoughlin	Lakeland Christian School	Mr. Matthew Croxton
J0403	Doping Dodder With Auxin Agar: Growth Changes in a Parasitic Plant by Venous Connection to Host Tomato	

Fourth Place

Allan J Stewart	Lakeland Christian School	Mr. Matthew Croxton
J0403	Doping Dodder With Auxin Agar: Growth Changes in a Parasitic Plant by Venous Connection to Host Tomato	

Fourth Place

Junior *Chemistry*

Payson Keown	St. Joseph Catholic School	Mrs. Carol Polkowski
J0505	Breathing Bananas	

Honorable Mention

Wenjo Lai	Lakeland Christian School	Mr. Matthew Croxton
J0506	Basic Cocoa: Investigating the Effects of Strong Bases on the Extraction of Caffeine and Theobromine from Cocoa Powder	

Second Place

Junior *Earth & Environmental Sciences*

James A Lovely	Resurrection Catholic School	Mrs. Lisa Schaal
J0603	Herbicide's Organic Side	

Fourth Place

Junior *Engineering*

Caitlin A Kaiser	Resurrection Catholic School	Mrs. Lisa Schaal
J0707	3D Sensory Tags Part 2	

Second Place

Junior *Environmental Engineering*

Neil J Dave	Lakeland Christian School	Mr. Matthew Croxton
J0805	Solvents and Smoke, Feat. Invertebrate Indicators - Year 2	

Honorable Mention

Junior *Microbiology*

Lauren E Jones	Lakeland Christian School	Mr. Matthew Croxton
J1102	Cu Later, Aerobic Bacteria?	

Honorable Mention

Junior *Physics & Astronomy*

Grant P Parker	Lakeland Highlands Middle School	Ms. Judy Thomas
J1208	Directed Radiation through Improved Magnetic Control	

Second Place

Senior *Animal Sciences*

Lauren E Nonnenmocher	Lakeland Christian School	Mr. Matthew Croxton
S0105	Reef Relief: Investigating the Allelopathic Effects of Soft Corals on the Health of Large and Small Polyp Stony Corals	

Fourth Place

Senior *Chemistry*

Jasper L Montgomery	IB at Bartow High School	Ms. Debbie Kennon
S0503	Comparison of Gold Refractive Index Data Using Plasmon Rulers - Year 2	

Honorable Mention

Senior *Intelligent Machines, Robotics, & Systems Software*

Matthew G Graham	Polk Pre-Collegiate Academy	Mr. Auburn Thompson
S0905	Electromagnetic Wall Climber - Year 2	

Fourth Place

13 awards for Polk Region

Sarasota

Junior *Earth & Environmental Sciences*

Jacqueline M Anders J0630	McIntosh Middle School Sunshine on My Solar Makes Me Happy	Ms. Dorothy Rieger
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Fourth Place

Senior *Earth & Environmental Sciences*

Hannah C Swartz S0628	Sarasota High School Effects of Methylcobalamin-B12 on the Biotransformation of Arsenic V in <i>Shewanella oneidensis</i> MR-1	Mr. Andrew Harshman
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Fourth Place

Lily Sikorski S0629	Sarasota High School Ingestion of Microplastics by Bivalves	Mr. Andrew Harshman
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Fourth Place

Alexa J VanSuch S0629	Sarasota High School Ingestion of Microplastics by Bivalves	Mr. Andrew Harshman
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Fourth Place

Senior *Engineering*

Kevin Zhu S0725	Pine View High School Increasing Scanning Range of MEMS Mirrors for Endoscopic Optical Systems via Submersion in High RI Fluids	Ms. Hali Flahavan
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Second Place

Christian J Knuth S0726	Sarasota High School Engineering a Low Cost UV Crosslinking Hydrogel Bioprinter	Mr. Andrew Harshman
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Fourth Place

Senior *Environmental Engineering*

Isabella D Brush S0823	Sarasota High School Measuring the Effect of Gene Silencing on Lipid Yield in <i>Spirulina platensis</i>	Mr. Andrew Harshman
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Fourth Place

Senior *Microbiology*

Kathryn E Savage S1122	Sarasota High School Degrading Bacterial Biofilms Using Trehalase for Alzheimer's Disease Treatment	Mr. Andrew Harshman
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Second Place

8 awards for Sarasota Region

Seminole

Junior *Animal Sciences*

Susannah C Zonts	Saint Luke's Lutheran School	Mrs. Kelly Weeks
J0109	What Are the Effects of OTC Medicines on the Lifespan of <i>Daphnia magna</i> ?	

Honorable Mention

Junior *Behavioral & Social Sciences*

Preston H Pomp	Jackson Heights Middle School	Mrs. Melanie Francher
J0209	Brain Pop: Cognitive Disruptions through Device Alerts - Year 2	

Third Place

Junior *Cellular/Molecular Biology & Biochemistry*

Kyra Henriques	Sanford Middle School	Mrs. Amanda Holden
J0407	Determining the Enzyme Inhibitory Effects of the Aqueous Infusion of Leaves of 5 Plants Traditionally Used in the Treatment of Diabetes Mellitus on Glucose Metabolizing Enzymes	

First Place

Junior *Environmental Engineering*

Ishika Nag	Sanford Middle School	Mrs. Amanda Holden
J0816	Breathe Easy: Using Nanoparticles to Improve the Efficiency of Air Filtration Systems by Reducing Particulate Matter	

Second Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Siddharth A Kini	Seminole Science Charter School	Mrs. Ramona Lataille
J0915	Peek-A-Weed: A Novel Method to Detect Weeds Using Artificial Intelligence	

Third Place

Andres G Sanchez	Sanford Middle School	Mrs. Robyn Smith
J0916	A Helping Hand: A CNC Machining Concept	

Honorable Mention

Ajay N Sastri	Sanford Middle School	Mrs. Robyn Smith
J0916	A Helping Hand: A CNC Machining Concept	

Honorable Mention

Junior *Mathematics & Computational Sciences*

Daniel T Chung	Sanford Middle School	Mrs. Amanda Holden
J1010	How Likely Will You Survive an Alligator Attack? A Decision Tree Model to Predict the Probability of Survival	

Third Place

Junior *Microbiology*

Anouska Seal	Sanford Middle School	Mrs. Robyn Smith
J1105	Inhibitory Effects of Superfoods on <i>E.coli</i>	

Second Place

Junior *Physics & Astronomy*

Chad W Brown	Milwee Middle School	Ms. Melissa Cole
J1222	4 Balls and 1 Machine	

Third Place

Junior *Plant Sciences*

Stephen W Mello	Saint Luke's Lutheran School	Mrs. Kelly Weeks
J1312	Zinc's Affects on Arugula in Hydroponics	

Fourth Place

Sara A Estelow	Indian Trails Middle School	Ms. Jenny Ho
J1313	Alternatives to Glycophosphate: Natural Weed Control	

Third Place

Senior *Behavioral & Social Sciences*

Ronald B Xu	Winter Springs High School	Dr. Paul Sacks
S0206	Combating Stuttering Via an Empowered Multi-Modal Neural Network Based on Facial and Audio Recognition Data	

Division Grand Award Winner And First Place

Ana-Paula Dovali	Oviedo High School	Mr. William James Furioli, II
S0207	Effects of Time Constraints on Athletic Performance	

Recognition

Elijah R Slage	Oviedo High School	Mr. William James Furioli, II
S0207	Effects of Time Constraints on Athletic Performance	

Recognition

Divya Srinivasan	Seminole High School	Dr. Frances Monroe
S0208	Adolescent Depression and Its Correlation Between Body Mass Index and Psychosomatic Symptoms: A Prospective Study Amongst the Teenage Population	

Fourth Place

Sweta Srinivasan	Seminole High School	Dr. Frances Monroe
S0208	Adolescent Depression and Its Correlation Between Body Mass Index and Psychosomatic Symptoms: A Prospective Study Amongst the Teenage Population	

Fourth Place

Senior *Biomedical & Health Sciences*

Krithika Subramanian	Hagerty High School	Dr. Romina Jannotti
S0317	Structural Differences in the Brains of Alzheimer's Patients versus Normals as Identified by a Machine Learning Analysis of MR Images	

Honorable Mention

Kashyap Sreeram	Seminole High School	Dr. Frances Monroe
S0318	A New Cure: The Effect of Photodynamic Therapy on the Fragmentation of DNA Utilizing <i>E. Coli</i> as an In Vitro Model	

Fourth Place

Arianna Zhai	Seminole High School	Dr. Frances Monroe
S0318	A New Cure: The Effect of Photodynamic Therapy on the Fragmentation of DNA Utilizing <i>E. Coli</i> as an In Vitro Model	

Fourth Place

Senior *Earth & Environmental Sciences*

Maika Mitsumori	Oviedo High School	Mr. William James Furioli, II
S0619	Predicted Impact of Climate Change on Indicator Species	

Honorable Mention

Senior *Engineering*

Dylan C Ryan	Lyman High School	Mrs. Mary Acken
S0714	Zonal Differentiating Soundbar	

Third Place

Annika M L Vaidyanathan	Winter Springs High School	Dr. Paul Sacks
S0715	Spring Break: A Non-Explosive Device for Astronauts to Collect Planetary Rock Samples and for First Responders in Rescue Missions	

Fourth Place

Senior *Environmental Engineering*

Travis A Koenig	Oviedo High School	Mr. William James Furioli, II
S0817	Key to Eliminating the Plastic Problem: Degradation of Polyethylene Plastic Using <i>Bacillus sp.</i> YP1 and <i>Enterobacter asburiae</i> YT1 from Wax Worm Gut	

Fourth Place

Grace M Thompson	Oviedo High School	Mr. William James Furioli, II
S0817	Key to Eliminating the Plastic Problem: Degradation of Polyethylene Plastic Using <i>Bacillus sp.</i> YP1 and <i>Enterobacter asburiae</i> YT1 from Wax Worm Gut	

Fourth Place

Taeseung Um	Oviedo High School	Mr. William James Furioli, II
S0817	Key to Eliminating the Plastic Problem: Degradation of Polyethylene Plastic Using <i>Bacillus sp.</i> YP1 and <i>Enterobacter asburiae</i> YT1 from Wax Worm Gut	

Fourth Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Eshan Ramesh	Oviedo High School	Mr. William James Furioli, II
S0912	Predicting International Infectious Disease Incidence Rates Using Neural Networks	

Fourth Place

Senior *Microbiology*

Varsha Naga	Winter Springs High School	Dr. Paul Sacks
S1116	Nanoceramic Coating of Central Venous Catheters has Inhibitory Effect on Colonization by <i>E.Coli</i> and <i>Bacillus cereus</i>	

Fourth Place

Senior *Plant Sciences*

Laboni Santra	Oviedo High School	Mr. William James Furioli, II
S1312	A Minimally-invasive 3D-printed Microneedle Array Applicator System (μ NAAS) for Delivery of Therapeutics to Citrus Leaf Tissue	

Division Grand Award Winner And First Place

Saadhana Sridharan	Oviedo High School	Mr. William James Furioli, II
S1313	Cultivation Methodologies' Effects on Antimicrobial Phenolic Compound Content and Efficacy in Dwarf Kale.	

Recognition

30 awards for Seminole Region

South Florida

Junior *Animal Sciences*

Brendan G Groff-Vazquez J0102	George Washington Carver Middle School Aphid vs Predator	Mrs. Bertha Vazquez
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Honorable Mention

Junior *Behavioral & Social Sciences*

Sofia Lataczewski J0203	Downtown Doral Charter Upper School Virtual Reality vs Reading Comprehension	Mrs. Rebeca Martinez
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Recognition

Junior *Chemistry*

Amanda Barnes J0504	Winston Park K-8 Center The Effect of Oil Additives in Clay's Modulus of Elasticity	Mr. David Negrelli
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Fourth Place

Junior *Engineering*

Carlos E Ramirez J0704	Doral International Academy of Math and Science K-8 Mars Rover "VOLTEX" with Electrical System	Mr. Carlos Ramirez
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Recognition

Junior *Physics & Astronomy*

Julia Colan J1207	Highland Oaks Middle School Fibonacci Solar Array Base	Mr. Julio Miguez
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First Place

Junior *Plant Sciences*

Sophia G Carbajal J1304	Winston Park K-8 Center Phytoremediation: The Effect of Hyperaccumulation of NiSO ₄ or Cr ₄ SO ₄ on Magnesium Content within <i>Brassica juncea</i> , <i>Brassica oleracea aceophala</i> and <i>Brassica oleracea gongylodes</i>	Mr. Joseph Callaway
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Second Place

Senior *Biomedical & Health Sciences*

Candela Escolar S0307	Dr. Michael M. Krop High School Hypertrophic Cardiomyopathy in a Hispanic Population	Dr. David Buncher
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Honorable Mention

Ethan Z Levy S0308	Dr. Michael M. Krop High School Accuracy of a Novel Method to Measure In-Stent Restenosis Using Embedded Nano-Sensors	Dr. David Buncher
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Third Place

Katherine L Morales S0310	Medical Academy for Science and Technology Using Luciferase Reporter Gene Assay to Understand the Functions of Genomic DNA	Mrs. Jennifer Barreto
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Fourth Place

Senior *Chemistry*

Alexis B Crowder S0502	Dr. Michael M. Krop High School Relative Entropy of Briggs-Rauscher Oscillating Reaction: A Novel Method to Fully Account for this Unique Reaction	Dr. David Buncher
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Third Place

Senior *Earth & Environmental Sciences*

Dante A Martinez	Westminster Christian School	Mrs. Lisa Garrido
S0607	Effect of Tardigrades on <i>Chlamydomonas nivalis</i> Growth	

Honorable Mention

Senior *Engineering*

Albert A Manrique	MAST Academy at FIU	Dr. Matthew Welker
S0704	Augmented Reality for Autism	

Fourth Place

Senior *Environmental Engineering*

Zoe F Diederich	Coral Reef Senior High School	Mrs. Caroline Lominchar
S0806	Stepping Down into Cooler Waters (Fountains vs Waterfalls)	

Second Place

Neica I Joseph	North Miami Beach Senior High School	Mrs. Vania Boeva
S0807	Alternative Energy: Harnessing the Power of Mud in the Form of Microbial Fuel Cells	

Honorable Mention

Michael N Odzer	Dr. Michael M. Krop High School	Dr. David Buncher
S0808	Airborne Hurdles: Identifying and Overcoming Environmental Factors in Wildlife Studies of <i>Chelonia midas</i> When Utilizing Unmanned Aerial Systems for Data Collection	

Recognition

Isabela V Perdomo	MAST Academy at FIU	Mrs. Cristina Madrigal
S0809	A Novel Environmentally Friendly Approach to Controlling Marine Growth Using Complex Ultrasonic Waveforms	

Third Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Jack F Polk	Medical Academy for Science and Technology	Mrs. Jennifer Barreto
S0904	Evaluation and Classification of Anonymous Communication Systems	

Honorable Mention

Senior *Mathematics & Computational Sciences*

Yael Klucznik	Dr. Michael M. Krop High School	Dr. David Buncher
S1004	3-D Modeling of Acid-Base Titrations	

Fourth Place

Senior *Physics & Astronomy*

Michael Bregar	MAST Academy at FIU	Mrs. Cristina Madrigal
S1205	Cell Circuits: Using Nyquist Plot to Find Equivalent Circuit Models to Human Keratinocyte Cells	

Honorable Mention

19 awards for South Florida Region

St. Johns

Junior *Earth & Environmental Sciences*

Emily I Revvelta	Fruit Cove Middle School	Mrs. Jill Kiefer
J0631	The Relationship between Black Mangrove Cover and Marsh Periwinkle Density in a Northeast Florida Salt Marsh	

Third Place

Senior *Biomedical & Health Sciences*

Katherine Rodriguez	Allen D. Nease High School	Mrs. Marsha Sanford
S0327	Melatonin as an Antiproliferative Agent in Brain Metastasis from Breast Cancer	

First Place

Senior *Engineering*

Christian B Hughes	Allen D. Nease High School	Mrs. Marsha Sanford
S0727	Affordable Exoskeletons for Industrial Use	

Third Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Alan A Michael	Allen D. Nease High School	Mrs. Brandy Kilpatrick
S0918	Autism Diagnostics Tool Using Gesture Recognition and Machine Learning	

Honorable Mention

4 awards for St. Johns Region

St. Lucie

Junior *Engineering*

Annarose Hilhorst J0744	Lincoln Park Academy Sunflower Solar	Mr. Michael Davis
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Fourth Place

Junior *Environmental Engineering*

Robert N Sansone J0832	West Gate K-8 The Oceanic Oil Spill Solution	Mr. Joseph Kline
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First Place

Junior *Microbiology*

Madison N Adkins J1119	Lincoln Park Academy Endophytic Bacteria in Sugar Cane	Mr. Michael Davis
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Third Place

Senior *Mathematics & Computational Sciences*

Sreya Banik S1022	Lincoln Park Academy Generation of Classified Image Libraries to Train Machine Learning Algorithms to Identify Different Marine Phytoplankton	Ms. Lisa Hevner
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Fourth Place

Senior *Microbiology*

Nichapa Dancharnjitt S1129	Lincoln Park Academy How Does Temperature Characterize Bacteriophage Infecting <i>Mycobacterium smegmatis</i> ?	Ms. Lina Rao
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Recognition

Senior *Plant Sciences*

Callie W Zheng S1327	Lincoln Park Academy How Will a Mixed Infection of Tomato Spotted Wilt Virus (TSWV) and Tomato Chlorotic Spot Virus (TCSV) Affect <i>Datura stramonium</i> ?	Ms. Lisa Hevner
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Third Place

Lilian L Crawford S1328	Lincoln Park Academy Organic Amendments for Vegetable Pest Management	Mrs. Sally VanDereedt
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Fourth Place

7 awards for St. Lucie Region

Suwannee Valley

Junior *Earth & Environmental Sciences*

Arnav N Kapasi	Lake City Middle School	Ms. Kelly Thomas
J0642	Microplastics in Water	

Recognition

Junior *Physics & Astronomy*

Brody F Crews	Fort White High School	Ms. Jennifer Conway
J1238	It's a Matter of Time	

Honorable Mention

Junior *Plant Sciences*

Josie L Driggers	Madison Creative Arts Academy	Mrs. Megan Hackle
J1328	Salty Soil: Can It Be Fixed?	

Recognition

Anna M Meyer	Madison Creative Arts Academy	Mrs. Megan Hackle
J1328	Salty Soil: Can It Be Fixed?	

Recognition

Senior *Animal Sciences*

Abigail G Ripplinger	Union County High School	Ms. Renae Allen
S0120	Which Method Has the Best Hatch Rate: the Husbandry Method or the Artificial Insemination Method?	

Recognition

Senior *Chemistry*

Noah Anuez	Fort White High School	Mr. Wayne Oelfke
S0520	The Effect of pH and Glyphosate Concentration on Weed Control in GMO Sweet Corn Production	

Recognition

Zane L Baughman	Madison County High School	Mrs. Amanda Phillips
S0521	How Does Quench Type Effect the Properties of Metal	

Recognition

Senior *Earth & Environmental Sciences*

Austin Bagby	Bell High School	Mr. Bill Martin
S0636	Effect of Humate and Humic Acid on Soil Environment	

Fourth Place

Aidan P Newsom	Union County High School	Ms. Renae Allen
S0638	Salinity of Water and Its Effects on Algae Concentration and Growth	

Fourth Place

Senior *Environmental Engineering*

Donovan Preedom	Fort White High School	Mr. Wayne Oelfke
S0828	Efficiency Comparison of Four Hydroponic Growing Systems	

Honorable Mention

10 awards for Suwannee Valley Region

Thomas Alva Edison

Junior *Animal Sciences*

David Trujillo	Saint Andrew Catholic School	Ms. James Less
J0106	What Is the Most Efficient Way to Kill Mosquito Larvae and Pupae of the <i>Culex quinquefasciatus</i> Species while Preserving Plant Life in an Aqueous Environment?	

Recognition

Junior *Behavioral & Social Sciences*

Mehereen Chowdhury	Canterbury School	Ms. Diane Amundson
J0205	Paper vs Screen: Which Is Better for Reading Comprehension?	

Third Place

Skylar Robbins	Punta Gorda Middle School	Ms. Betty Jo Richards
J0206	The Effect of Light and Sound Brainwave Synchronizers and Gamma Waves on Cognitive Function and Memory	

Second Place

Junior *Cellular/Molecular Biology & Biochemistry*

Elsa Marcet	Paul Laurence Dunbar Middle School	Ms. Lisa Leitten
J0405	Lunchbox Science: The Effect of a Homemade Organic, Acidic Solution on Organic Fuji Apples	

Second Place

Junior *Chemistry*

Luka Smith	Punta Gorda Middle School	Ms. Betty Jo Richards
J0513	Will the Implementation of Thermal Energy in Comparison to Acidic Electrical Outlets, Implement a Change in Luminescence Displayed?	

Honorable Mention

Junior *Earth & Environmental Sciences*

Kadin P Musco	The Alva School	Ms. Robyn Hammes
J0611	Bottle Water: Got <i>E-Coli</i> ?	

Honorable Mention

Cassandra Heeg	L. A. Ainger Middle School	Ms. Mary Sanger
J0612	The Survival of the Smallest	

Fourth Place

Austin Lowder	L. A. Ainger Middle School	Ms. Mary Sanger
J0612	The Survival of the Smallest	

Fourth Place

Junior *Engineering*

Quin Konicek	Bonita Springs Middle School Center for the Arts	Mrs. Regina Liggins
J0713	Beam Mechanics Using a Pencil Model	

Recognition

Junior *Environmental Engineering*

Ethan DiNottia	Paul Laurence Dunbar Middle School	Ms. Lisa Leitten
J0808	Coastal Eutrophication	

Recognition

Robert Stewart	Paul Laurence Dunbar Middle School	Ms. Lisa Leitten
J0809	Resistance Is Futile: A Study on Fluid Drag	

Honorable Mention

Junior *Physics & Astronomy*

Benjamin Turalic	Crestwell School	Ms. Beth Hopkins
J1216	Laser Waves	

Honorable Mention

Junior *Plant Sciences*

Andrew Pino	Saint Andrew Catholic School	Ms. James Less
J1307	The Effects of Different Florida Native Aquatic Plants on Water Quality	

Third Place

Senior *Animal Sciences*

Maya Chandar	Canterbury School	Ms. Kelly Percivall
S0107	The Effect of Laser Beams on ATP Uptake and Cellular Membrane Potential (A Novel 4th Year Study on Cell Mechanics)	

Third Place

Senior *Behavioral & Social Sciences*

Ryan Scharlau	Canterbury School	Ms. Kelly Percivall
S0204	Crazy Crickets: The Effect of Caffeine and CBD Oil on the Aggressive Behaviors of Crickets	

Third Place

Senior *Cellular/Molecular Biology & Biochemistry*

Cynthia Sheng	Fort Myers High School	Ms. Cathy Tucker
S0407	Investigation of the Effects of DNA Concentration on PEI Transfection Success and Efficacy of the SERP-2 Secretion Signal	

Second Place

Senior *Earth & Environmental Sciences*

Isabelle Barta	North Fort Myers High School	Ms. Tiffany Becker
S0611	The Growing Issue of Microplastics	

Honorable Mention

Mark Leone	Estero High School	Dr. Barry Harris
S0612	Mitigation of Florida Red Tide (<i>Karenia brevis</i>) Blooms through Flocculation with Enhanced Local Sediments	

Second Place

Senior *Engineering*

Junwei Tan	Florida Southwestern Collegiate High School- Lee Campus	Ms. Melanie Clinton
S0710	Engineering a Bladeless Wind Harvester Using Modified PVDF Piezoelectric Strips to Increase Voltage Response as Well as Bluff Bodies to Create Vortex Induced Vibrations and Employ Vortex Shedding Effects to Amplify Oscillation	

Recognition

Senior *Mathematics & Computational Sciences*

Dahlia Dry	Fort Myers High School	Ms. Cathy Tucker
S1007	Plotting New Horizons: A Statistical Analysis of Potential Factors Influencing the Probability of Planetary System Formation	

Second Place

Senior *Microbiology*

Luke Long	Canterbury School	Ms. Kelly Percivall
S1111	GREEN WATTS - Investigating Power Production of a Single Chamber Plant Microbial Fuel Cell in a Modular System Comparing Crop Plants, <i>Triticum aestivum</i> , <i>Saccharum officinarum</i> and <i>Zea mays</i> , A Novel Fifth Year Study	

First Place

Brian Magnuson	Florida Southwestern Collegiate High School	Mr. Michael Mitchell
S1112	The Influence of Bacteriophages on Antibiotic Resistance in <i>E. coli</i>	

Honorable Mention

Senior *Physics & Astronomy*

Morgan Barkhurst	Florida Southwestern Collegiate High School- Lee Campus	Ms. Melanie Clinton
S1209	Graphene Solar-Photon Sail: A Novel Approach to the Application of Monolayer Graphene on Aluminumized Polyimide Film Using a Figure of Merit of a Solar-photon Sail Membrane for Interstellar Space Exploration	

Division Grand Award Winner And First Place

23 awards for Thomas Alva Edison Region

Tomoka

Junior *Biomedical & Health Sciences*

Akshay D Gupta J0303	David C. Hinson Middle School Which Substance Least Affects the Antioxidant Level in Tea?	Ms. Nita Manis
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Honorable Mention

Junior *Chemistry*

Andie I Litz J0503	David C. Hinson Middle School Which Olive Cultivar is Most Stable for Use in Olive Oil as Determined by UV-Vis Spectrophotometry?	Ms. Aisihia Hines-Mack
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Recognition

Junior *Earth & Environmental Sciences*

Ahmed T Eldeeb J0601	David C. Hinson Middle School Can Nanosilver in Consumer Products Affect Pond Life?	Ms. Nita Manis
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Fourth Place

Junior *Engineering*

Takara M White J0703	Creekside Middle School Earthquake-Proof Buildings - Testing Vibration Isolators	Mr. Martin Ingoldsby
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Fourth Place

Junior *Environmental Engineering*

Roseanna M Tagg J0803	River Springs Middle School Paper Straws, Fact or Fiction - Are They Really Biodegradable?	Ms. Patricia Robertson
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Recognition

Junior *Intelligent Machines, Robotics, & Systems Software*

Sawyer Vanrider J0904	New Smyrna Beach Middle School Low Cost Computing	Ms. Rebecca Leahey
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Recognition

Junior *Physics & Astronomy*

Hannah L Ashton J1203	David C. Hinson Middle School Does Changing the Type of Wood Affect The Volume of a Stringed Instrument?	Mrs. Abigail Crain
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Fourth Place

Senior *Biomedical & Health Sciences*

Meryl Liu S0304	Spruce Creek High School A Novel Prototypic Approach to Biomechanical Posture Correction in Student Backpacks and Prevention of Intervertebral Disc Herniation in the L4/L5 and L5/S1 Lumbar Spinal Discs- Year 2	Dr. Nick Stoute
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Honorable Mention

Senior *Environmental Engineering*

Scott R Tobin, Jr. S0804	Spruce Creek High School A Three Phase Process for Nutrient Stabilization and Red Tide Prevention	Ms. Anne M. Cooney
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Honorable Mention

Senior *Microbiology*

Madison A Solodky S1104	Deland High School Dose Response of the Plant Pathogen <i>Raffaelea lauricola</i> to Biological Detergents	Ms. Cindy Rosso
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Recognition

10 awards for Tomoka Region

West Panhandle

Junior *Animal Sciences*

Marina V Deubler J0110	Brown-Barge Middle School Competition Behaviors of Gulf Killifish and Mullet	Mr. Richard Hunter
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Fourth Place

Mariah J Golson J0110	Brown-Barge Middle School Competition Behaviors of Gulf Killifish and Mullet	Mr. Richard Hunter
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Fourth Place

Junior *Biomedical & Health Sciences*

Diego A Brown J0313	Brown-Barge Middle School Reaction Rate of Milk of Magnesia Buffer with Acid	Mrs. Susan Hunter
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Recognition

Junior *Earth & Environmental Sciences*

Olivia A Booth J0619	Holley Navarre Middle School Don't Be Salty!: Measuring UV Rays at the Beach	Mrs. Kiersten Huggins
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Third Place

Junior *Intelligent Machines, Robotics, & Systems Software*

Alexis E Matzer J0917	Ferry Pass Middle School Is it Possible to Determine an Author Using a Simple Computer Program	Ms. Jennifer Eney-Matzer
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Fourth Place

Junior *Microbiology*

Lana E Carter J1106	Brown-Barge Middle School Best Growth Conditions for Yeast	Mrs. Susan Hunter
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Second Place

Senior *Environmental Engineering*

Claire J Han S0819	Pensacola High School Solar Energy Driven Membrane Distillation Process to Make Fresh Water from Undrinkable Water	Mrs. Cherie Stephens
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Third Place

Senior *Intelligent Machines, Robotics, & Systems Software*

Richie Dong S0913	Pensacola High School Indoor Positioning/Navigation Using a Radar Implemented With An Ultrasonic Sensor and Magnetometer	Mrs. Cherie Stephens
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Fourth Place

Amy A Zhang S0913	Pensacola High School Indoor Positioning/Navigation Using a Radar Implemented With An Ultrasonic Sensor and Magnetometer	Mrs. Cherie Stephens
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Fourth Place

Senior *Microbiology*

Ella M Griffith S1117	Pensacola High School Evaluating the Influence of WiFi on <i>Physarum polycephalum</i> (Slime Mold) Growth	Mrs. Cherie Stephens
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Honorable Mention

10 awards for West Panhandle Region