

Category Winners



62nd Annual State Science and Engineering Fair

March 28 - 30, 2017

Lakeland Center, Lakeland

Junior

Animal Sciences

Recognition

Students Name(s): Dana R Amin

School: Saint Paul Catholic School, **Region:** West Panhandle

Title: Crabtastic Temperatures

Students Name(s): Jacob A Pelham

School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal

Title: Organic or Non-Organic

Students Name(s): Elise Leturno

School: Lecanto Middle School, **Region:** Citrus

Title: Chickens + CaCO₃ = Quality Eggshells?

Students Name(s): Maia Truog

School: Challenger K8 School of Science and Mathematics, **Region:** Hernando

Title: Wi-Fly: The Effect of Wi-Fi and Laptop Computer Radiation on the Lifespan of a House Fly

Honorable Mention

Students Name(s): Zoe R Krishtul

School: The Weiss School, **Region:** Palm Beach

Title: The Effect of Desiccation on Cold Tolerance in Tardigrades

Students Name(s): Liam H Hughes

School: Kirby Smith Middle School, **Region:** Northeast Florida

Title: Effects of Noise Pollution on Hatching Rate of Brine Shrimp

Students Name(s): Joseph L Brooks

School: Green Cove Springs Junior High School, **Region:** Clay Rotary

Title: The superhero of the sky: The Dragonfly

Students Name(s): Tehya A Bahsoun

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: How Toxic is UV Radiation to Marine Organisms?

Fourth Place

Students Name(s): Isabella Augustine

School: Trinity Catholic School, **Region:** Capital

Title: Which Natural Extract Is Most Effective in Repelling Mosquitos?

Students Name(s): Lucy E Long

School: Storm Grove Middle School, **Region:** Indian River

Title: Can Glucono Delta Lactone Improve the Efficacy of *Metarhizium anisopliae* by Inhibiting the Immune System of Termites?

Students Name(s): Abby O Stenn

School: Gifford Middle School, **Region:** Indian River

Title: The Efficiency of Neem oil Against the Vectors of Zika, Chikungunya, and Dengue Virus

Students Name(s): Emma R McGuckin

School: Hardee Junior High School, **Region:** Heartland

Title: Does the type of Fertilizer, Citrus 20-5-20, or Farming 9-12-12 Affect the Survival Rate of *Daphnia magna*? Year 3

Students Name(s): Emma N Rodriguez-Pajerski

School: Challenger K8 School of Science and Mathematics, **Region:** Hernando

Title: Death of *Daphnia*

Students Name(s): Luke J Arango

School: Saint John Vianney Catholic School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Does Time Matter When You are Frozen?

Third Place

Students Name(s): Kadi Casey

School: Saint Mary Catholic School, **Region:** East Panhandle

Title: Quit Horsin' Around

Students Name(s): Joel Valan

School: Darnell Cookman Middle/High School of Medical Arts, **Region:** Northeast Florida

Title: Preventing Zika: The Effect of the pH of Water on the Growth and Survivability of Mosquito Larvae *Culex pipiens*

Students Name(s): Abigail Penfield

School: Avon Park Middle School, **Region:** Heartland

Title: A Comprehensive Look into Capturing Methods for Aethina Murray in *Apis mellifera* Hives

Students Name(s): Kadin P Musco

School: Varsity Lakes Middle School , **Region:** Thomas Alva Edison

Title: Moo-nure; The Final Answer

Second Place

Students Name(s): Isaac J Long

School: Howard Bishop Middle School, **Region:** Alachua

Title: How Diet and Caterpillar Biology Affect the Longevity of the Adult Bella Moth *Utetheisa ornatrix*

Students Name(s): Alexa F Drab

School: Okaloosa STEMM Academy, **Region:** East Panhandle

Title: Neonicotinoids Role In Colony Collapse Disorder: Infliction or Fiction?

Students Name(s): Kiran S Arain

School: Saint Edwards School, **Region:** Indian River

Title: The Effect of *Encarsia protransvena* on *Singhiella simplex* Populations Infesting *Ficus benjamina*

First Place

Students Name(s): Janani S Kumaran

School: Abraham Lincoln Middle School, **Region:** Alachua

Title: Can Snails Act as Biological Control Agents for the Aquatic Invasive Plant, *Hydrilla*

Students Name(s): Maya S Chandar

School: Canterbury School, **Region:** Thomas Alva Edison

Title: The Effect of High Frequency Shortwaves vs Laser Beams on the Metamorphosis of *Melitobia digitata* (A Novel 2nd Year Study)

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Junior

Behavioral & Social Sciences

Recognition

Students Name(s): Lauren K Bautista
School: Holley Navarre Middle School, **Region:** West Panhandle
Title: Pricing Trickery: The Placebo Effect and Prices

Students Name(s): Logan C Delgado
School: Bay Haven Charter Academy, **Region:** Three Rivers
Title: The Value of Color

Students Name(s): Anelise J Bullard
School: Fort White High School, **Region:** Suwannee Valley
Title: The Uncanny Valley

Honorable Mention

Students Name(s): Asha J Budhai
School: Oak Hammock K-8 School, **Region:** St. Lucie
Title: Drop the Pressure

Students Name(s): Annelise G Youngblood
School: Challenger K8 School of Science and Mathematics, **Region:** Hernando
Title: The Effect of Age on Lung Capacity

Fourth Place

Students Name(s): Ethan J Stewart
School: Community Leadership Academy, **Region:** Capital
Title: Male vs Female: Who Exhibits More Unsafe Driving Behaviors?

Students Name(s): Jay D Nibhanupudy
School: Sanford Middle School, **Region:** Seminole
Title: Do You See What I Smell?

Students Name(s): Violet T Sibol
School: Herbert Hoover Middle School, **Region:** Brevard: South
Title: Fixed on Gaming

Third Place

Students Name(s): Auria K Rembert
School: Ronald McNair Magnet Middle School, **Region:** Brevard: Intracoastal
Title: How Does Music Affect Your Stress Levels?

Students Name(s): Ria M Patel

School: Plato Academy Tarpon Springs, **Region:** Pinellas

Title: How Does the Type of Music Playing in the Background Affect Short Term Memory in Students?

Students Name(s): Devam P Patel

School: Hill-Gustat Middle School, **Region:** Heartland

Title: Energy Drink Consumption : More Than Meets the Heart; Public Education to Modify This Behavior Causing Cardiac Arrhythmia

Second Place

Students Name(s): Sarah A Bickel

School: Storm Grove Middle School, **Region:** Indian River

Title: A Stroop Effect Test: Will Experienced Teachers Perform Better When Pressed?

Students Name(s): Laura E Darty

School: Saint Luke's Lutheran School, **Region:** Seminole

Title: Change Your Font, Change Your Future: The Effects of Font on Memorization

First Place

Students Name(s): Helen F. Peluso

School: Alexander D. Henderson University School, **Region:** Palm Beach

Title: Can a Person's Decision to Take a Risk That Benefits a Team be Influenced by Limiting Knowledge of Purported Teammates Performance?

Category Winners



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Junior

Biomedical & Health Sciences

Recognition

Students Name(s): Johnathan D Konopik
School: Oakridge Middle School, **Region:** Collier
Title: Effect of Sugar and Acidity on Tooth Decay

Students Name(s): Kaitlynn A Varga
School: Cathedral School of Saint Jude, **Region:** Pinellas
Title: Iron Content in Conventional Cereals

Students Name(s): Meryl Liu
School: Creekside Middle School, **Region:** Tomoka
Title: Modeling the Transmission Rate of Travel-related ZIKV in Florida Counties Using Linear Regression Analysis

Students Name(s): Bryan S Park
School: Deerlake Middle School, **Region:** Capital
Title: Does Microwave Cooking Affect Vitamin C?

Honorable Mention

Students Name(s): Kasey S Lane
School: New Smyrna Beach Middle School, **Region:** Tomoka
Title: Which Case Is Safe?

Students Name(s): John R Whitaker
School: Homeschool , **Region:** Big Springs
Title: To C or Not to C - The Effect of Ascorbic Acid (Vitamin C) on the Cardiac Muscle - Searching for a Cure for Anxiety Disorders

Students Name(s): Rochelle A Rowe
School: Lauderdale Lakes Middle School, **Region:** Broward
Title: Turn Down Fur Watt? An Investigative Study into the Negative Effects of Loud Music on the Structure of the Stereocilia

Students Name(s): Kyle T Ramos
School: Saint Joseph Catholic School, **Region:** Martin
Title: The Effect of Energy Drinks on the Cardiovascular System

Fourth Place

Students Name(s): Sonica Prakash
School: Pine View High School, **Region:** Sarasota
Title: Developing a Medical Algorithm for Pharmacogenomics and Personalized Medicine

Students Name(s): Ashley J Dempster-Wilson
School: Bay Haven Charter Academy, **Region:** Three Rivers
Title: A Sugary Solution

Students Name(s): Ellie G Pfahler
School: Howard Bishop Middle School, **Region:** Alachua
Title: Hue Can See It?

Students Name(s): Rylan S Andrews
School: DeLaura Middle School, **Region:** Brevard: Intracoastal
Title: Exposed:The Effect of UV Light on DNA

Students Name(s): Vrinda G Patel
School: South Sumter Middle School, **Region:** Big Springs
Title: What is the Effect of Curcumin on Human Blood Coagulation?

Students Name(s): Gauri Kasarla
School: American Heritage School, **Region:** Broward
Title: Testing the Efficiency of Avastin in Zebrafish Embryos to Design a Control Mechanism for Possible Implications in the Treatment of Hypoxia in Premature Infants

Third Place

Students Name(s): Nikita R Tanguturi
School: Bak Middle School of the Arts, **Region:** Palm Beach
Title: Jump and Shoot: Measuring the Amount of Stress on the Patellar Tendon

Students Name(s): Cecilia T Suarez
School: George Washington Carver Middle School, **Region:** South Florida
Title: Honey Bee Good

Students Name(s): Micaela E McGrath
School: The Villages Charter Middle School, **Region:** Big Springs
Title: A Dementia Patients Memory Tested for 2 Months

Students Name(s): Hannah L Nair
School: International Community School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Depth Perception Challenge

Second Place

Students Name(s): Izabelle J Young
School: San Jose Catholic School, **Region:** Northeast Florida
Title: Solving the Bioload of Xerostomia

Students Name(s): Madeline E Huberman
School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland
Title: Do *Saccharomyces cerevisiae*, Grown in the Presence of Vitamin D, Become More Resistant to UV Radiation Damage?

Students Name(s): Kima S Sibayan
School: Herbert Hoover Middle School, **Region:** Brevard: South
Title: Oh No, Sucralose!

First Place

Students Name(s): Akash Verma
School: Abraham Lincoln Middle School, **Region:** Alachua
Title: RF Radiation: Can We Keep it Down?

Students Name(s): Matthew Werd
School: Resurrection Catholic School, **Region:** Polk
Title: Brain Pain!

Grand Award Winner

Students Name(s): Matthew Werd
School: Resurrection Catholic School, **Region:** Polk
Title: Brain Pain!

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Junior

Cellular/Molecular Biology & Biochemistry

Recognition

Students Name(s): Lilah Hodge

School: Saint Paul Catholic School, **Region:** West Panhandle

Title: Pineapple Enzyme vs Jello Smackdown

Students Name(s): Grace M Frazier

School: San Jose Catholic School, **Region:** Northeast Florida

Title: Do Different Types of Kitchen Knives Affect the Amount of Cross-Contamination of Gluten?

Honorable Mention

Students Name(s): Maura C Liles

School: Saint Mary Catholic School, **Region:** East Panhandle

Title: Regeneration Station: The Immune Analysis of Cell Regeneration of Proven Healing Liquids

Students Name(s): Alejandra S Abramson

School: American Heritage School, **Region:** Broward

Title: Effect of Crude Oil on the Degeneration of *Planaria*

Fourth Place

Students Name(s): Emelia J Clark

School: North Bay Haven Charter Academy, **Region:** Three Rivers

Title: What Material Promotes Oyster Propagation the Best?

Students Name(s): Kartik Ananthan

School: Hill-Gustat Middle School, **Region:** Heartland

Title: Don't Cry Over Expired Milk

Third Place

Students Name(s): Rolando A Coto

School: Tequesta Trace Middle School, **Region:** Broward

Title: Heartbeats that Will Make You Think Twice

Students Name(s): Deepika Kannan

School: Sanford Middle School, **Region:** Seminole

Title: Antioxidants in Food: A Second Year Study

Students Name(s): Kellen J Maurus

School: Herbert Hoover Middle School, **Region:** Brevard: South

Title: The Effect of Extracellular Matrix on the Regeneration Rate of *Lumbricus terrestris*

Second Place

Students Name(s): Dylan Geiger

School: DeLaura Middle School, **Region:** Brevard: Intracoastal

Title: Meta Yeast vs Natural Supplements

Students Name(s): Kaylee C Krininger

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: Differential Decellularization

First Place

Students Name(s): James S Cohan

School: Howard Bishop Middle School, **Region:** Alachua

Title: Determining the Optimal Cooking Method and Pan Material for Preserving Nutrients in White Cauliflower

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Junior

Chemistry

Recognition

Students Name(s): Leonard Marinaccio

School: Ormond Beach Middle School, **Region:** Tomoka

Title: The Heat is on: How Does Temperature Affect the Glow of Luminol?

Students Name(s): Ebubechi Nwaubani

School: The Villages Charter Middle School, **Region:** Big Springs

Title: What Combination of 3 Heat Resistant or Burn Healing Substances Protect Best against Burns on Chicken Skin?

Students Name(s): Ariel Arias

School: NSU University School, **Region:** Broward

Title: Using pH Indicator to Find the Acidity of Soil Determines if Gas Stations Cause Soil Pollution

Students Name(s): Arianna Nicolas

School: Stone Magnet Middle School, **Region:** Brevard: South

Title: A Comparison of Natural Remedies and OTC Medicines on the pH of Simulated Gastric Fluid

Honorable Mention

Students Name(s): Austin D Stein

School: Eagles Landing Middle School, **Region:** Palm Beach

Title: Electrolyte Dispute

Students Name(s): Benjamin D Homan

School: Okaloosa STEMM Academy, **Region:** East Panhandle

Title: Does Humidity Affect Carbon Dioxide Absorption by Polyethyleneimine ?

Students Name(s): Colton A Ward; Matthew T Yates

School: South Sumter Middle School, **Region:** Big Springs

Title: GOT POWER

Fourth Place

Students Name(s): Madeline Mair

School: Pine Ridge Middle School, **Region:** Collier

Title: Laundry Detergents vs Stains, Cost and the Environment

Students Name(s): Megan S Erne

School: San Jose Catholic School, **Region:** Northeast Florida

Title: The UV and Sunscreen Battle

Students Name(s): Ethan G Wasserfall; Kareem A Jawad

School: The Cornerstone School, **Region:** Big Springs

Title: Drought Busters

Students Name(s): Emily M Grossenbaugh

School: Saint Luke's Lutheran School, **Region:** Seminole

Title: Print vs Nature

Students Name(s): Addie G Weeks

School: International Community School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Is Pricey Paint Worth It?

Third Place

Students Name(s): Gavin E Putnal

School: McIntosh Middle School, **Region:** Sarasota

Title: The Best Offense is a Diaper Defense

Students Name(s): Madeleine G Wilson

School: Bay Haven Charter Academy, **Region:** Three Rivers

Title: Feel the Burn! Commonly Used Antacid Compounds and Their Neutralizing Capacity

Students Name(s): Natalie A Byron

School: Alice B. Landrum Middle School, **Region:** St. Johns

Title: Mighty Microgreens: Don't Judge Your Greens By Their Size

Students Name(s): Alyssa M Donall

School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal

Title: What's Stuck in the Muck?

Second Place

Students Name(s): Gabriel P Lerner-Sperow

School: Okaloosa STEMM Academy, **Region:** East Panhandle

Title: Hydrogen Production through Ratio Variance of Sodium Carbonate and Calcium Hydroxide

Students Name(s): Sandhya Kumar; Surabhi Kumar

School: Deerlake Middle School, **Region:** Capital

Title: Precise Measurement of Surface Tension in Liquids and the Effect of Temperature

Students Name(s): Zoe A Parker

School: Lakeland Highlands Middle School, **Region:** Polk

Title: Water and Electricity DO Mix

First Place

Students Name(s): Morgan E Barkhurst

School: North Fort Myers Academy of the Arts, **Region:** Thomas Alva Edison

Title: BPA Free? Let's See! The Study of BPA in Plastics Using a UV-Vis Spectrophotometer

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Junior

Earth & Environmental Sciences

Recognition

Students Name(s): Donovan R Bohanan

School: Neptune Middle School, **Region:** Osceola

Title: Water Works: How Does Water Treatment Affect Water Quality?

Students Name(s): Benjamin W Hahn

School: Fort Clarke Middle School, **Region:** Alachua

Title: Air Potato Leaf Beetles: Annihilating the Perpe-tater

Students Name(s): Gabrielle Grant

School: Saint Cecelia Interparochial School, **Region:** Pinellas

Title: Putting the Brakes on Stormwater! What Is the Best Method to Prevent Sand Buildup in Front of the Stormwater Drain?

Students Name(s): Michael N Odzer

School: Highland Oaks Middle School, **Region:** South Florida

Title: Abundance and Habitat use of *Chelonia mydas* using Drone Video Surveillance: Does Distance from Refuge Build on Ideal Free Distribution Theory for Green Sea Turtles?

Students Name(s): Ria Gupta

School: David C. Hinson Middle School, **Region:** Tomoka

Title: Does Land Development Along the Tomoka River Affect Water Quality?

Students Name(s): David P Marquis

School: Challenger K8 School of Science and Mathematics, **Region:** Hernando

Title: Insight in Continental Convergent Plate Boundaries: The Effect of Different Materials on the Height of Mounds Created by Lateral Compression

Honorable Mention

Students Name(s): Erin K Gaydar

School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal

Title: How Do Different Levels of Phosphorus Affect the Indian River Lagoon's Ecosystem?

Students Name(s): Tori E Epperson

School: Saint Cecelia Interparochial School, **Region:** Pinellas

Title: Does Garbage Affect the Process of Echo Transmission?

Students Name(s): Emma J Schlageter

School: Creekside Middle School, **Region:** Tomoka

Title: Does the Age of an Aquatic Restoration Site Effect the Biodiversity of the Vegetation at that Location?

Students Name(s): Raine Leonard

School: Citrus Springs Middle School, **Region:** Citrus

Title: The Effects of Ocean Acidification on Shellfish

Students Name(s): Charles R Phillips
School: Redeemer Christian School, **Region:** Big Springs
Title: Where's My Water?

Students Name(s): Sofia J Herrero
School: Saint Francis Xavier Catholic School , **Region:** Thomas Alva Edison
Title: Birds About Town: A Focus on Urban Ecology

Fourth Place

Students Name(s): Kassandra L Greenan
School: McIntosh Middle School, **Region:** Sarasota
Title: Plant Filtration

Students Name(s): Zander R Yeomans
School: Hardee Junior High School, **Region:** Heartland
Title: Does Climate Change Affect the Movement of Salinity Through the Lower Areas of the Peace River?

Students Name(s): Ciara D Woodall
School: Lake Butler Middle School, **Region:** Suwannee Valley
Title: Phosphate Mining and How it Affects Water Quality

Students Name(s): Megan Wessinger
School: New River Middle School, **Region:** Broward
Title: Turtle Hurdles

Students Name(s): Christopher T Cantor
School: Corbett Preparatory School of IDS, **Region:** Hillsborough
Title: The Effect of a Hurricane on the Biodiversity of Microorganisms in the Tampa Bay Estuary

Students Name(s): Justin W Richburg
School: Saint Luke's Lutheran School, **Region:** Seminole
Title: Mosquito Lagoon Water Quality

Students Name(s): Connor O'Sullivan
School: Forest Grove Middle School, **Region:** St. Lucie
Title: Recharge, Repower, and Restore Energy

Third Place

Students Name(s): Ryan F Hoffman
School: Arthur I. Meyer Jewish Academy, **Region:** Palm Beach
Title: Is E85 More Efficient and More Eco-Friendly than Regular Gasoline?

Students Name(s): Brock H Womble
School: Deerlake Middle School, **Region:** Capital
Title: Fish Friendly Lakes: Conducting Water Quality Tests to Determine the Impact of the Surrounding Environment of Lentic Water Systems on Nonpoint Source Pollution Levels - Year 2

Students Name(s): Ellie M Schrock
School: Saint Edwards School, **Region:** Indian River
Title: Stop the Leach

Students Name(s): Abigail L Holcomb
School: Yearling Middle School, **Region:** Heartland
Title: Algae Invasion! Investigating the Effect of Fertilizer on the Growth of *Chlorophyta chlorella*

Students Name(s): Sierra D Edelstein
School: Gulf Middle School , **Region:** Thomas Alva Edison
Title: The Pearl of the Ocean: Do Freshwater Releases from Lake Okeechobee Affect the Filtration Rate of Eastern Oysters *Crassostrea virginica* in Southwest Florida Estuaries?

Students Name(s): Julia C Jamieson
School: Lake Eola Charter School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Solar Purification

Second Place

Students Name(s): Alex R D'Arco
School: Pine Ridge Middle School, **Region:** Collier
Title: Can *Daphnia* Consume Different Populations of Chlamydomonas Algae?

Students Name(s): Minnie J Liang
School: Abraham Lincoln Middle School, **Region:** Alachua
Title: El Ni-no or La Ni-yes?

Students Name(s): Juliana R Namen
School: San Jose Catholic School, **Region:** Northeast Florida
Title: The Effect of Bioadsorbent Materials on the Concentration of Heavy Metals in River Water

Students Name(s): Jasmine Roncevic
School: Julia Landon College Preparatory Middle School, **Region:** Northeast Florida
Title: Biodegradation of Polystyrene by *Tenebrio molitor larvae*

Students Name(s): Sumaiya Rahman
School: Alazhar School, **Region:** Broward
Title: Combating Oil Spills Naturally

First Place

Students Name(s): Andrew J Horkan
School: San Jose Catholic School, **Region:** Northeast Florida
Title: Converting Yard Waste and Paper into Clean Energy

Students Name(s): Brooke C Rentschler
School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland
Title: Is It Possible to Create a More Natural Reef Using Local Vegetal Ingredients Year II: Movement and Decomposition?

Students Name(s): Dillon Elliott

School: Stone Magnet Middle School, **Region:** Brevard: South

Title: Developing and Testing a Bioassay to Detect Microplastics

Category Winners



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Junior

Engineering

Recognition

Students Name(s): Marts A Purins

School: The Weiss School, **Region:** Palm Beach

Title: The Effects of Attack Angle and Windspeed on Lift for Different Airfoils

Students Name(s): Madeline J Perry

School: Neptune Middle School, **Region:** Osceola

Title: Lift vs Drag: Which Airfoil is the Most Efficient and Has the Greatest Lift?

Students Name(s): Njeri A Carthy

School: Howard Bishop Middle School, **Region:** Alachua

Title: Failure Strength and Deflection of a Carbon Fiber/Wood Composite

Students Name(s): James Baird

School: C. W. Ruckel Middle School, **Region:** East Panhandle

Title: G-Whiz!: Which Foam Will Be the Most Effective at Decreasing the Number of G's In a Football Helmet Collision to Minimize the Impact on the Brain?

Students Name(s): Liam X Leahy

School: Holy Family Catholic School, **Region:** Northeast Florida

Title: Designing a Buoyant Wind Turbine Platform

Honorable Mention

Students Name(s): Karl Reiter

School: Corkscrew Middle School, **Region:** Collier

Title: Materials as Sound Barriers in Space

Students Name(s): Maxwell C Fletcher

School: Braden River Middle School, **Region:** Lockheed Martin Manatee

Title: Strongest of the Strong: A Study of Structural Efficiency of Two Truss Bridges

Students Name(s): William A Giniewski

School: Herbert Hoover Middle School, **Region:** Brevard: South

Title: Piston Powered Prosthesis

Students Name(s): Carl Critchfield

School: Stone Magnet Middle School, **Region:** Brevard: South

Title: Optimizing the Stall Angle and the Lift of a 3-D Printed Airfoil

Fourth Place

Students Name(s): Alice M Fowle
School: Pine Ridge Middle School, **Region:** Collier
Title: Harnessing Wave Energy on Shorelines

Students Name(s): Victoria N Perez
School: Centennial Middle School, **Region:** Pasco
Title: Wonderful Wind Turbines

Students Name(s): Andy J Henriquez
School: Storm Grove Middle School, **Region:** Indian River
Title: The Golf Airfoil

Students Name(s): Camila Rimoldi Ibanez
School: Sebring Middle School, **Region:** Heartland
Title: Is Your Smart Phone Leaking? Year 2

Students Name(s): Thomas Greene
School: Lake City Middle School, **Region:** Suwannee Valley
Title: One Beat at a Time

Students Name(s): Matthew G Graham
School: Berkley Accelerated Middle School, **Region:** Polk
Title: Generating Electricity from the Pressure of Natural Falling Water

Third Place

Students Name(s): Sami Najib
School: Panama City Advanced School, **Region:** Three Rivers
Title: Analysis and Design of Helicopter Rotor Systems

Students Name(s): Matthew J Hershfield
School: Howard Bishop Middle School, **Region:** Alachua
Title: General Purpose Button Pusher

Students Name(s): Anthony D Madorsky
School: Howard Bishop Middle School, **Region:** Alachua
Title: iFLAG (Innovative Forgotten or Lost Automobile Guidance)

Students Name(s): James R Elford
School: Sebastian Charter Junior High School, **Region:** Indian River
Title: Cool Supercharged Sunlight

Students Name(s): Viraj Singh
School: Dr. David L. Anderson Middle School, **Region:** Martin
Title: Cellphone Radiation-Shields Up!

Second Place

Students Name(s): Makenzie J Marez
School: Liza Jackson Preparatory School, **Region:** East Panhandle
Title: Stifle the Cost of Anterior Cruciate Ligament Kneed in *Canis lupus familiaris*

Students Name(s): Aditya Singh
School: Valley Ridge Academy, **Region:** St. Johns
Title: Developing Distance Based Edge Detection

Students Name(s): Isabella R Weiner
School: Saint Mary's Catholic School, **Region:** Brevard: Intracoastal
Title: In Situ Resource Utilization of Martian Regolith for Construction

Students Name(s): Steven C Vokoun
School: Murray Middle School, **Region:** Martin
Title: Cones are No Longer Just for Ice Cream

First Place

Students Name(s): Charles B Sherwin
School: Okaloosa STEMM Academy, **Region:** East Panhandle
Title: For Your Ears Only

Students Name(s): Gavin A Baker
School: Green Cove Springs Junior High School, **Region:** Clay Rotary
Title: It's Getting Hot In Here!

Students Name(s): Jack H Krasulak
School: Saint Andrew's Episcopal Academy, **Region:** St. Lucie
Title: Mitigating the Effects of IED Explosion through Novel Hull Design

Grand Award Winner

Students Name(s): Jack H Krasulak
School: Saint Andrew's Episcopal Academy, **Region:** St. Lucie
Title: Mitigating the Effects of IED Explosion through Novel Hull Design

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Junior

Environmental Engineering

Recognition

Students Name(s): Naomi E Barr

School: Okaloosa STEMM Academy, **Region:** East Panhandle

Title: The Silent Tsunami

Students Name(s): Jordan M Umlas

School: Nautilus Middle School , **Region:** South Florida

Title: The Creation of a novel Carbon Dioxide Scrubber Using Chlorella

Students Name(s): Danielle Schroeder

School: Staint Teresa Catholic School, **Region:** Brevard: Mainland

Title: Does the Salinity of Water Affect the Amount of Energy Created by a Salt Water Battery?

Students Name(s): Heidi E Kinsey

School: Cypress Lake Middle School, **Region:** Thomas Alva Edison

Title: A Hairy Solution

Honorable Mention

Students Name(s): Emma K Kost

School: Treasure Village Montessori School, **Region:** Monroe

Title: Organic Growth in the Underwater Region on Construction Materials

Students Name(s): Yara Nasr

School: Ormond Beach Middle School, **Region:** Tomoka

Title: Can Car Mounted Wind Turbines Power Moving Electric Vehicles?

Students Name(s): Samuel L Glow

School: Williams Middle Magnet School, **Region:** Hillsborough

Title: Pollution Reduction Analysis Utilizing Phytoremediation for Stormwater Outfalls in the Hillsborough River Watershed, 2nd Year Study

Fourth Place

Students Name(s): Nicole M Terry

School: Okaloosa STEMM Academy, **Region:** East Panhandle

Title: Solidification and its Effects on Landfill Airspace

Students Name(s): Madeline M Murch

School: Charles S. Rushe Middle School, **Region:** Pasco

Title: Blankets for the Minimization of Heat Loss and Evaporation

Students Name(s): Jakob L Gundersen
School: George Washington Carver Middle School, **Region:** South Florida
Title: A Green Light to Free Power

Students Name(s): Dana Sapir
School: Aventura City of Excellence School, **Region:** South Florida
Title: The Solar Secret of Fibonacci's Tree

Students Name(s): Joshua Brunk
School: Inverness Middle School, **Region:** Citrus
Title: Thermoelectric Generators and Solar Cells - Watts Up!

Third Place

Students Name(s): Eliana J Razzino
School: DeLaura Middle School, **Region:** Brevard: Intracoastal
Title: Clean Green Machine

Students Name(s): Charles E Reedy
School: Crews Lake Middle School, **Region:** Pasco
Title: Clean Energy Sources

Students Name(s): Makayla D Bedgood
School: South Sumter Middle School, **Region:** Big Springs
Title: Combating the Agriculture Crisis; Aquaponics vs Hydroponics

Students Name(s): Krithika Subramanian
School: Sanford Middle School, **Region:** Seminole
Title: The Light that Drives You

Second Place

Students Name(s): Delia K Savin
School: Westwood Middle School, **Region:** Alachua
Title: How Do Polymers Affect Gel Formation for Oil Remediation?

Students Name(s): Vivek S Sandrapaty
School: Howard Middle School, **Region:** Big Springs
Title: Solar Energy 3.0: Will a Slowly Rotating Solar Cell Produce More Electricity than a Stationary Solar Cell?

Students Name(s): Patrick W Sykora
School: Challenger K8 School of Science and Mathematics, **Region:** Hernando
Title: Microbial Fuel Cells: Better Living Through Science

First Place

Students Name(s): Isabela V Perdomo
School: Norman S. Edelpcup Sunny Isles Beach K-8 Community School, **Region:** South Florida
Title: Cleaner Bottoms: Part 2 An Environmentally Friendly Method of Reducing Barnacle Growth and Improving the Quality of Our Waterways Using Ultrasonic Waves!

Students Name(s): Scott R Tobin

School: Creekside Middle School, **Region:** Tomoka

Title: By Using s Solar Powered Tesla Coil, Can Water Be Made Potable through Ozonification?

Category Winners



62nd Annual State Science and Engineering Fair

March 28 - 30, 2017

Lakeland Center, Lakeland

Junior Intelligent Machines, Robotics, & Systems Software

Recognition

Students Name(s): Manuel Nouel-Mato
School: The Sagemont School, **Region:** Broward
Title: How Secure is Your Password?

Students Name(s): Breanna K Newberg
School: Lakeland Christian School, **Region:** Polk
Title: Push it: Designing and Programming a Robot to Push A Button - Year II

Honorable Mention

Students Name(s): Justin Ming
School: Saint Cecelia Interparochial School, **Region:** Pinellas
Title: The Arduino, GPS, Iridium Transmitting and Location Device (AGITLD)

Students Name(s): Nathan J Cheng
School: Avalon Middle School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Creating Visualizations of Intensity and Pitch Using Computer Software to Control Linear Actuators

Fourth Place

Students Name(s): Ward C Genoway
School: IDEAL School of Advanced Learning , **Region:** Palm Beach
Title: Using Drone Technology to Detect Improvised Explosive Devices in Emergency Combat Zone Navigation

Students Name(s): Benjamin Batman
School: DeLaura Middle School, **Region:** Brevard: Intracoastal
Title: Signaling Motion Sensor

Students Name(s): Brady P Garrison
School: Pembroke Pines Charter Middle School, **Region:** Broward
Title: Herbie the Photovore: Designing an Efficient Light- following Robot

Third Place

Students Name(s): Sofia E Klostermeyer
School: Alice B. Landrum Middle School, **Region:** St. Johns
Title: Creating Cryptographically Secure Passwords Using Hash Functions

Students Name(s): John Blake Caven
School: Julia Landon College Preparatory Middle School, **Region:** Northeast Florida
Title: Athletic Drones? The Effect of Autonomous Algorithms on Robotic Intelligence

Students Name(s): Arko A Ghosh

School: Williams Middle Magnet School, **Region:** Hillsborough

Title: i-Cane 2.0: Smart Navigation for the Visually Impaired

Second Place

Students Name(s): Jad Helmy

School: Abraham Lincoln Middle School, **Region:** Alachua

Title: Optimizing and Extending Alzimio to Help Dementia, Autism, and Alzheimer's Patients

First Place

Students Name(s): Andy E Shar

School: The Villages Charter Middle School, **Region:** Big Springs

Title: What Are the Challenges of Creating a New Computer Programming Interpretive Language Using Three Different Existing Programming Languages, Such as Visual Basic, XAML, and Python?

Grand Award Winner

Students Name(s): Andy E Shar

School: The Villages Charter Middle School, **Region:** Big Springs

Title: What Are the Challenges of Creating a New Computer Programming Interpretive Language Using Three Different Existing Programming Languages, Such as Visual Basic, XAML, and Python?

Category Winners



62nd Annual State Science and Engineering Fair

March 28 - 30, 2017

Lakeland Center, Lakeland

Junior

Mathematics & Computational Sciences

Recognition

Students Name(s): Logan L Saenz

School: Pembroke Pines Charter Middle School, **Region:** Broward

Title: An Analysis of the Properties of Pascal's Triangle

Students Name(s): Hannah Chester

School: Stone Magnet Middle School, **Region:** Brevard: South

Title: Simulating a Residue Number System in the Python Programming Application

Honorable Mention

Students Name(s): Arseny E Kuzmin; Sophia M Zavada

School: Celebration K-8 School, **Region:** Osceola

Title: Foams and Sponges: Surface Density Study

Students Name(s): Junwei Tan

School: Gateway Intermediate Charter School , **Region:** Thomas Alva Edison

Title: Autonomous Search and Rescue

Fourth Place

Students Name(s): Victoria K Cross

School: The Weiss School, **Region:** Palm Beach

Title: Impacts of Algae Feedstuff Substitutions on a Simulated Holstein Milking Herd

Students Name(s): Noah B Jenkins

School: Neptune Middle School, **Region:** Osceola

Title: Windows for Thought!

Students Name(s): Evan Karcher

School: DeLaura Middle School, **Region:** Brevard: Intracoastal

Title: Space Travel: What A Drag?

Third Place

Students Name(s): Sarah V Leebrick

School: Merritt Brown Middle School, **Region:** Three Rivers

Title: Thrown for a Curve

Students Name(s): August A Ewert-Harpold

School: Howard Bishop Middle School, **Region:** Alachua

Title: A Duodecimal Napier's Bones

Students Name(s): Picabo B Lesh

School: The Cornerstone School, **Region:** Big Springs

Title: Clean Machines

Second Place

Students Name(s): Alexander S China

School: George Washington Carver Middle School, **Region:** South Florida

Title: Math vs Bias

First Place

Students Name(s): Nathan Foo

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: Deriving a Predator-Prey Model for Regulating the Growth of HABs with Different Species of Zooplankton inside of a Water Ecological System

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Junior

Microbiology

Recognition

Students Name(s): Angelia F Morris
School: Holley Navarre Middle School, **Region:** West Panhandle
Title: Spice It Up: Testing The Antimicrobial Properties of Herbs and Spices

Students Name(s): Elise R Corley
School: Indian Trails Middle School, **Region:** Seminole
Title: Which Destroys More Bacteria: Synthetic or Natural Antibiotics?

Honorable Mention

Students Name(s): Rachael N Yacuzzo
School: South Sumter Middle School, **Region:** Big Springs
Title: Will Certain Household Spices Inhibit The Growth of *E.coli* K-12?

Students Name(s): Stephanie A Bobrek
School: Martha B. King Middle School, **Region:** Lockheed Martin Manatee
Title: The Major Glow Up: Bioluminescent Algae

Fourth Place

Students Name(s): Amy Zhang
School: Brown-Barge Middle School, **Region:** West Panhandle
Title: Light Up Your *Euglena*

Students Name(s): Salma Benbrahim
School: Orlando Science Middle School, **Region:** Dr. Nelson Ying Expo - Orange
Title: At What Concentration is *Allium sativum* an Effective Antibacterial

Third Place

Students Name(s): Alexandra M Manion
School: Saint Mary Catholic School, **Region:** East Panhandle
Title: Got Algae? Can Environmental Conditions Alter Our Global Gases, and if so, Are There Conditions in Which a Primary Producer Can Minimize Potential Negative Effects, therefore Aid in the Alteration of these Effects?

Students Name(s): Emma G Hays
School: Hardee Junior High School, **Region:** Heartland
Title: Does the OTC NSAID Naproxen Affect the Growth of Bacteria More than Various Antibiotics? Year 2

Students Name(s): Caspian M Schultz
School: North Fort Myers Academy of the Arts, **Region:** Thomas Alva Edison
Title: Strike! Spare Me the Bacteria

Second Place

Students Name(s): Alexander M LaFortune

School: Cocoa Beach Junior/Senior High School, **Region:** Brevard: Intra-coastal

Title: Contaminated vs Clean, Year 2: The Effects of Unfiltered and UV-Filtered Solar Radiation on the Viability of Gram-Positive *Micrococcus luteus* and Gram-Negative *E.coli* K12 Bacteria

Students Name(s): Riaaz Khan

School: Stone Magnet Middle School, **Region:** Brevard: South

Title: A Comparison of the Antimicrobial Properties of Oil from the Tea Tree, *Melaleuca alternifolia* and the Oil from Lemongrass, *Cymbopogon* on Gram Positive Bacteria

First Place

Students Name(s): Om D Patel

School: Lyndon B. Johnson Middle School, **Region:** Brevard: Mainland

Title: Evaluation of Antibacterial Activity of the Piper Betel Leaf

Grand Award Winner

Students Name(s): Om D Patel

School: Lyndon B. Johnson Middle School, **Region:** Brevard: Mainland

Title: Evaluation of Antibacterial Activity of the Piper Betel Leaf

Category Winners



62nd Annual State Science and Engineering Fair

March 28 - 30, 2017

Lakeland Center, Lakeland

Junior

Physics & Astronomy

Recognition

Students Name(s): Darcy R Sullivan
School: Saint Paul Catholic School, **Region:** West Panhandle
Title: Pitter Patter Here's Some Spatter!

Students Name(s): Anya F AitSahlia
School: Oak Hall School, **Region:** Alachua
Title: How Do the Angle of Attack and Wind Speed Affect the Lift Generated by a Butterfly's Wings

Students Name(s): Brin M Conerly
School: Hardee Junior High School, **Region:** Heartland
Title: Does the Varian from Gray to Black Affect the Ability of an Object's Converting Solar to Heat Energy?

Students Name(s): Ellie Wilhelm
School: Oakleaf Junior High School, **Region:** Clay Rotary
Title: Catch the Wave

Students Name(s): Natalie M Gonzalez
School: Pembroke Pines Charter Middle School, **Region:** Broward
Title: Can Water be Used to Bend Light onto Solar Panels?

Honorable Mention

Students Name(s): Lindsey E Rauscher
School: Saint Paul Catholic School, **Region:** West Panhandle
Title: Liter of Light (Refracted Sunlight vs Light Bulbs)

Students Name(s): Jonathan C Walker
School: Bay Haven Charter Academy, **Region:** Three Rivers
Title: How Gravitational Lensing Affects Luminosity

Students Name(s): Gisele C Crary
School: Saint Joseph Catholic School, **Region:** Martin
Title: Does the Sun Rotate?

Students Name(s): Ankitha Nath
School: Stone Magnet Middle School, **Region:** Brevard: South
Title: Investigating the Affects of Liquid Density on the Refraction of Laser Light

Fourth Place

Students Name(s): Hannah S Feingold
School: Loggers' Run Middle School, **Region:** Palm Beach
Title: Studying Chirality with a Homemade Polarimeter

Students Name(s): Samuel R Lewis
School: Celebration K-8 School, **Region:** Osceola
Title: Reach for the Sky! The Impact of Length vs Weight on Rocket Launch Altitude

Students Name(s): Malik Lewis
School: Cocoa High School, **Region:** Brevard: Mainland
Title: Will Adding a Rheopectic Non-Newtonian Fluid to the Inside of a Football Helmet Reduce Impact Force?

Students Name(s): Benjamin C Abi-Rafeh
School: American Heritage School, **Region:** Broward
Title: Materials that Best Block Sound Waves

Students Name(s): Gabriel M Diaz
School: Pembroke Pines Charter Middle School, **Region:** Broward
Title: Bluetooth Tracking

Students Name(s): Luke J Hawxwell
School: Conway Middle School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Radar Invisibility

Third Place

Students Name(s): James T Clubley
School: Gulf View Middle School, **Region:** Collier
Title: Voltage Insultage

Students Name(s): Zachary M Headings
School: Fruit Cove Middle School, **Region:** St. Johns
Title: Detecting Sound with Light

Students Name(s): Nathan T Baxter
School: Keystone Heights Junior/Senior High School, **Region:** Clay Rotary
Title: Sound Has the Power

Students Name(s): Annika M L Vaidyanathan
School: Sanford Middle School, **Region:** Seminole
Title: Can We Have Some Quiet Please? The Effects of Shape and Profile on Noise!

Students Name(s): Riley N Hamilton
School: Olivet Private School, **Region:** St. Lucie
Title: Testing Fluids for Geothermal Heating and Air Conditioning

Second Place

Students Name(s): Micah Evans

School: North Naples Middle School, **Region:** Collier

Title: Test Your Strength: Effect of Different Material Conductivity on Magnetic Fields' Strength

Students Name(s): Sarah A Menard

School: Charles S. Rushe Middle School, **Region:** Pasco

Title: How Particle Size or Surface Terrain Affects the Amplitude of Seismic Waves Produced by a Meteor Impact

Students Name(s): Jack W Brophy

School: San Jose Catholic School, **Region:** Northeast Florida

Title: Using Body Heat to Create Electricity

Students Name(s): James D Humpel

School: Saint Charles Borromeo Catholic School , **Region:** Thomas Alva Edison

Title: A Blast from the Past

First Place

Students Name(s): Anjana Balachandar

School: Abraham Lincoln Middle School, **Region:** Alachua

Title: High Fives for Wi-Fi

Students Name(s): Emily S Daldine

School: Saint Mary Catholic School, **Region:** East Panhandle

Title: Bubbles Continue to Implode

Students Name(s): Zachary C Hessler

School: Gifford Middle School, **Region:** Indian River

Title: Save Our Silence: A Digital Approach to Reducing Noise Pollution

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Junior

Plant Sciences

Recognition

Students Name(s): Sara I Toledo

School: Winston Park K-8 Center, **Region:** South Florida

Title: Does the Nitrogen-Fixing Bacteria (Rhizobium) and Nitrogen Fertilizer Affect the Biomass of the Clover (Trifolium)

Students Name(s): Bodie C Robbins

School: Treasure Village Montessori School, **Region:** Monroe

Title: Withering Weeds

Students Name(s): Mason A Kozac

School: Lincoln Park Academy, **Region:** St. Lucie

Title: Savanna Mint

Students Name(s): James Coffey

School: Stone Magnet Middle School, **Region:** Brevard: South

Title: The Effects of Soil Nutrients on the Percentage of Trap Closures and the Amplitude of Electric Spikes Produced by the Trap of a Venus Flytrap

Honorable Mention

Students Name(s): Logan A Mears

School: Richardson Middle School, **Region:** Suwannee Valley

Title: Rad Radishes

Students Name(s): Laboni Santra

School: Jackson Heights Middle School, **Region:** Seminole

Title: FITC and Glucosamine Tracing Therapeutics in Leaf Using Florescent Dye

Students Name(s): Jennifer A Jacoby

School: Gulf Middle School , **Region:** Thomas Alva Edison

Title: Radiation and Radish Seeds

Fourth Place

Students Name(s): Kavay H E Howell

School: Holley Navarre Middle School, **Region:** West Panhandle

Title: Fix That Nitrogen! Comparing the Effects of Nitrogen-Fixing Bacteria and Nitrogen Fertilizer

Students Name(s): Marla Rinehart

School: Bay Haven Charter Academy, **Region:** Three Rivers

Title: Atmospheric Pressure vs. Plant Growth

Students Name(s): Johnathan Schoenborn
School: Fruit Cove Middle School, **Region:** St. Johns
Title: From Rubbish to Radishes: Does Compost Produce Increased Plant Growth Over Manufactured Fertilizer?

Students Name(s): Lucien L Brunelle
School: Bishop Larkin Catholic School, **Region:** Pasco
Title: The Effect of Allelopathy on Bean Seed Germination

Students Name(s): Sophia G Carbajal
School: Winston Park K-8 Center, **Region:** South Florida
Title: The Effect of Nickel Sulfate on Amount of Magnesium in Plants

Third Place

Students Name(s): Samantha N Kammerer
School: North Bay Haven Charter Academy, **Region:** Three Rivers
Title: Can Cryogenically Preserving Seeds Save Florida's Citrus from Extinction?

Students Name(s): Sophia K Shah; Hannah M Palka
School: Oak View Middle School, **Region:** Alachua
Title: How Does Glycerin Affect the Decomposition of Organic Materials?

Students Name(s): Mailene G Miranda
School: Saint Joseph Catholic School, **Region:** Northeast Florida
Title: What Makes Science A-Peel-ing: Tensile Strength of Banana Fibers

Students Name(s): Asher G Dorfman
School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland
Title: Preventing Allelopathy

Second Place

Students Name(s): Sam A Hazamy
School: Alexander D. Henderson University School, **Region:** Palm Beach
Title: Does Water Hyacinth Limb Removal Percentage Effect the Plant's Growth Rate?

Students Name(s): Marissa Golem
School: Imagine South Lake Charter School, **Region:** Lake
Title: The Effects of Cryo-Freezing on Seeds

Students Name(s): Michael D Conti
School: Maitland Middle School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Evaluating Agriculture in a Martian Atmosphere

First Place

Students Name(s): Tabina Hossain
School: DeLaura Middle School, **Region:** Brevard: Intracoastal
Title: Does *Ceratophyllum demersum* Inhibit the Growth of *Anabaena*?

Students Name(s): Andrew H Simon

School: American Heritage School, **Region:** Broward

Title: Determination of a Correlation between the Capsaicinoid Concentration of the Fruit of the Genus Capsicum and Organic Growth Conditions

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Animal Sciences

Recognition

Students Name(s): Sean M Kennedy

School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal

Title: Preventing Endocrine Disruption in *Danio* Embryos

Students Name(s): Sierra D Langford

School: Clay High School, **Region:** Clay Rotary

Title: Here's the Grind: Can Papaya Seed Be Used as an Effective Dewormer in Goats?

Students Name(s): Benjamin G Shirey

School: Oviedo High School, **Region:** Seminole

Title: Predatory Chromatophore Response of Octopus *Filosus* on Unfamiliar Prey Items

Honorable Mention

Students Name(s): James A Staman

School: The Bolles School, **Region:** Northeast Florida

Title: Blue Light Effect Study-Impact on *Drosophila*'s Cognitive Ability and Changes in Gender Ratios

Students Name(s): Carlie M Taylor

School: The Villages Charter High School, **Region:** Big Springs

Title: The Effects of Spontaneous Mutations Upon Male Fitness in *Caenorhabditis elegans*

Students Name(s): Emily A Acevedo

School: Bradford High School, **Region:** Suwannee Valley

Title: Comparison of ELISA to RIA as Predictors of Parturition in Goats

Fourth Place

Students Name(s): Daniel A Clein

School: Wellington Community High School, **Region:** Palm Beach

Title: Comparative Mosquito Larval Bioassays

Students Name(s): William G Canty

School: Bishop John J. Snyder High School, **Region:** Northeast Florida

Title: The Effects of Genetic Mutation and Aspartame Exposure on *Drosophila melanogaster* Olfactory Response

Students Name(s): Katelyn S Nicholson

School: Episcopal School of Jacksonville, **Region:** Northeast Florida

Title: Analyzing the Correlations Between Genetically Modified Soybean Oil and the Development of *Gallus domesticus* Embryos

Students Name(s): Sana Shareef

School: Saint Edwards School, **Region:** Indian River

Title: Using Response Surface Methods to Optimize a Repellant for the Invasive Sri Lankan Weevil *Mylocerus undecimpustulatus undatus* Marshall (Coleoptera: Curculionidae: Entiminae)

Students Name(s): Alyssa M Sanchez

School: South Sumter High School, **Region:** Big Springs

Title: Methane Reduction Using Cull Produce in Bos Taurus

Third Place

Students Name(s): Jessica Young

School: Palm Beach Central High School, **Region:** Palm Beach

Title: Synthesis of a Soy Protein Hydrogel for Invasive Snail Control in Agricultural Settings

Students Name(s): Madison Precht

School: Westminster Christian School, **Region:** South Florida

Title: Lethal and Sub-lethal Effects of Sunscreen Compounds on the Threatened Staghorn Coral, *Acropora cervicornis*

Students Name(s): William L Johnson

School: Saint Edwards School, **Region:** Indian River

Title: Migratory Passerines' Usage of Australian Pine

Students Name(s): Anjeli V Nandwani

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: The Effects of *Azadirachta indica* (Neem) and *Dysphania ambrosioides* (Epazote) on *Diaphorina citri* (Asian Citrus Psyllid)

Second Place

Students Name(s): Ayse S Demircan

School: Florida Atlantic University High School, **Region:** Palm Beach

Title: Elasmobranch Olfactory Organ Morphology

Students Name(s): River C Grace

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: Shining a Light on the Blind: Evolutionary Regression and Adaptive Progression in the Micro-vertebrate *Ramphotyphlops braminus* - Year 3

First Place

Students Name(s): Shantanu S Jakhete

School: South Fork High School, **Region:** Martin

Title: Sustainable Mosquito Control: A Chemical-free, Low-Cost Approach for Controlling *Aedes aegypti*, A Vector of Zika

Grand Award Winner

Students Name(s): Shantanu S Jakhete

School: South Fork High School, **Region:** Martin

Title: Sustainable Mosquito Control: A Chemical-free, Low-Cost Approach for Controlling *Aedes aegypti*, A Vector of Zika

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Behavioral & Social Sciences

Recognition

Students Name(s): Patricia K McAuley; Lauren Beall

School: Pensacola High School, **Region:** West Panhandle

Title: The Effect of Work Environment and Stress Level on the Accuracy of Eyewitness Testimony: Year III

Students Name(s): Paige E Pokryfke

School: Saint Thomas Aquinas High School, **Region:** Broward

Title: Stimulating Neurotransmission to Improve Standard Test Scores

Honorable Mention

Students Name(s): Maxence C Sutton

School: Cypress Bay High School, **Region:** Broward

Title: Using Grit to Determine Student Success

Students Name(s): Aiden M Calenda

School: Melbourne High School, **Region:** Brevard: South

Title: How Do Hurricanes Affect the Movement Patterns of Species of Sharks?

Fourth Place

Students Name(s): Andres A Cruz-Sanchez

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: "False Sense of Security!" Impact of Cell Phone Hands-Free Dual Tasking Function on Human Reaction Time Performance

Students Name(s): Klara L Fletcher

School: Fletcher Academy , **Region:** Suwannee Valley

Title: Memory Matters: The Effectiveness of Mnemonics vs Video Learning - Year 2

Third Place

Students Name(s): Savannah M Jordan

School: Sarasota High School, **Region:** Sarasota

Title: Testing the Effects of Traumatic Brain Injury on *Drosophila melanogaster*

Students Name(s): Nabiha E Ahmed; Sobia T Khan

School: Spruce Creek High School, **Region:** Tomoka

Title: How Does the Testimony of Veiled Individuals Affect the Observer's Ability to Judge

Students Name(s): Samuel D Naranjo

School: Paul J. Hagerty High School, **Region:** Seminole

Title: Effects of Anxiety and Identity Development on Moral Consistency

Second Place

Students Name(s): Alyssa Russell

School: Satellite High School, **Region:** Brevard: Intracoastal

Title: Sound of Music - Year III

Students Name(s): Tiffany Liu; Abigail R Lifferth; Carter W Draney

School: The Villages Charter High School, **Region:** Big Springs

Title: Does Modern Technology Exacerbate Teen Procrastination?

First Place

Students Name(s): Sapna K Patel

School: Oviedo High School, **Region:** Seminole

Title: Kemotions - Keys to Emotional Cues

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Biomedical & Health Sciences

Recognition

Students Name(s): Chase A Olivanti

School: Wiregrass Ranch High School, **Region:** Pasco

Title: How does N-Acetyl-5-Methoxytryptamine affect Cellular Respiration in *Saccharomyces cerevisiae*?

Students Name(s): Matthew Dickens

School: CAT/ Lakewood High School, **Region:** Pinellas

Title: Analysis of Football Helmet Safety

Students Name(s): Areebah I Ahmed

School: Spruce Creek High School, **Region:** Tomoka

Title: The Effect of Fluid Dynamics in Cardiovascular Disease

Students Name(s): Juan E Torres

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: Rhythmic Training and its Effect on Rise-Time Perception

Students Name(s): Gabriel M Frydman

School: NSU University School, **Region:** Broward

Title: Selected Laboratory Methods for Confirmation of RNA Silencing

Honorable Mention

Students Name(s): Abigail E Raffalski

School: Westminster Christian School, **Region:** South Florida

Title: Cell Cycle Dysregulation in Ovarian Cancer

Students Name(s): Myesha A Choudhury

School: Canterbury School, **Region:** Thomas Alva Edison

Title: How Would the Addition of Fish Oil and Genistein to Bacterial Transformation Protocols Affect the Plasmid Uptake and Antibacterial Resilience of an MM294 *E. Coli* Culture Substrate?

Students Name(s): Marissa A Jordan

School: Palm Bay Magnet High School, **Region:** Brevard: South

Title: The Fabrication and Evaluation of a Prosthetic Macula to Restore Vision in Patients Affected by Geographic Atrophy

Students Name(s): Meghana Ganjam

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Diffusion of Anti-Inflammatory Components of Sesame Seed Oil through Biological and Cellular Membrane Barriers

Fourth Place

Students Name(s): Deandra Williams
School: Palm Beach Central High School, **Region:** Palm Beach
Title: The Role of Crumb Rubber as a Mutagen and Neurological Disruptor in *Drosophila melanogaster*

Students Name(s): Andy Armand
School: North Miami Beach Senior High School, **Region:** South Florida
Title: Studies of the Interactions between Analogues of Heparin Disaccharide and Alzheimer Amyloid β ($A\beta$)

Students Name(s): Odessa X Deng
School: Lawton Chiles High School, **Region:** Capital
Title: Yeast Cells as a Model for Misfolded Protein Disposal in Huntington's Disease

Students Name(s): Olivia J Lazarik
School: Saint Edwards School, **Region:** Indian River
Title: A Model for Treating Neurodegenerative Diseases: The Effect of Caffeine on the Learning Behavior and Regeneration of *Dugesia tigrina* (Brown Planaria)

Students Name(s): Madelyn Kish
School: Union County High School, **Region:** Suwannee Valley
Title: The Effects of Mirror Therapy Accompanied with Music on the Rehabilitation of Stroke Patients

Third Place

Students Name(s): Srijith K Nair
School: American Heritage School of Boca/Delray, **Region:** Palm Beach
Title: Antibiotic Properties of *Moringa oleifera* to Combat Superbugs!

Students Name(s): Teerth P Patel
School: Sarasota High School, **Region:** Sarasota
Title: The Effects of Temperature on Synovial Fluid Viscosity via Magnetic Particle Translation

Students Name(s): Cameron W Hochman
School: Home School , **Region:** Collier
Title: The Effects of Cell Phone Radiation on Reproduction and Wing Phenotype Mutation in *Drosophila melanogaster*

Students Name(s): Julia Hoffman
School: Satellite High School, **Region:** Brevard: Intracoastal
Title: Enhancing Breast Cancer Treatment Efficiency Using Circadian Rhythms

Second Place

Students Name(s): Ray Jia
School: Alexander W. Dreyfoos School of the Arts, **Region:** Palm Beach
Title: Smells Like a Solution Autophagy in Chemosensory Neurons is Essential for Lipid Metabolism Regulated by Insulin-like Signaling in *Caenorhabditis elegans*

Students Name(s): Ethan Z Levy
School: Dr. Michael M. Krop High School, **Region:** South Florida
Title: A Novel Method for Auto-Suturing in Laparoscopic Robotic Coronary Artery Bypass Graft Anastomosis

Students Name(s): Lindsay S Poulos

School: Episcopal School of Jacksonville, **Region:** Northeast Florida

Title: The Effects of Secondhand E-Cigarette Vapor on *Drosophila melanogaster*

First Place

Students Name(s): Sayyada Kazim

School: Tampa Bay Technical High School, **Region:** Hillsborough

Title: Vitamin E Delta-tacotrienol Targets Cancer Stem Cell Transcription Factors and Inhibits Human Pancreatic Cancer Metastasis

Grand Award Winner

Students Name(s): Sayyada Kazim

School: Tampa Bay Technical High School, **Region:** Hillsborough

Title: Vitamin E Delta-tacotrienol Targets Cancer Stem Cell Transcription Factors and Inhibits Human Pancreatic Cancer Metastasis

Category Winners



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Lakeland Center, Lakeland

Senior

Cellular/Molecular Biology & Biochemistry

Recognition

Students Name(s): Chevara Joseph

School: Florida Atlantic University High School, **Region:** Palm Beach

Title: Loss of Neurofibromin During Development Increases Grooming in *Drosophila*

Students Name(s): Siddharth S Ananthan

School: Sebring High School, **Region:** Heartland

Title: Starbucks : The New BP

Students Name(s): Joanna LaTorre

School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland

Title: Sugar vs Sugar Substitutes

Students Name(s): Callie W Zheng

School: Lincoln Park Academy, **Region:** St. Lucie

Title: Can Human Fecal Specific Primers be Used to Detect Fecal Contamination in Sediment and Muck Samples?

Honorable Mention

Students Name(s): Brindha P Rathinasabapathi

School: Eastside High School, **Region:** Alachua

Title: Treating Hypertension: Using Natural Compounds to Inhibit Angiotensin Converting Enzyme

Students Name(s): Grant B Szymanski

School: The Bolles School, **Region:** Northeast Florida

Title: The Effect of Cell Phone EMR on Bioluminescence

Students Name(s): Honghao Zhu

School: Episcopal School of Jacksonville, **Region:** Northeast Florida

Title: Exploration of Serum-based Biomarkers of Benign versus Malignant Renal Masses

Fourth Place

Students Name(s): Madison R Barshick

School: Ponte Vedra High School, **Region:** St. Johns

Title: Cloning of AMP-activated Protein Kinase Gene into a *Saccharomyces cerevisiae* Specific Plasmid to Induce RNA Interference in *Musca domestica*

Students Name(s): Caroline E Anderson

School: Episcopal High School of Jacksonville, **Region:** Northeast Florida

Title: The Effects of pH on Antigen-Antibody Interactions in Saline Agar

Students Name(s): Joanna Q Wang
School: Lawton Chiles High School, **Region:** Capital
Title: Identify Cdc48 Cofactors Required for Autophagy

Students Name(s): Ritika Jeloka
School: Melbourne High School, **Region:** Brevard: South
Title: The Effects of Microplastics on the Neurotransmission rate of an Earthworm, *Lumbricus terrestris*

Students Name(s): Noopur Ranganathan
School: Trinity Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange
Title: An Alternatively-Spliced Form of S6K-1 Lacking the Catalytic Domain Function that Serves as a Dominant-Negative Inhibitor of mTORC1 Signalling-a Novel Drug Target to Combat Obesity, Cancer, and Cardiovascular Diseases

Third Place

Students Name(s): Michael Goncalves
School: TERRA Environmental Research Institute, **Region:** South Florida
Title: The Impact of Arg 33 and Arg 84 on Human Cytoglobin Stability

Students Name(s): Amanda R Maytin
School: Medical Academy for Science and Technology, **Region:** South Florida
Title: Role of Autophagy on HIV Tat-Induced Intracellular Calcium Release in Murine Astrocytes

Students Name(s): Sai Aditya Sriram
School: Vanguard High School, **Region:** Big Springs
Title: A Novel Whole-Cell Bacterial Sensor Utilizing the Chemiluminescent Interactions between 3-aminophthalhydrazide and Metalloproteins

Students Name(s): Dylan W Davis
School: Hardee Senior High School, **Region:** Heartland
Title: Does Type of Soil Mixed with Cow Excreta Affect the Time it Takes for Potential Methane Production to be Converted into Electrical Power? Year Four

Second Place

Students Name(s): Saagar Jain
School: Pine Crest School, **Region:** Broward
Title: Alternative Splice Variant Expression of MCIDAS Does not Induce Ciliated Cell Differentiation

Students Name(s): Catherine Horger
School: Lincoln Park Academy, **Region:** St. Lucie
Title: The Effect of Indole-3-Acetic Acid and Kinetin on the Fresh Weight Accumulations & Morphology of a Tobacco Cell Line

Students Name(s): Rithvik Seela
School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Use of Intestinal Scaffolding as a Pumping Assist Solution to Heart Failure

First Place

Students Name(s): Codi J Elliott

School: Sarasota High School, **Region:** Sarasota

Title: Modifying Substrate Mechanics to Engineer an *in vitro* Tumor Microenvironment

Students Name(s): Jay S Chandar

School: Canterbury School, **Region:** Thomas Alva Edison

Title: Moving Towards the Cure: Investigating the Effect of cAMP-Dependent Molecular Mechanisms on the Regulation of MAPT Gene Expression and the Formation of Neurofibrillary Tangles to Identify Drug Targets for Alzheimer's Disease - A Fourth Year Study

Grand Award Winner

Students Name(s): Jay S Chandar

School: Canterbury School, **Region:** Thomas Alva Edison

Title: Moving Towards the Cure: Investigating the Effect of cAMP-Dependent Molecular Mechanisms on the Regulation of MAPT Gene Expression and the Formation of Neurofibrillary Tangles to Identify Drug Targets for Alzheimer's Disease - A Fourth Year Study

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Chemistry

Recognition

Students Name(s): Jorgi Mandelbaum

School: Spanish River Community High School, **Region:** Palm Beach

Title: Fruits Fight Free Radicals: Antioxidant Ability in Fruits: Holding Off Free Radicals Through Oscillating Reactions

Students Name(s): Sreten Dedic

School: J.W. Mitchell High School, **Region:** Pasco

Title: Investigating New Methods of Noninvasive Glucose Monitoring

Students Name(s): Laura A Babiceanu

School: Spruce Creek High School, **Region:** Tomoka

Title: Polystyrene Sulfonation as a Method to Remove Calcium and Magnesium Ions from Water

Students Name(s): Akhil K Shiju

School: Lawton Chiles High School, **Region:** Capital

Title: A Study on Organic Photovoltaic Cells: Powering the Future with a More Ecofriendly Solution

Honorable Mention

Students Name(s): Ian J Zegouros

School: Niceville High School, **Region:** East Panhandle

Title: The Durability of Guitar Strings

Students Name(s): Tiffani Byun

School: Indian Rocks Christian School, **Region:** Pinellas

Title: Using a Microbial Fuel Cell to Create Electricity from Mud

Students Name(s): Hunter B Richards

School: Union County High School, **Region:** Suwannee Valley

Title: Moo... Who?

Fourth Place

Students Name(s): John D Dixon

School: Pensacola High School, **Region:** West Panhandle

Title: The Effect of Dissolved Sodium Chloride Ions on the Leidenfrost Point of Water

Students Name(s): Enjolie Vadella

School: Satellite High School, **Region:** Brevard: Intracoastal

Title: Just Enough Binder for Multi-Walled Carbon Nanotubes

Students Name(s): Zhaoxian Zhang
School: Episcopal School of Jacksonville, **Region:** Northeast Florida
Title: Aluminum Recovery in Al-Air Primary Batteries for Innovative Fuel Cell Design

Students Name(s): Cristian Rios
School: Okeechobee High School, **Region:** Heartland
Title: Identifying a Correlation between Water Quality and Socioeconomic Status

Students Name(s): Anna M Kucera
School: Canterbury School, **Region:** Thomas Alva Edison
Title: An Analysis of Bisphenol A, Bisphenol S, and Bisphenol F in BPA-Free versus Ordinary Plastic Containers Using Gas Chromatography Mass Spectrometry

Third Place

Students Name(s): Sara V Fernandez
School: Westminster Christian School, **Region:** South Florida
Title: The Effect of Increasing the Level of Magnetic Field Applied on the Flow Rate of Simulated Blood

Students Name(s): Olivia L Gottlieb
School: Dr. Michael M. Krop High School, **Region:** South Florida
Title: Cohesiveness of the Oscillating BZ Reaction

Students Name(s): Colby D Pitts
School: South Sumter High School, **Region:** Big Springs
Title: The Absorption of Textile Dyes using Organic Waste Material

Students Name(s): Clarice Su
School: C. Leon King High School, **Region:** Hillsborough
Title: Tuning Carbon Dioxide Capture Behavior Via Ion Exchange in Porous Organic Polymers

Second Place

Students Name(s): Kunal Upadya
School: Vanguard High School, **Region:** Big Springs
Title: Copper Oxide Nanoparticles for Adsorption of Phosphate in a Novel Gel-Loaded Delivery System

Students Name(s): Suganth Kannan
School: American Heritage School, **Region:** Broward
Title: Development of an Algorithm to Filter and Assign Signals in Protein NMR Spectroscopy to Accelerate Drug Discovery

Students Name(s): Jasper L Montgomery
School: Bartow High School - IB, **Region:** Polk
Title: An In Silico and In Vitro Study of Gold Nanoparticle Aggregates for Photothermal Ablation of Cancer Cells

First Place

Students Name(s): Padmavathi Reddy
School: American Heritage School, **Region:** Broward
Title: Improving Nitration Activity of Fused TxtE-Cyp102A1 Reductase Domain by Optimizing the Linker Length

Grand Award Winner

Students Name(s): Padmavathi Reddy

School: American Heritage School, **Region:** Broward

Title: Improving Nitration Activity of Fused TxtE-Cyp102A1 Reductase Domain by Optimizing the Linker Length

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Earth & Environmental Sciences

Recognition

Students Name(s): Andres E Leon

School: Felix Varela Senior High School, **Region:** South Florida

Title: Tracking Phosphate Inputs as a Result of Saltwater Intrusion in the Florida Everglades Using Benthic Algal Mats

Students Name(s): Sohayla T Eldeeb

School: Spruce Creek High School, **Region:** Tomoka

Title: The Effectiveness of Ferrofluid Nanotechnology on Cleaning up Oil Spills

Students Name(s): Jillian C Markle

School: Lincoln Park Academy, **Region:** St. Lucie

Title: Ugh! Another Invasive Weevil in Florida

Students Name(s): Mark Leone

School: Canterbury School, **Region:** Thomas Alva Edison

Title: A Study of the Effects of Environmental Variables on Phytoplankton Appearances

Honorable Mention

Students Name(s): Celinie M Nguyen

School: Palm Beach Central High School, **Region:** Palm Beach

Title: Soil Remediation, Water Pollution Prevention, and Soil Stabilization Through the Combination of Soluble and Insoluble Nanocomposite Hydrogels - A Two-Year Study

Students Name(s): Alexandra K Gabrielski

School: Viera High School, **Region:** Brevard: Mainland

Title: Increasing the Sustainability of a Heterotrophic Biomass Production System (A 6 Year Study of *Chlorella vulgaris*)

Students Name(s): Mariah R Griner

School: Union County High School, **Region:** Suwannee Valley

Title: Exploring Denitrification of Stormwater: Testing Three Carbon Substrates for Filtration Efficiency

Students Name(s): Emily M Carr

School: Springstead High School, **Region:** Hernando

Title: The Effect of Fluorescent Emission Levels on the Coral Polyp Percent Mortality of *Briareum violacea*, *Zoanthid sp.*, and *Sympodium caeruleum* in a Heat Stress Environment

Fourth Place

Students Name(s): Jonathan C Chin Cheong

School: Florida Atlantic University High School, **Region:** Palm Beach

Title: Evaluating the Ecotoxicity of Impermeable Surfaces to Improve Urban Water Quality: Quantification of Low Impact Developmental Design Efficiencies and Synthesis of an Eco-Efficient Asphalt Substrate with Functionalized Pollutant Adsorption Capabilities

Students Name(s): Sidhika Balachandar
School: Buchholz High School , **Region:** Alachua
Title: Novel Graphen Oxide Based Technology for Ultra Efficient Filtration

Students Name(s): Austin K Bagby; Caitlin H Anthony
School: Bell High School, **Region:** Suwannee Valley
Title: Can Humate Reduce Nitrogen Leaching in Sandy Soil?

Students Name(s): Lourdes M Lopez
School: Archbishop Edward A. McCarthy High School, **Region:** Broward
Title: Manipulating Expression of the Flowering Locus T Gene in *Pinus taeda* and *Populus trichocarpa*

Students Name(s): Nidhi Ohri
School: Seminole High School, **Region:** Seminole
Title: Synthetic Photosynthesis: Investigating the Potential of Single- and Double- Chamber Hydrogen Fuel Cells with the Use of a Catalyst Mixture as a Novel Approach to Hydrogen Production - Year 4

Students Name(s): Melissa Marchese
School: Canterbury School, **Region:** Thomas Alva Edison
Title: The Effects of Boat Traffic on Water Quality as Measured by Levels of Turbidity, Colored Dissolved Organic Matter, and Chlorophyll α

Third Place

Students Name(s): William Z Gao
School: Suncoast Community High School, **Region:** Palm Beach
Title: Stormwater Treatment Area Performance Prediction Using Artificial Neural Network

Students Name(s): Jacob C Wells; Emily M Hough; Casey J Ryan
School: South Sumter High School, **Region:** Big Springs
Title: Mass Transfer Theory vs Pan Evaporation Method

Students Name(s): Emily L Pallack
School: American Heritage School, **Region:** Broward
Title: A Comparative Analysis of Fluensulfone as a Nematicide on *Caenorhabditis Elegans* SKN-1 Pathway Mutants and in Vivo RNA Interference Study as a Solution of Nematicidal Resistance

Students Name(s): Kenneth M West
School: Melbourne High School, **Region:** Brevard: South
Title: Improving Shade Balls

Students Name(s): Nirja N Shah
School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange
Title: Studying the Effects of Air Pressure on Asteroid Regolith

Second Place

Students Name(s): Arjun P Panicker
School: Buchholz High School , **Region:** Alachua
Title: Biofuels from Algae

Students Name(s): Jieli A Wegerif

School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal

Title: The Effect of Wave Action on Muck Flux

Students Name(s): Graham P Ungrady

School: The Bolles School, **Region:** Northeast Florida

Title: Comparing Viability and Photosynthetic Capability of Algae Cultures Versus Algae Beads

First Place

Students Name(s): Spencer J Toll; Joshua L Tucker

School: Vero Beach High School, **Region:** Indian River

Title: Indium Prospecting Using Neural Nets

Students Name(s): Lauren A Waldman

School: American Heritage School, **Region:** Broward

Title: Aerobic Cometabolism of cis-DCE by *Rhodococcus rhodochrous* ATCC® 21198 with Isobutane Growth Substrate

Category Winners



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Lakeland Center, Lakeland

Senior

Engineering

Recognition

Students Name(s): Tara M Martin

School: Episcopal School of Jacksonville, **Region:** Northeast Florida

Title: Piezoelectric Biomechanical Energy Harvesting Using Direct Impact and Contactless Magnetic Plucking to Power Wearable Biometric Devices

Students Name(s): Michael B Mancil

School: Orange Park High School, **Region:** Clay Rotary

Title: Natural Insulation

Students Name(s): Benjamin R Beale

School: Bayside High School, **Region:** Brevard: South

Title: A New Spin on the Flywheel

Honorable Mention

Students Name(s): Julianna M Heitman

School: West Florida High School of Advanced Technology, **Region:** West Panhandle

Title: Determination of Airfoil Characteristics for Maximum Lift

Students Name(s): Sohan G Subhash

School: F. W. Buchholz High School, **Region:** Alachua

Title: Making Harder Materials Tougher

Students Name(s): Joseph E Cilenti

School: South Sumter High School, **Region:** Big Springs

Title: Reach Into the Future II

Fourth Place

Students Name(s): Richard G Leonard

School: American Heritage School of Boca/Delray, **Region:** Palm Beach

Title: Busting Barnacles

Students Name(s): Daniel C Bobbitt

School: Niceville High School, **Region:** East Panhandle

Title: Go with the Flow - Increasing the Efficiency of the Tesla Turbine to Reduce the Cost of Cleaner Energy Generation from Natural Gas

Students Name(s): Kelly Laplante

School: Academy of Environmental Science, **Region:** Citrus

Title: Harvesting Energy From VAWTs Installed in Water Pipes

Students Name(s): Sruthika Baviriseaty

School: C. Leon King High School, **Region:** Hillsborough

Title: Rare Earth Metal Doped Titanium Dioxide Upconversion Photocatalysis for Historical Building Preservation Applications

Students Name(s): Caroline G Nolan

School: Clark Learning Center, **Region:** Martin

Title: ESPERER (Economic System Producing Energy Resources and Environmental Results)

Third Place

Students Name(s): Hannah D Herbst

School: Florida Atlantic University High School, **Region:** Palm Beach

Title: Protecting Civilians and Public Service Personnel through an Early Identification System for Airborne Chemicals: SEIAC

Students Name(s): Devanik Biswas

School: Stanton College Preparatory School, **Region:** Northeast Florida

Title: Fabrication of a Novel Nanoporous Hybrid and Multi-layer Membrane for a Drug Delivery System

Students Name(s): Stefan Abi-Karam

School: American Heritage School, **Region:** Broward

Title: Creating a System for Cheap Distributed Landmine Sensing Using GPS and GSM Technologies Coupled with Low cost Electrical Design, Engineering and Manufacturing Techniques

Second Place

Students Name(s): Kathryn E Savage

School: Sarasota High School, **Region:** Sarasota

Title: Alzheimer's Treatment: Solubilized-Curcumin via Buccal Patch

Students Name(s): Amber Z Yang

School: Trinity Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Multi-Orbit Space Debris Cloud Tracking Using Iterative Closest Points Registration with Machine Learning

First Place

Students Name(s): Grayson L Huntsinger

School: Lakeland Grace Academy, **Region:** Polk

Title: Mission To Mars: Designing a Spacecraft Impact Protection and Leak Detection System with Radiation Shielding

Grand Award Winner

Students Name(s): Grayson L Huntsinger

School: Lakeland Grace Academy, **Region:** Polk

Title: Mission To Mars: Designing a Spacecraft Impact Protection and Leak Detection System with Radiation Shielding

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Environmental Engineering

Recognition

Students Name(s): Jules Volny

School: Satellite High School, **Region:** Brevard: Intracoastal

Title: Photovoltaic Sandwich - Year III

Students Name(s): Alisa Luthra

School: Academy of Environmental Science, **Region:** Citrus

Title: Measuring Flow Rate

Students Name(s): Sabrina L Mead

School: The Villages Charter High School, **Region:** Big Springs

Title: Which Polymer Produces the Strongest Bioplastic, and Which Is the Best for the Environment?

Students Name(s): Raleigh G Forbell

School: Springstead High School, **Region:** Hernando

Title: Second Year Study: Deployment Method for New Artificial Reef Design to Effectively Enhance and Conserve Marine Life

Honorable Mention

Students Name(s): Xuan M Ho; Joseph C McCormack; Maya N Humeda

School: Pensacola High School, **Region:** West Panhandle

Title: Monitoring Nutrient Levels of a Self Sustained Environment with Use of an Arduino

Students Name(s): Anna M Zimmerman

School: Braden River High School, **Region:** Lockheed Martin Manatee

Title: A Solar Powered Method of Extracting Drinking Water from the Air

Students Name(s): Jacob S Butcher; James Puentes; Jose G Quintanilla

School: Polk Pre-Collegiate Academy, **Region:** Polk

Title: The Energy Source of the Future: Research on the Efficiency of Photovoltaic Panels

Fourth Place

Students Name(s): Vithulan Suthakaran

School: Florida Atlantic University High School, **Region:** Palm Beach

Title: SEA Skimmer: The Development of a Sustainable Environmental Accumulation Skimmer in Order to Extract Marine Pollution from a Variety of Geographical Locations

Students Name(s): Jeffrey A Sutherland; Leo S Forty

School: Pensacola High School, **Region:** West Panhandle

Title: The Optimal Performance For Residential Wind Turbines with Different Number of Blades

Students Name(s): Grace Liu
School: Spruce Creek High School, **Region:** Tomoka
Title: A Cost Effective Aquatic Robot for Collecting Environmental Data

Students Name(s): Kyle Bramblett
School: Titusville High School, **Region:** Brevard: Mainland
Title: Do Herbicides and Fertilizers Commonly Found in Surface Runoff that Flows into the River Water Affect the Oyster *Crassostrea virginica* and Clam *Mercenaria mercenaria* Ability to Naturally Filter and Improve the Overall Water Quality of the Indian River Lagoon?

Students Name(s): Nithya Kasarla
School: American Heritage School, **Region:** Broward
Title: Using Various Compounds to Increase the Efficiency of Cadmium Chelation Processes in *S. lycopersicum*, *L. minor* and *C. elegans*: Improving Phytoremediation Processes and Cadmium Poisoning Treatments

Third Place

Students Name(s): Talar Terzian
School: Oak Hall School, **Region:** Alachua
Title: Spin Cycle: An Off-the-Grid Hydrodynamic Water Filtering Mobile Washing Machine

Students Name(s): Jesus R Capó; David A Perez
School: Christopher Columbus High School, **Region:** South Florida
Title: RecycloTrash: Barcodes vs CV

Students Name(s): Ann M Walton; Sneha Reddy
School: The Bolles School, **Region:** Northeast Florida
Title: Introduction of Mycorrhizae into Non-Mycorrhizal Plants: A Model to Reduce Phosphorous Fertilizer

Students Name(s): Kevin M Matos
School: The Villages Charter High School, **Region:** Big Springs
Title: Reinventing Photobioreactors: Eliminating Industrial Emissions While Producing Energy

Second Place

Students Name(s): Stefan Wan
School: Alexander W. Dreyfoos School of the Arts, **Region:** Palm Beach
Title: Functionalizing Biochar with Layered Double Hydroxides for Removal of Phosphate and Nitrate from Aqueous Solutions

Students Name(s): Omar Shareef
School: Saint Edwards School, **Region:** Indian River
Title: The Creation of an Autonomous, All-Electric Aquatic Vehicle, Powered by a Novel Power Regeneration System

Students Name(s): Elliot P Whitney
School: Palm Bay Magnet High School, **Region:** Brevard: South
Title: The Design and Construction of a Digital Water Quality Monitor for Use in the Indian River Lagoon

First Place

Students Name(s): Hamzah F Jhaveri

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Novel Agarose Processing Techniques: Development and Impregnation of Hyper-porous Agarose Emission Foam and Micro-cylindrical Agarose Particles

Grand Award Winner

Students Name(s): Hamzah F Jhaveri

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Novel Agarose Processing Techniques: Development and Impregnation of Hyper-porous Agarose Emission Foam and Micro-cylindrical Agarose Particles

Category Winners



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Senior Intelligent Machines, Robotics, & Systems Software

Recognition

Students Name(s): Alexander Pope

School: Pensacola High School, **Region:** West Panhandle

Title: Creating an Optimised Algorithm for EEG Wave Separation and an Accompanying Graphic Interface

Students Name(s): Antares Tobelem

School: American Heritage School, **Region:** Broward

Title: Patient Paperwork Portal

Honorable Mention

Students Name(s): Rishu Mohanka

School: Suncoast Community High School, **Region:** Palm Beach

Title: A Novel Computational Method for Early Detection of Coronary Artery Disease and Heart Attacks

Students Name(s): Alexander J Carnes

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Fight Cyberbullying Using Key Phrase Identification Software

Fourth Place

Students Name(s): Alexis M Base

School: Florida Atlantic University High School, **Region:** Palm Beach

Title: C.O.D.E for Invasive Species; Developing an Inexpensive Computer Operated Detection Environment for Identification and Eradication of Species Such as *Pterois volitans*

Students Name(s): Varun A Lakshmanan

School: South Fork High School, **Region:** Martin

Title: A Novel iOS Application : Measuring Blood Speed of the Radialis Indicis Artery

Third Place

Students Name(s): Garrett A Ellington

School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal

Title: How Accurate is EEG - Year 3

Students Name(s): Johnathan M Bressette

School: South Sumter High School, **Region:** Big Springs

Title: AARLink: The Future of Multi-GPUs?

Students Name(s): Rachel Auslander

School: Pine Crest School, **Region:** Broward

Title: Taking Steps to Ensure Safety: A Novel, Wearable, Accelerometric Device

Second Place

Students Name(s): Ruohan Wu

School: Spruce Creek High School, **Region:** Tomoka

Title: Utilizing Feature Extraction Algorithms and Machine Learning for the Diagnosis of Melanoma Skin Cancer

Students Name(s): Aidan F Ryan

School: Paul J. Hagerty High School, **Region:** Seminole

Title: Computer Vision as a Flight Stabilization System for Autonomous UAVs

First Place

Students Name(s): Amir A Helmy

School: Eastside High School, **Region:** Alachua

Title: Using Smart Phones to Capture and Analyze Heart Data

Category Winners



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Lakeland Center, Lakeland

Senior

Mathematics & Computational Sciences

Recognition

Students Name(s): Evan J Kirby

School: East Ridge High School, **Region:** Lake

Title: A Novel Solution for Integer Factorization with Cryptographic Applications

Students Name(s): Emma A Johnston

School: Manatee High School, **Region:** Lockheed Martin Manatee

Title: Hardy-Weinberg Principle: What Population Size Is Large Enough?

Students Name(s): Sumer S Sao

School: Trinity Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: An Analysis of Optimal Balance in a Dynamic System

Honorable Mention

Students Name(s): Elizabeth J Stone

School: Miami Country Day School, **Region:** South Florida

Title: Relative Entropy of Paintings

Students Name(s): Xuanhao Shi; Manning Chuor

School: Bartow High School - IB, **Region:** Polk

Title: X Degree

Students Name(s): Sreya Banik

School: Lincoln Park Academy, **Region:** St. Lucie

Title: Application of Chaos Game Representation of Genes to Measure the Predictability Using Random DNA Sequences to Determine if the Sequence is of Kinase or Phosphatase Protein

Fourth Place

Students Name(s): Autumn S Thompson

School: Strawberry Crest High School, **Region:** Hillsborough

Title: The Fourier Series Applied to Florida Beach Waves

Students Name(s): Jonathan P Sepulveda

School: Paul J. Hagerty High School, **Region:** Seminole

Title: Using Artificial Neural Networks to Predict Minimum Inhibitory Concentration of Candidate Antibiotics Against *E. coli* and *X. alfae*

Students Name(s): Grady G Daniels

School: Bartow High School - IB, **Region:** Polk

Title: An Exploration in Textual Analysis

Students Name(s): Angela K Sutton
School: Bayside High School, **Region:** Brevard: South
Title: An Application and Analyzation of Orbifold Based Chord Geometries

Third Place

Students Name(s): Anmol Warman
School: Academy at the Lakes, **Region:** Pasco
Title: Developing Novel Gene Candidates (MEF2A, LTA, LGALS2, ALOX5AP, and PDE4D), Through an Adaptive Genetic Algorithm, Support Vector Cluster, and Dynamic Bayesian Networks, to Analyze in a Learning Classifier System for a Highly Propitious CRISPR Therapy for Ischemic Heart Disease

Students Name(s): Lauren K Enten
School: Saint Thomas Aquinas High School, **Region:** Broward
Title: Improving Predictive Capabilities of Metastatic Breast Cancer Models Using a GRG Method

Students Name(s): Dahlia L Dry
School: Fort Myers High School, **Region:** Thomas Alva Edison
Title: Looking into the Past for Insight on the Future: Predictive Analytics and Data Science for Time Series Data

Second Place

Students Name(s): Kelly Van Woesik
School: Satellite High School, **Region:** Brevard: Intracoastal
Title: Home Ranges of Atlantic Great White Sharks - Phase II

Students Name(s): Muhammad U Abdulla
School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland
Title: A Stochastic Approach to the Identification of Heart Disease

First Place

Students Name(s): Mitchell A Hammack
School: Oviedo High School, **Region:** Seminole
Title: Early Skin Cancer Detection Using Convolutional Neural Networks - Year Two

Category Winners



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Lakeland Center, Lakeland

Senior

Microbiology

Recognition

Students Name(s): Jason A Kristol

School: Spanish River Community High School, **Region:** Palm Beach

Title: Placing the Misplaced *Purpurea*

Students Name(s): Elena Lopez-Belio

School: American Heritage School of Boca/Delray, **Region:** Palm Beach

Title: Plastic Drinking Bottles: A Haven for Microbial Growth

Students Name(s): Delaenam A Akahoho

School: Okeechobee High School, **Region:** Heartland

Title: To Resist or Not to Resist

Honorable Mention

Students Name(s): Angela Shar

School: Vanguard High School, **Region:** Big Springs

Title: Biowarfare: How Do Bacteriophages Lyse Bacterial Cells?

Students Name(s): Jackson R Driskell

School: Hardee Senior High School, **Region:** Heartland

Title: Does the Frequency of Ultrasonic Waves Affect the Growth of *Prorocentrum*?

Students Name(s): Samantha L Bates

School: Paul J. Hagerty High School, **Region:** Seminole

Title: The Effects of Multi-Walled Carbon Nanotubes (CNT) on the Viability of *Euglena gracilis*

Fourth Place

Students Name(s): Shreyas K Chetan

School: The Bolles School, **Region:** Northeast Florida

Title: Finding Optimal Concentrations and Solvents for Turmeric- A Fight against *Streptococcus pyogenes*

Students Name(s): Kathleen M McClellan

School: Bishop Kenny High School, **Region:** Northeast Florida

Title: Sterilization of Bacteria on Restaurant Menus to Reduce Cross Contamination

Students Name(s): Truman Roland

School: Citrus High School, **Region:** Citrus

Title: Monitoring the Varying Sensitivity, Initial Resistance, and Partial Acclimation of *Escherichia coli* to Fluoroquinolone, Aminoglycoside, and Aminopenicillin Antibiotic Agents

Students Name(s): Steven J Meikle; Bryce N Clark; Isha S Patel
School: Viera High School, **Region:** Brevard: Mainland
Title: Can *Halobacterium salinarium* Survive in Regolith Mars Simulants?

Students Name(s): Aksheta S Kanugnati
School: Carrollwood Day School, **Region:** Hillsborough
Title: DNA Damage Repair in *Saccharomyces cerevisiae* Model System Using Beta Carotene or Chitosan Nanoparticles

Third Place

Students Name(s): Kathryn L Richards
School: Sarasota High School, **Region:** Sarasota
Title: The Effect of Retinol, Thiamine, Ascorbic Acid, and Cholecalciferol on the Regeneration of Planarian and Neuron Corotic Mouse Stem Cells

Students Name(s): Cady C McGehee
School: Okeechobee High School, **Region:** Heartland
Title: The Performance of Lime, Chlorhexidine Gluconate Solution, Bleach Solution, and Aeration of the Soil Against *Mycoplasma bovis* in Recycled Sand Bedding - A Four Year Study

Students Name(s): Prerna Ravinder
School: Bartow High School - IB, **Region:** Polk
Title: Prevention is Better than a Cure

Students Name(s): Shreya K Reddy
School: Lincoln Park Academy, **Region:** St. Lucie
Title: Improving Health of Beneficial Insects through Ingestion of Nonpathogenic Indovirus

Second Place

Students Name(s): Asraa F Ahmed
School: Spruce Creek High School, **Region:** Tomoka
Title: Novel Treatment for Chronic Bacterial Infection: Potential Use of Caffeine in the Multi-compound Inhibition of N-Acylhomoserine Lactone (AHL)-Based Quorum Sensing in Chromobacterium Violaceum CVO26 in Vitro

Students Name(s): Griffin M Wagner
School: Vero Beach High School, **Region:** Indian River
Title: Investigating Synergistic Relationships of Environmental Salinity and Nitrate Levels on the Proliferation of *Anabaena variabilis*

First Place

Students Name(s): Trishala Kumar
School: American Heritage School, **Region:** Broward
Title: Inhibition of Bone Metastasis in MDA-MD-231 and PC-3 Cells by the Extracellular Adherence Protein of *Staphylococcus aureus*

Category Winners



62nd Annual State Science and Engineering Fair

March 28 - 30, 2017

Lakeland Center, Lakeland

Senior

Physics & Astronomy

Recognition

Students Name(s): Elijah Jackson

School: Bay Area Homeschool, **Region:** Three Rivers

Title: Drowning in Power

Students Name(s): Anabella Maria D Galang

School: HomeSchool, **Region:** Collier

Title: Sun's Shades: What Color Best Protects Against UV Radiation

Students Name(s): Hannah T Anderson

School: Indian Rocks Christian School, **Region:** Pinellas

Title: The Photonic Effect of an Optic Lens on a Photovoltaic Cell

Students Name(s): Desiree' Robinson

School: James S. Rickards High School, **Region:** Capital

Title: A Progressive Airfoil Study on the Convexity and Concavity of Wind Turbine Blades and Their Wind Resistance Efficiencies

Honorable Mention

Students Name(s): Esha M Patel

School: Oak Hall School, **Region:** Alachua

Title: The Generation of Renewable Energy from Mechanical Stress Exerted through Pressure

Students Name(s): Roshan Warman

School: Academy at the Lakes, **Region:** Pasco

Title: Cantilever Dynamics and Optimization in Atomic Force Microscopy

Students Name(s): Parker J Coye

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Fabrication of Graphene Based Single Electron Transistor with Chemically Transferred Graphene

Fourth Place

Students Name(s): Jackson A Cook

School: Niceville High School, **Region:** East Panhandle

Title: Real-Life Levitation: A study of the Correlation Between a Standing Wave's Number of Nodes and Wave Strength

Students Name(s): Kavitha Vudatha

School: Stanton College Preparatory School, **Region:** Northeast Florida

Title: Low Cost Patient-Nurse Communication System

Students Name(s): Jack Morrison
School: Strawberry Crest High School, **Region:** Hillsborough
Title: Fluid Dynamics and Hurricane Katrina

Students Name(s): Riley A Hogge; Alexis B Moreira
School: Fort Pierce Westwood High School, **Region:** St. Lucie
Title: Catching Waves

Students Name(s): Ethan Leung; Shaan Chaudhari; Jash Patel
School: Fort Myers High School, **Region:** Thomas Alva Edison
Title: Effects of Neodymium Magnetic Fields on Rhizochlonium Algae Growth

Third Place

Students Name(s): Noah R Ogburn
School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland
Title: Does Synthetic Sharkskin Affect the Properties of Lift on a b737d-il Airfoil?

Students Name(s): Giancarlo D Cabeza
School: Western High School, **Region:** Broward
Title: Stability Statistics

Students Name(s): Austin R Banttari
School: Central Florida Aerospace Academy of Kathleen High School, **Region:** Polk
Title: Linear Aspects- Exploring the Relationship between Aircraft Wing Aspect Ratio and Lift Generation

Students Name(s): Devon J Madden
School: Bayside High School, **Region:** Brevard: South
Title: Year Two: The Absorption of Space Radiation with Development in Shielding Materials

Second Place

Students Name(s): Zane T Forrester
School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal
Title: The Influence of Perovskite Layer Thickness and the Efficiency of a BiFeO₃ Solar Cell

Students Name(s): MaryAlice D Young
School: Bishop Kenny High School, **Region:** Northeast Florida
Title: Using a System of Electromagnetic Fields to Create a Cumulative Force that Simulates the Effects of Earth's Gravity in Outer Space

Students Name(s): Sarah M Weyand
School: Vero Beach High School, **Region:** Indian River
Title: Aliens and Explosions: How Supernovae Affect the Habitable Zones of Exoplanets

First Place

Students Name(s): Camille A Miles
School: Niceville High School, **Region:** East Panhandle
Title: Thermoelectric Generator Powered Tracking Concentrated Photovoltaic System

Grand Award Winner

Students Name(s): Camille A Miles

School: Niceville High School, **Region:** East Panhandle

Title: Thermoelectric Generator Powered Tracking Concentrated Photovoltaic System

Category Winners



62nd Annual State Science and Engineering Fair

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Lakeland Center, Lakeland

Senior

Plant Sciences

Recognition

Students Name(s): Gillian Carter

School: Spruce Creek High School, **Region:** Tomoka

Title: The Affect of Cigarette Smoke on Tomato Plants

Students Name(s): Alexi K Dong

School: Indian River Charter High School, **Region:** Indian River

Title: Exploring Electro-culture: The Effect of Varying Electrical Voltage, Duration, and Periodicity on the Growth of *Lactuca sativa*

Students Name(s): Rajat Ramesh

School: American Heritage School, **Region:** Broward

Title: Screening of Samples of Citrus Sinensis for Proteobacteria *Candidatus Liberibacter asiaticus* in Association with Citrus Greening

Honorable Mention

Students Name(s): Rohin Patel

School: Sebring High School, **Region:** Heartland

Title: DNA Barcoding of Unique and Rare Plants in the Lake Wales Ridge

Students Name(s): Miranda Bihler

School: Durant High School, **Region:** Hillsborough

Title: How Does Artificial Light Color Affect the Amount of Oxygen Produced in the Photosynthesis Process by Elodea Plants?

Students Name(s): Radhika U Desai

School: Lake Highland Preparatory School, **Region:** Dr. Nelson Ying Expo - Orange

Title: Using DNA Barcoding to Measure the Biodiversity of Moss Species in Wekiwa Springs State Park

Fourth Place

Students Name(s): Andrew Phillips

School: Seminole Ridge High School, **Region:** Palm Beach

Title: Cultivation of *Lolium multiflorum* in Martian Soil

Students Name(s): Megan M Zou

School: Ransom Everglades School, **Region:** South Florida

Title: Supercharged Plants to Fight Global Warming: Data Mining for Key Genes of Photosynthetic Acclimation to Climate Change

Students Name(s): Hannah N Lee

School: The Bolles School, **Region:** Northeast Florida

Title: Effectiveness of Water Hyacinth as a Fertilizer on Basil Growth

Students Name(s): Noah R Anuez
School: Fort White High School, **Region:** Suwannee Valley
Title: Are there Measureable Differences between GMO and non-GMO Plants?

Students Name(s): Ryan J Dunwoody
School: Palm Bay Magnet High School, **Region:** Brevard: South
Title: The Use of *Mycorrhizae* (fungi) to Increase the Health of *Zea mays* (corn) in the Brazilian Amazon, and Decrease Soil Deterioration

Third Place

Students Name(s): Ryan G Hardin
School: Union County High School, **Region:** Suwannee Valley
Title: Association Study for Rootability Traits on Populus Deltoides

Students Name(s): Julia G Canady
School: Lakeland Christian School, **Region:** Polk
Title: Weed Warfare: Investigating Allelopathy - Year 7

Students Name(s): Qiao Jiao
School: Canterbury School, **Region:** Thomas Alva Edison
Title: The Effect of Acid Precipitation on the Vascular and Endocrine System of Plants

Second Place

Students Name(s): Lily M Tucciarone
School: Edgewood Jr/Sr High School, **Region:** Brevard: Intracoastal
Title: Effect of Hydroponic Application of Thuricide on the Protein of Glycine Max Pods

Students Name(s): Pooja S Shah
School: West Shore Jr. / Sr. High School, **Region:** Brevard: Mainland
Title: The Effects of Reactive Oxygen Associated Molecules (ROAMs) on ROS Production and Growth in *Arabidopsis thaliana*

First Place

Students Name(s): Haniya Shareef
School: Lincoln Park Academy, **Region:** St. Lucie
Title: Molecular Characterization and Enhanced Efficacy of a Novel Host-Specific Bioherbicide Candidate for *Cyperus rotundus*

Grand Award Winner

Students Name(s): Haniya Shareef
School: Lincoln Park Academy, **Region:** St. Lucie
Title: Molecular Characterization and Enhanced Efficacy of a Novel Host-Specific Bioherbicide Candidate for *Cyperus rotundus*
