#### **Alachua**

#### **First Place**

#### **Junior**

Alexander I	-lsu	Lincoln Middle School	BEHA
J0212	Social Media's Impact	on Teenagers: FoMO, JoMO, and Stress	

#### **Fourth Place**

#### **Senior**

Nathan Wei		Buchholz High School	CHEM
S0514	<u> </u>	Veight Polystyrene Covalent-Adaptable Network	s for
Sophia Rong	Ermanong Flastio Rec	Buchholz High School	MACO
S1010	The Role of Cell-to-ce Modeling Approach	Il Transmission in HIV Infection: Insights from a l	Mathematical

#### **Honorable Mention**

#### Junior

Maggie Gao	Lincoln Middle School	EAEV	_
J0626	Effect of Fire Extinguisher Foam on Soil Quality	and Plant Growth	

#### Recognition

#### Junior

Thomas We	endling	Westwood Middle School	PHYS
J1222	How Do Different Heln Them?	net Materials Affect the Strength of an Impa	act Passed through

#### Senior

ENEV
Fertilizer through

#### **Third Place**

#### Senior

Akash Verma		Eastside High School	BMED
	Potential Harmful Effect	of Certain High-altitude Plant Extracts in Mitigatets Caused by High Levels of Deleterious Chemiing a Radiochromic Film Colorimeter Guided Ap	cals in Skin
Abhith Kasala		Gainesville High School	EAEV
	Microplastics on Danic	n: A Novel Investigation of the Ecotoxicological E o rerio (Zebrafish) Embryonic Development and A ne Morphology, and Organ Viability, a Holistic A	Assessing the

8 awards for Alachua Region

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# **Big Springs**

# **First Place Junior**

Miguel Secillano Howard Middle School

Now Boarding - A Scientific Simulation of Boarding a Plane J1005

#### **Senior**

Alynza McBride South Sumter High School **EAEV** 

MACO

S0608 Are Growth Rates of Pine Trees Affected by Depth to Ground Water?

#### **Fourth Place**

#### **Junior**

Avery K Great	thouse	Saint John Lutheran School	BMED
J0305	Crazy About Caffeine: magna?	What is the Effect of Caffeine on Heart Rate Usin	ng <i>Daphnia</i>
Sarah C Colle	y	The Villages Charter Middle School	CHEM
J0513	Molecular Gastronomy	/ & Medicine	
Delaney Peter	rson	The Cornerstone School	ENEV
J0806		Be Generated Using a Linear Solar Power System of the Florida Turnpike?	m Along the

#### **Honorable Mention**

#### **Junior**

Gerardo J Cardoso		Wildwood Middle High School	CMBI
J0404	Bacteria on Kitchen Sp	ongesWhich Method is Best	
Lily B Kosa		Wildwood Middle High School	EAEV
J0613	What Can Destroy the	Growth of Coffee Senna?	
Ryan Glatter-	Gotz	The Cornerstone School	IMRS
J0905	Distinguishing Betwee Teachers?	n AI and Human-Generated Text: A Challenge for	LA

#### **Senior**

Grace C Froel	ale	The Villages Charter High School	FAFV
Glace C Floei	IIC .	The villages Charlet High School	LALV
S0607 A Quantitative Study		f Microplastics in Freshwater Systems in Florida and their	
	Contribution to Micropl	astics found in the Ocean off the Gulf of Mexico	
Jose M Carva	jal-Beltran	Wildwood Middle High School	PHYS
S1204	Establishing a Possible	e Correlation between Variation of Thermodynami	cs and
	Corresponding Aerody	namics in Descent of Maple Samara Seeds: Yea	ır II
Jade A Collins	3	West Port High School	PHYS
S1205 Testing the Tensilit		Spider Silk in Comparison to Steel	

S1205

#### Recognition

#### **Junior**

Nolan D Kenn	nedy	The Villages C	Charter Middle School	EAEV
J0612	The Efficacy of Various Sustainable High-nutri		Transform Macroalgal	Sargassum Blooms Into a

#### **Second Place**

#### **Junior**

Brady W Klii	ne	The Villages Charter Middle School	PHYS
J1211	Which Type of Tape is	Objectively the Best?	

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Megha Sand	· ·	Osceola Middle School, Ocala	PHYS
J1212	What Angle of Trajed Farthest?	ctory and Fin Configuration will Allow a Rock	et to Travel the
Senior			
Camille A Du	ma	Vanguard High School	MACO
S1004		elis-Menten Rational Function Models, Para ations to Determine the Most Influential Fact	
Rishit Shaqui	ib	Vanguard High School	MICR
S1108	Bi-Directional Hygier	ne: Combating Nosocomial Infection with the	Microbiome
hird Place			
Junior			
Lillian M Fon		Saint John Lutheran School	ANIM
J0104	How can Predatory I Biological Control of	Mite Environments Be Improved to Increase Snake Mites?	Production for the
Abigail D Lac	ayo	Wildwood Middle High School	BMED
J0306	Enzyme Excellency	Year 2	
Jaycee G Woody		Wildwood Middle High School	PLNT
J1305	Phytoremediation: U	sing Plants to Remove Lead From Soil	
Senior			
Hannah G Ke	ennedy	The Villages Charter High School	BMED
S0309		colaou Tests Utilizing a Novel Cytobrush to ve Sample Collection	Reduce Acute Pair
Diana Gegaj		Vanguard High School	CHEM
S0503		zuki Cross-coupling Reaction Using Design Reaction Time, Temperature, and Catalyst Lo	•
Litian Zheng	,	Vanguard High School	CHEM
S0503		zuki Cross-coupling Reaction Using Design Reaction Time, Temperature, and Catalyst Lo	•
Shane Hoang		Vanguard High School	CHEM
S0504	Investigating the Via Substitute for Lithiun	bility of Molten Salt Batteries as a Sustainab n Ion Batteries	le and Effective
Raaghuv Nar	ndur	Vanguard High School	CHEM
S0504	Investigating the Via Substitute for Lithiun	bility of Molten Salt Batteries as a Sustainab n Ion Batteries	le and Effective
Vaughn Sirki	s	Vanguard High School	CHEM
S0504	Investigating the Via	bility of Molten Salt Batteries as a Sustainab	le and Effective

25 awards for Big Springs Region

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#### **Brevard: Intracoastal Division Grand Award Winner And First Place** Senior Dillen Scott Satellite High School **PHYS** A Novel Method of Calculating Air Shower Muon Half Life Using Time of Flight S1206 **Fourth Place** Junior Sidharth Patsamatla **IMRS** Edgewood Jr/Sr High School A Novel Artificial Intelligence Tool for the Detection of Cancer Towards Improved J0906 Radiotherapy via High Level Computer Vision and Image Segmentation Jaxon Hyczka Herbert H. Hoover Middle School MICR J1106 The Antibacterial Effectiveness of a Copper Nanoparticle Polymer Resin Senior Sara Mozdzen Edgewood Jr/Sr High School **EAEV** Understanding Water Spangles (Salvinia minima) Highly Invasive Nature by S0610 Comparing Population Growth and Nutrient Absorption with Common Duckweed ( Lemma minor), and Assess its Potential to Remediate Nutrient Polluted Waters. **Honorable Mention** Junior Rene Formoso Edgewood Jr/Sr High School **ENMS** J0710 R.O.D.A: Robotic Operating Discovery Arm DeLaura Middle School Zander Colangelo **PHYS** Electromagnetic Launch Systems J1216 Senior MACO Thanmay Kumar Edgewood Jr/Sr High School A Novel Analysis of Machine Learning Approaches in Aiding Glaucoma Identification S1006 Recognition **Junior** Rebecca Shackley Herbert H. Hoover Middle School **BMED** The Effect of Chitosan on Regeneration in Hydra littoralis J0309 Abigail McFarland Edgewood Jr/Sr High School **CHEM** Corrosive Coffee, Brew Methods and Freshness J0520 DeLaura Middle School MACO Jadyn Cross Designing a Turing Complete 8 Bit Computer J1007 Senior Peyton Prill Edgewood Jr/Sr High School **ANIM** Measuring the Effect of Urea on the Behavior of Amphibalanus eberneus S0109 Samantha Cohen-Pinsky Satellite High School Targeted Mutagenesis of the Arabidopsis Deoxyhypusine Synthase (DHS) Gene via S1311 CRISPR/Cas9 Enzyme Engineering; Generating an Increase in Carbon Sequestration and Photosynthetic Rate **Second Place**

#### lunior

#### **Junior**

Dominic Tosi Herbert H. Hoover Middle School BEHA

J0206 Learning to Learn or Learning to Teach?

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Aiden Wright		Herbert H. Hoover Middle School	CMBI
J0407	The Effect of Punica g	iranatum on <i>Drosophila melanogaster</i> (Year 2	2)
Griffin Kirby		Edgewood Jr/Sr High School	EAEV
J0618	A Bright Idea for Track	king Septic Wastewater Pollution	
Aswath Rajes	sh	DeLaura Middle School	ENEV
J0812	How Does Chitosan E	nhance the Properties of Bio-Plastic?	
Wesley Kette	ering	Herbert H. Hoover Middle School	PLNT
J1311	Sea Soak vs Sea Spra	άγ	

#### **Third Place**

# Senior

Jeremiah Fe	eizi	Satellite High School	BMED
S0313		ds: Investigating the Maintained Anti-Can pidan Against Adenocarcinoma Cultured T	
Jesse White	;	Satellite High School	CMBI
S0404		. Cell Treatment: Using Predesigned Lenti and Silence the Gene CLDN1	viral Plasmid Glycerol
Brianna Jon	es	Edgewood Jr/Sr High School	ENMS
S0709	Inhibiting the Ripening	and Infection of Crops Through Cold Pla	sma Treatment
Sharanya Na	atarajan	Edgewood Jr/Sr High School	ENEV
S0810	An Engineered Hub &	Spoke System to Seek and Destroy HAB	s (Yr-4)
Julia Cohen-	-Pinsky	Satellite High School	MICR
S1109	Extracting and Purifyir	ng <i>Apis mellifera</i> Venom for Use as an An	timicrobial Agent

22 awards for Brevard: Intracoastal Region

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#### **Brevard: Mainland**

#### **Division Grand Award Winner And First Place** Junior Sophie Schuh Viera High School **ENEV** Making a Better Rope Cutter for Entangled Whales J0817 **Fourth Place** Junior Corina Lane Johnson Middle School MICR Escherichia coli ATCC 25922 Colonies Isolated to Different Temperatures to See J1110 Which Will Reproduce the Most Senior Lavanya Natarajan Viera High School **IMRS** Autonomous Data Acquisition and Imaging System to Mitigate Fugitive Methane S0916 **Emissions in Landfills Emma Carpenter** Viera High School A Time-series Analysis of Period-doubling Bifurcations in Cepheid Variable Stars to S1015 Identify the Edge of Chaos James Egdorf Viera High School **PHYS** How Does the Application of a Free-Rotating Disk Design for Triboelectric S1213 Nanogenerators Compare to a Paper Based Design? Grayce Meredith Astronaut High School **PLNT** Does Grass Variety Impact Absorption of Fertilizer Runoff? S1323 **Honorable Mention** Junior **Delaney Hermes** Space Coast Jr/Sr High School **EAEV Breaking Down Ocean Acidification** J0633 Senior Jasmine Bohannon Rockledge High School **CMBI** A Novel Imaging Technique: Using Fluorescent Dyed Silica Nanoparticles in S0418 Identifying Leukemia Biomarkers Zaina Waldo Rockledge High School CHEM Using Dyed Silver Nanoparticles as a Novel Latent Fingerprint Testing Medium S0518 Recognition **Junior** Chase Nason Madison Middle School **ENMS** Construction Adhesives J0719 Second Place Senior Sophia Weiner Holy Trinity Episcopal Academy **ENMS** Detecting Myofascial Tightness in the Lower Extremities S0715 **RJ Zrallack** Titusville High School **ENEV** Engineering a Completely Biodegradable System of Microsorum Pteropus to S0820

# Third Place Junior

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Reverse Eutrophication in Leachate Canals that Lead into the Indian River

J1010 How to Test Peripheral Vision with an App

13 awards for Brevard: Mainland Region

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#### **Brevard: South Division Grand Award Winner And First Place** Senior Rushil S Shah West Shore Junior/Senior High School **BEHA** Understanding the Impact of Celebrity Endorsements on the Artificial Growth of S0222 Altcoins through a Multi-Level Latent Class Analysis and Software Based Approach **First Place Junior** Cydnee E Miranda West Shore Junior/Senior High School **EAEV** How Does Pestalotiopsis microspora React to Different Types of Plastic? J0641 Senior William A Held Heritage High School **CMBI** Determining an Optimal Carbon Source to Promote the Radiosynthetic Growth of S0423 Cladosporium sphaerospermum **Fourth Place** Junior Matthew G Grainger West Shore Junior/Senior High School MACO Tracking and Comparing Influenza Patterns J1013 Senior Basil M Salem Melbourne High School **IMRS** Utilizing Arduino to Develop a Haptic Virtual Interaction Glove S0922 **Honorable Mention Junior** Jayce E Clark West Shore Junior/Senior High School **BEHA** J0217 Do Discoid Roaches Prefer Peanuts, Dry Oatmeal, or Apples Best? Eshan Vipuil West Shore Junior/Senior High School **BMED** Comparing the Antimicrobial Resistance of Escherichia coli Using Different J0321 Antibacterial Methods through Inhibition Zones Over Time Senior Emma P Schaff **PLNT** Melbourne High School The Effects of Ocean Acidification on Halimeda opuntia S1331 Recognition Junior Dylan Siegal West Shore Junior/Senior High School **CHEM** Extracting Vitamin C from Potatoes Using Titration J0542 Senior Ava J Auter West Shore Junior/Senior High School **EAEV**

#### **Second Place**

S0632

#### Junior

Shoaib Ahme	d	West Shore Junior/Senior High School	MICR
J1112	Bacteria Growth in Dif	ferent Levels of Magnetic Fields	

Muck Accumulation and Nutrient Cycling within Salt Wedge Zones in the Indian River

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Lagoon: A Second Year Study

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Pranav Po	onnusamy	West Shore Junior/Senior High School	ENMS
S0720	3rd Eye: A Novel Emb	pedded System for Driver Attentiveness Moni	toring Using Data
	Fusion and Machine I	₋earning (Year 2)	

#### **Third Place**

#### Junio

Junior			
William J	Estevez	West Shore Junior/Senior High School	ENEV
J0820	Designing, Creating, a	and Testing a Multi-Purpose Wave Tank	
Senior			
Laya Dan	naraju	West Shore Junior/Senior High School	CHEM
S0530		Membrane-Wrapped Septenary High-Entro stothermal Osteosarcoma Treatment - Year 2	
Bianka A	Albert	West Shore Junior/Senior High School	IMRS
S0923	Radiologists to the De	ch for Early Diagnosis of Bronchogenic Carc etection and Classification of Lung Nodules i rom Patients' Thoracic CT Scans Implement Networks	n 3-Dimensional
Matthew '	W Krininger	West Shore Junior/Senior High School	PHYS
S1215	Development of a Ble	ed Based Aerospike Engine	

16 awards for Brevard: South Region

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#### **Broward**

# First Place Junior

Olivia Chung

American Heritage School

PLNT

The Effects of Vegetable Storage Methods on Plant Protein Concentration

Senior

Jacob Federici American Heritage School

PLNT

S1327 Mitigation of Decreased Protein Synthesis under Elevated Carbon Dioxide in

Arabidopsis thaliana

#### **Fourth Place**

#### **Junior**

	Adam Ginsbur	g	NSU University School	BMED
		How Does Temperatul Closing Wounds?	re Affect the Viability and Effectiveness of Suture	Threads when
	Christian Diez		Classical Conversations of West Plantation	ENMS
,	J0726	Which Bridge Has the	Greatest Load Bearing Capacity?	

#### **Senior**

0011101			
Melodi Fug	jate	American Heritage School	BMED
S0331	Transgenerational Effe Using <i>Caenorhabditis</i>	ects of the College Epidemic on Food A <i>elegans</i> as a Model	ddiction and Obesity
Hayley Hoo	des	Pine Crest School	BMED
S0332	Identifying MicroRNA 1 1q21 Amplification	Targets for Treatment of Multiple Myelo	ma with Chromosome
Alejandra A	Abramson	American Heritage School	ENMS
S0718	The Development of 3 Engineering	D-Printed Bio-Renewable Polymer Aqu	eous Solution for Tissue
Akansha M	lehta	American Heritage School	MICR
S1115		n Quenching Potential of Phytochemica Ita Extract on <i>Chromobacterium violace</i>	
Tyler Delga	ado	St. Thomas Aquinas High School	PLNT
S1328	Natural Plant Filtration	with Funaria hygrometrica and Phyllos	tachys edulis Cellulose
Nicholas S	elvaggi	St. Thomas Aquinas High School	PLNT
S1328	Natural Plant Filtration	with <i>Funaria hygrometrica</i> and <i>Phyllos</i>	tachys edulis Cellulose

#### **Honorable Mention**

#### **Junior**

S	Samuel Mays		NSU University School	ENMS
J	0723	inSPECTRO Gadget: Unknown Substances	Low-cost, Portable Raman Scatter Spectroscopy to	o Identify

#### **Senior**

Maya Neer	anjun	American Heritage School	IMRS
S0920	Deep Learning Autom	ated Segmentation of Left Atrium in Ca	ardiac MRI for Atrial
	Fibrillation: a Benchm	ark Study of State-of-the-Art Methods	

#### Recognition

#### **Junior**

Ivan Kalash	nnykov	American Heritage School	PLNT
J1326		t Preservation Types on the Nutrient Volume of	f Microgreens
	Grown in Different Sub	ostrates	

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#### **Second Place**

#### **Junior**

Alexa Shamus		Pembroke Pines Charter Middle School	BMED
J0320 Th	he Influence of Sneal	ker Type on Eighth and Ninth Graders' Gait	
Maximus Callis		American Heritage School	ENMS
Al	luminum, Quasi-Isotr	Type on Energy Absorption when Testing 3000 opic Carbon Fiber, and Self-Reinforced Polypro Custom Impact Testing Machine	

#### **Senior**

Calvin Math	new	American Heritage School	CHEM
S0522	3D Printing Personaliz	zed Knee Implants: Novel Computationa	I Geometric Models for
	Stem Cell Regeneration	on in Meniscus Tears	

#### **Third Place**

#### **Junior**

S1116

Sohail Hai		American Heritage School	BMED
J0316	The Correlation of Ele	vated Spermine Levels and the Incidence of	Pancreatic Cancer
David Alber	tini	Classical Conversations of West Plantation	ENMS
J0727	Let There Be Light: The	ne Solar-Faraday Flashlight	
Senior			
Emma Delg	jado	American Heritage School	BEHA
S0221	, ,	Time Periods of the Intermittent Metabolic Sw Behavioral Abilities of Mutant <i>Drosophila mela</i> ptic Neuroplasticity	• ,
Adelmo Mo	rrison Orozco	Cypress Bay High School	CHEM
S0521	Iron Cross-linked Algi	nate Beads for the Photosensitive Release of	Fertilizer
Zoe Reisma	an	Cypress Bay High School	CHEM
S0521	Iron Cross-linked Algi	nate Beads for the Photosensitive Release of	Fertilizer
Anik Bora		American Heritage School	EAEV
S0628	Creating a Drought Pr	ediction Model Using Convolutional Neural N	etworks
Sina Stefan	ios	St. Thomas Aguinas High School	MICR

Action Mechanisms of Acne Medications Modeled by Mycobacterium smegmatis

23 awards for Broward Region

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# Capital

#### **Fourth Place**

#### **Senior**

Divya S Vemireddy James S. Rickards High School ENEV

S0816 Al Designed Rover That Uses Object Detection to Identify and Collect Trash Off

Ocean Floors

#### **Honorable Mention**

#### Senior

Kavyashre	ee Kadhirvelu	James S. Rickards High School	CHEM
S0513		lysis and Prediction of Bio-Oil Quality Usived from FT-ICR MS	sing Molecular
Navya S Kommu		James S. Rickards High School	MICR
S1113 Metagenome Assemble Bioremediation		led Genome (MAG) As a Tool to Better	Understand Uranium

#### Recognition

#### **Junior**

Angela M (	Curry	Trinity Catholic School	ANIM
J0109	The Amazing Catch		
Evan C Tal	kacs	Christ Classical Academy	ANIM
J0110	Is Wildlife More Active	During a Full Moon?	

#### Senior

Caroline E Co	ouch	Maclay School	ANIM
S0114	The Predictive Value of Rupture in Dogs	of Tibial Plateau Angle for Risk of Cranial Cruciate	Ligament
Heewon Seo		Lawton Chiles High School	EAEV
S0615	Predicting and Evalua Machine Learning	ting Water Quality in Areas Affected by Tropical C	yclones Using
Arib M Syed		Lawton Chiles High School	EAEV
S0615	Predicting and Evalua Machine Learning	ting Water Quality in Areas Affected by Tropical C	yclones Using
Leah G Kiros		Maclay School	MACO
S1009	Defining and Modeling	Nuclear Migration in the Early Drosophilia Embry	0

#### **Second Place**

#### **Senior**

Shaoyang Ma	a	Lawton Chiles High School	BMED
S0320	Exosome Biogenesis	of Human Stem Cells Regulated by So	calable Bioreactors

#### **Third Place**

#### **Junior**

Keya K Pa	tel	Maclay School	PHYS
J1220	The Inverse Space Le	idenfrost Effect	
Emmie B k	Kutter	Maclay School	PHYS
J1221	Fingerprinting an Indiv	idual Cello Using an Algorithm with Four	ier Analysis
Ana C Bou	ıchard	Christ Classical Academy	PLNT
J1316	Hypochlorous Acid an	d Seedlings	
Leanna J k	Kitchen	Community Leadership Academy	PLNT
J1317	Under Pressure: Does	it Help Plants?	

#### Senior

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Shiv P Patel Maclay School CMBI

S0410 Characterization of Lung Cancer Mechanosensation

15 awards for Capital Region

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#### Citrus

iti us			
Honorable Mo	ention		
Junior			
Dean Grace	;	Saint John Paul II Catholic School	EAEV
J0619	Nature's Fertilizer		
Zachariah C	Clayton	Citrus Springs Middle School	PHYS
J1217	Musical Flames		
Senior			
Jahnavi Kor	mpella	Lecanto High School	BMED
S0314	Combination Therapy	's Effect on Biofilm Production in Patients	with Pneumonia
Kaithlyn Jar	naludin	Lecanto High School	CHEM
S0509	Relationship between Meat	Carbon Dioxide Levels and the Spoilage	Time of Bos Tauru

# Recognition

# Senior

Ananya Pada	a	Lecanto High School	BEHA
S0210	Are Common Memory	Supplements "Lion" to Us?	

# **Third Place**

#### **Senior**

Nandini K	aranam	Lecanto High School	MICR
S1110	Natural Herbal Remed Commonly Found in V		eatments Against Bacterial Species

6 awards for Citrus Region

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# **Clay Rotary**

#### **Fourth Place**

#### **Senior**

Nha-Thanh Duong Ridgeview High School CHEM

S0524 Titanium Bonds: A Study of the Efficacy of Varied Surface Preparation Methods on

Titanium Substrates for Optimized Structural Adhesion

#### **Honorable Mention**

#### **Senior**

Alexander James Gordon Ridgeview High School IMRS S0925 Motion Profiling Algorithm for Improved Intelligent Machine Target Correction

#### Recognition

#### **Senior**

Phoenix Ar		ah Ricketts	Ridgeview High School	CMBI
	S0425	Cellulose Isolation from Treatment	m Sorghum Bicolor Biomass via Alkaline, Hydroge	n Peroxide
	Dylan R Barc	lay	Orange Park High School	CHEM
	S0525	Poseidon's Wind		
	Angelo De La	Rosa	Ridgeview High School	IMRS
			cluding Usage of Deep Learning Algorithms, 3-Ch Gyroscopic Technologies to Assist the Visually Imp	

#### \_

# Third Place Junior

Hajun Joshua Chun		Orange Park Junior High School	IMRS
J0914	Robot Wheels Eff	ect on Agility and Accuracy	
Antonio B	enjamin Estrada	Orange Park Junior High School	IMRS
.10914	Robot Wheels Eff	ect on Agility and Accuracy	

7 awards for Clay Rotary Region

Surroundings Identification

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#### Collier

#### **First Place** Junior Santiago Hernandez Golden Gate Middle School CHEM J0504 Water Fountain Impurities Sarah Dabees North Naples Middle School **PHYS** Harnessing Waste Energy Using Thermoelectric Generators J1202 **Fourth Place Junior** Alex Ewy North Naples Middle School **EAEV** How Varying Levels of Urbanization Increase or Decrease Carbon Dioxide Levels J0604 Lavya Patel Oakridge Middle School **PHYS** Something From Nothing! J1201 Rocco Sammartino Gulfview Middle School **PHYS** Battle of the Brands J1205 Senior **Brad Malick-Beltran** Barron Collier High School **ENEV** S0804 3D Printing Biodegradable, Environmentally Friendly, Slow Sinking, Lipless Crankbaits to Match the Fall Rate of the Market Standard Recognition **Junior** Oliver Schwartz Pine Ridge Middle School CHEM The Difference of pH Between Several Apple Cultivars J0506 Jack Pustizzi Oakridge Middle School **PHYS** J1204 Magnetic Coaster Launch Systems Second Place Junior Aarohee Dabas Oakridge Middle School CHEM Effect of Using Different Leavening Agents on Cookies J0505 Senior Colin Briggs Gulf Coast High School **IMRS** Quiver: Creating an Improved Efficacy Java Cybersecurity Library by Optimizing S0906 Application Based Programming Interfaces and Parameterizing Cryptographic Functions of Existing Packages **Third Place Junior** Melina Parris North Naples Middle School **PHYS**

#### 11 awards for Collier Region

J1203

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Harnessing Solar Energy to Make a "S'moretacular" Dessert

# Dr. Nelson Ying Expo - Orange

Nivision Gran	d Award Winner And	d First Dlaco	
Senior	a Award Winner And	a First Place	
Atreya Mana		Orlando Science High School	ANIM
S0122		y of Novel Volatile Beer Blend and Couma eatment within Honey Bee Hives, Year 4	phos Acaricide for
Tiffani Gay		Orlando Science High School	IMRS
S0926	5 5	DAR Navigation System with Haptic feedba e Visually Impaired, Year II	ack, Bluetooth and
ourth Place			
Junior			
Aanvi Mathur		Orlando Science Middle School	BMED
J0322	against Ultraviolet Rad	Smart Sunscreens as Compared to Tradition diation Using Bacteria as a Skin Cell Mode	el
Yuthika Pani		Orlando Science Middle School	EAEV
J0642	The Effect of Soil Perr	meability on Water Filtration	
Aditi Swain		Orlando Science Middle School	ENEV
J0821	Generating Electricity	from Food Waste	
Paxton Boaz		International Community School	MACO
J1014	2 for 1: Yes or No		
lonorable Me	ntion		
Junior			
Adrian Jose	Alvarez	Lockhart Middle School	ENMS
Adrian Jose / J0731		Lockhart Middle School axis Tracking Systems	ENMS
			ENMS
J0731	Single-axis and Dual-		ENMS
J0731 <b>Senior</b>	Single-axis and Dual-a	axis Tracking Systems	ANIM
J0731 Senior Megan Nguy	Single-axis and Dual-a enha Vu How Varying Toxicitie <i>melanogaster</i>	axis Tracking Systems  Trinity Preparatory School	ANIM
J0731 Senior Megan Nguy	Single-axis and Dual-a enha Vu How Varying Toxicitie <i>melanogaster</i> Bhatheja	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense I	ANIM mpact <i>Drosophila</i> ENEV
Senior  Megan Nguy S0121  Aayna Rohit	Single-axis and Dual-a enha Vu How Varying Toxicitie <i>melanogaster</i> Bhatheja Hybrid Clay Films with	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense I	ANIM mpact <i>Drosophila</i> ENEV
J0731  Senior  Megan Nguy S0121  Aayna Rohit S0824	Single-axis and Dual-a enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV
J0731  Senior  Megan Nguya S0121  Aayna Rohit S0824  Genesis Cely	Single-axis and Dual-acenha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV
J0731  Senior  Megan Nguyo S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition	Single-axis and Dual-acenha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical
J0731  Senior  Megan Nguy S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition Junior	enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with The Novel Developme Packaging and Tempe	Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Pharerature Monitoring	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical
J0731  Senior  Megan Nguyo S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition Junior  Keerthi Karri	enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with The Novel Developme Packaging and Tempe	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical
J0731  Senior  Megan Nguye S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition Junior  Keerthi Karri J1331  Senior	enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with The Novel Developme Packaging and Tempe The Efficiency of Diffe	Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare erature Monitoring  Orlando Science Middle School erent Amounts of Ayurvedic Medicine for N	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical
J0731  Senior  Megan Nguyi S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition Junior  Keerthi Karri J1331	enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with The Novel Developme Packaging and Tempe The Efficiency of Diffe Lettuce Plants	axis Tracking Systems  Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical  PLNT ourishment of Your
J0731  Senior  Megan Nguyi S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition Junior  Keerthi Karri J1331  Senior  Kate Elizabet S0526	enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with The Novel Developme Packaging and Tempe The Efficiency of Diffe Lettuce Plants	Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare erature Monitoring  Orlando Science Middle School erent Amounts of Ayurvedic Medicine for N Trinity Preparatory School	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical  PLNT ourishment of Your
J0731  Senior  Megan Nguye S0121  Aayna Rohit S0824  Genesis Cely S0825  Recognition Junior  Keerthi Karri J1331  Senior  Kate Elizabet S0526	enha Vu How Varying Toxicitie melanogaster Bhatheja Hybrid Clay Films with The Novel Developme Packaging and Tempe  The Efficiency of Diffe Lettuce Plants  th Martyny What Is the Protective	Trinity Preparatory School s of Agarwood and Sandalwood Incense In Lake Highland Preparatory School n Antimicrobial Efficacy for Treating Burns Trinity Preparatory School ent of a Bio-Based Smart Material for Phare erature Monitoring  Orlando Science Middle School erent Amounts of Ayurvedic Medicine for N Trinity Preparatory School	ANIM mpact <i>Drosophila</i> ENEV and Wounds, Year ENEV maceutical  PLNT ourishment of Youn

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Honey Bee Colonies

Abigail Merch	ant	Orlando Science Middle School	IMRS
J0915	The Mindful Arm		
Senior			
Anay Rajesh	Shah	Lake Highland Preparatory School	CMBI
S0426	Examining Endothelia Healing Purposes	l Cell Migration in the Presence of Magnetic Fields	for Wound
Aryan Pathak		Lake Highland Preparatory School	PHYS
S1218	Extending the Analysi Webb Space Telesco	s of TNO Data to Longer Wavelengths in Advance pe Data	of James
Third Place			
Junior			
Shishir Sajja		Orlando Science Middle School	CHEM
J0543	Which Artificial Sweet	ener Does Yeast Grow Best in?	
Ragini Nayak		Orlando Science Middle School	MICR
J1113		Extracts from Natural Antibacterial Substances at E Fluorquinolones on <i>E. coli</i>	Eliminating
Senior			
Ece Sarioglu		Lake Highland Preparatory School	BEHA
S0223	Analyzing Search Gui	dance from the Relative Arrangement between Ob	jects
Krithik Seela		Lake Highland Preparatory School	BMED
S0339	Using Artificial Intelligand Analyze Drug Re	ence Graph Neural Networks to Repurpose Pre-ex lationships, Year 3	isting Drug
Noah Anders	on Hall-King	West Orange High School	MACO
S1021	A Novel Model for Re	actor-Grade Crystalline Nuclear Fuel	
Anthony Jam	es Miceli	Trinity Preparatory School	PLNT
S1333	The Effects of <i>Rhizob</i> Martian Regolith	ium leguminosarum Inoculation on Pisum sativum	Grown in

22 awards for Dr. Nelson Ying Expo - Orange Region

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# **East Panhandle**

Honorable Me Junior	ntion		
Kyle Sposato	)	Saint Mary Catholic School	PLNT
J1324	Polluted Plants!		
Recognition			
Junior			
Hailey Nutt		Rocky Bayou Christian School	CHEM
J0537	What Fabric Can with	stand Washes with a Darker Color?	
Sierra Neitzk	е	Okaloosa STEMM Academy	ENEV
J0818	Bioplastics: Strength E	Battle	
Senior			
Summer Hou	ise	Magnet Innovation Center - South Walton High School	ENMS
S0716	What Is the Best Wind		
Zoe Orange		Paxton High School	ENEV
S0821	Χωρ?ς Χ?μα β: A Rea Nutrient Additive to So	listic Solution to the 2050 Soil Crisis and Possible oil on Mars	Use for the
Aurora Mend	enhall	Niceville High School	MACO
S1016	Folding the Future: An Geometry	Innovative Approach to Solving the Supply Chain	Crisis with

6 awards for East Panhandle Region

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#### Havens

Fourth Place	9		
Senior			
Henry Jiar	ng	North Bay Haven Charter	IMRS
S0911	Batstick: Ultrasonic	Smart Walking Aid	
Walker Ve	renakis	North Bay Haven Charter	IMRS
S0911	Batstick: Ultrasonic	Smart Walking Aid	
Honorable M	<b>l</b> ention		
Junior			
Rohan Ro	st	Bay Haven Charter Academy	BMED
J0324	The Effect of Differ	ent Sugars on the Growth of Planaria	
Sophia To	rres	University Academy - Charter	CMBI
J0406	Yeast Feast		
Emma Wir	ndsor	University Academy - Charter	CMBI
J0406	Yeast Feast		
Recognition			
Junior			
Valerie Do	wning	Bay Haven Charter Academy	EAEV
J0615	Seatastic Plastic		
Alina Beed	ch	University Academy - Charter	EAEV
J0616	Seagrass Health (F	Phase II)	

7 awards for Havens Region

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# Heartland

Fourth Place			
Junior			
Caroline Corr		Hardee Junior High School	CHEM
J0527	Does the Type of Pota Affect the Size of the I	assium Applied Foliarly to <i>Capsicum annuum</i> (bell Pepper?	peppers)
Anderson Gra	*	Hardee Junior High School	PLNT
J1313	Does a Redworm's (L Seeds?	umbricus rubellus) Diet Affect the Rate of Germina	ation for
Senior			
Jenna Larsor		Okeechobee High School	ANIM
S0112		airy Cattle: Evaluating Milk Production of Lactatin Bulls with and without the SLICK Gene: A Third Ye	
Angela Huan	—	Sebring High School	CMBI
S0407		on and Immune Cell Presence as Hallmarks of the on in Colorectal Cancer - Year 2	e Epithelia
Jackson Hold	comb	Okeechobee High School	EAEV
S0613	Growing More with Le	ss: The Effect of Microbes on Fertilizer Efficiency	
lonorable Me Senior			
Laina Canary		Hardee Senior High School	EAEV
S0612	Have Microplastics in		
Emma Jane		Hardee Senior High School Method of Molasses Affect the Brix in <i>Citrullus lan</i> d	PLNT
Recognition Senior			
Jenna Johns	ton	Okeechobee High School	PLNT
S1315	Microgravity and its Ef	fect on Plant Growth	
Second Place			
Senior			
Jasmine Des		Okeechobee High School	BMED
S0319		Change on <i>Drosophila melanogaster</i> when on Die atrol), a Second Year Study	etary
Third Place			
Junior			
Cooper Nolte		Yearling Middle School	CHEM
J0529	Homemade Hydrogen	: The Effect of Voltage on Electrolysis	
Janelle McDu		Hardee Junior High School	PLNT
J1315	Does the Type of Med basilicum) Production	lia Affect the Growth and Yield in Potted Basil ( <i>Oc</i> ?	rimum
Senior			
Brady William	nson	Okeechobee High School	PLNT

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# 12 awards for Heartland Region

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#### Hernando

Fourth Place Junior			
Colton Harrin		Challenger K8 School of Science and Mathematics	CHEM
J0531	Power of Mud: The Ef Production	fect of Compost Tea, Banana Water, and Tap Wa	ater on MFC
Theodore Tol	ler	Challenger K8 School of Science and Mathematics	EAEV
J0632	The Effect of Land De Florida Forest Preserv	velopment on Native <i>Tillandsia spp.</i> in the Univer ve	sity of South
Emily Harrin		Challenger K8 School of Science and Mathematics	PLNT
J1319	Water Matters!: The E	ffect of Water pH on Grass Growth	
Bryce Nagel		Challenger K8 School of Science and Mathematics	PLNT
J1320	The Effects of Ultravio	let Radiation on the Growth of Plants	

#### **Honorable Mention**

#### **Junior**

Kathryn S	harkey	Challenger K8 School of Science and Mathematics	EAEV
J0631	Algae Adversary: The Blooms	Effects of Competition for Nutrients on the Sever	ity of Algal
Callen Mo	ynihan	Challenger K8 School of Science and Mathematics	PHYS
J1225	How Does the Tempe	rature of Steel Affect Its Malleability?	

# Recognition

# Junior

Elijah Gibson		Challenger K8 School of Science and Mathematics	PHYS
	On the Road Again: The Incline and on a Declir	he Effect of Weight Distribution on the Speed of a he	Vehicle on an

#### Senior

Harsh Meht	a	Frank W Springstead High School	PHYS
S1208	Discrepancies in Exop	olanetary Data	

8 awards for Hernando Region

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#### Hillsborough

S0636

#### Fourth Place Junior Rhea Varma Williams Middle Magnet School **BEHA** Psychology of Competitiveness J0220 **Honorable Mention** Junior Nitin Kurup **IMRS** Williams Middle Magnet School **COVID Complication** J0916 Suma Gunupati Benito Middle School **PLNT** The Effects of Fertilizer on Different Types of Rice Grains J1333 Senior Deshna Pal Strawberry Crest High School **ENMS** Real Time Implementation of Eye Tracking Cursor S0723 Recognition **Junior** Matthew Durham Stewart Middle School **ENMS** How Does the Type of Metal Affect the Strength of It as an Electromagnet J0734 Senior Vito Nicolaci **Durant High School** ANIM S0126 Impact of the Salvator merianae on Native Gopherus polyphemus Population **Densities** Mollie Usher **Durant High School ANIM** S0126 Impact of the Salvator merianae on Native Gopherus polyphemus Population **Densities CHEM** Lydia Linares Strawberry Crest High School To What Extent Does the Addition of Bisphenol A into an Aquatic Environment Affect S0529 the Efficiency of the Consumption of Calcium in Halimeda opuntia? Erik Dyer Newsome High School **ENEV** Reinventing Strategies of Domestic Cooking to Curtail Carbon Monoxide Exposure in S0828 **Developing Countries** Findlay Hartman Newsome High School **ENEV** Reinventing Strategies of Domestic Cooking to Curtail Carbon Monoxide Exposure in S0828 **Developing Countries** Rudra Patel Middleton High School Using an Electroenchephalogram and a Transcutaneous Electrical Nerve Stimulation S0929 (TENS) Unit to Develop a Noninvasive Neuroprosthetic for Quadriplegic Patients **Second Place** Junior Williams Middle Magnet School **CMBI** Tanishka Aglave An Eco-Friendly Alternative to Chemical Herbicide - A Sustainable Approach for the J0417 Amaranthus palmeri Weed Control Using Novel Bio-Herbicide and Analyzing its Efficacy through NDVI/NDRE Vegetation Indexes through RapidScan CS45 Hand Sensor Device Senior Suchi Patel Middleton High School **EAEV**

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Novel 3D Multiplex Bioprinting Approach for Restoration of Coral Nurseries Utilizing

CRISPR/Cas9-mediated Genome Editing of Symbiodinium Microadriaticum

#### **Third Place**

#### Junior

Julioi			
Swara Patel		Carrollwood Day School	MICR
J1114		termine an Ideal Substrate Ratio for a Martian In-s ng Cyanobacteria (Year 3)	situ Resource
Senior			
Daniel Park		King High School	EAEV
	Foxfire Fungi: The Effe Panellus stipticus	ect of Lead Oxide Amounts on the Bioluminescen	ce Intensity of
Anika Prasad		Strawberry Crest High School	MACO
S1024	Analysis and Prediction	n of Breast Cancer Using Machine Learning Appr	oach

16 awards for Hillsborough Region

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#### **Indian River**

ndian River			
Fourth Place			
Junior			
Jack Curley		Saint Edward's Upper School	ENEV
J0803	Carbon Capture		
Cesar Dato-	Slattery	Saint Edward's Upper School	ENEV
J0803	Carbon Capture		
Nicholas Ru	mmel	Saint Edward's Upper School	ENEV
J0803	Carbon Capture	_	
Senior			
Elizabeth De	Schouwer	Vero Beach High School	MICR
S1104	Identifying, Cloning, a	nd Validating a Lysin Gene into <i>E. coli</i>	
Kailee Webs	ter	Vero Beach High School	PLNT
S1306	Repopulating <i>Halodul</i> Problem	le wrightii in the Indian River Lagoon: Getting to the	e Root of the
Honorable Me Junior	ntion		
Harper Hall		Sebastian River Middle School	MICR
J1103	Can't Touch This!		
Recognition Junior			
Payton Kapl		Sebastian Charter Junior High School	CHEM
J0515	Marvelous Milk Altern	atives	
Uma Crisafu		Gifford Middle School	ENEV
J0802	From Food Scraps to	Fuel	
Gianna Laur	en D'Elia	Storm Grove Middle School	MICR
J1102	Moss vs Lichen: Which	ch Has More Tardigrades?	
Senior			
Addison Log	emann	Saint Edward's Upper School	MICR
S1105	The Effect of Tempera	ature and Nutrients on the Concentration of Dinofla	igellates
Second Place			
Second Place Junior			
		Storm Grove Middle School	EAEV
Junior	n	Storm Grove Middle School eans: The Effects of Salinity on Rate of Thermal Ex	
Junior Ariana Bolto	n An A-Salt on Our Oce		
Junior Ariana Bolto J0606	n An A-Salt on Our Oce es	ans: The Effects of Salinity on Rate of Thermal Ex	pansion
Junior Ariana Bolto J0606 Gianna Dyke J1303	n An A-Salt on Our Oce es	eans: The Effects of Salinity on Rate of Thermal Ex Sebastian Charter Junior High School	pansion
Junior Ariana Bolto J0606 Gianna Dyke J1303 Third Place	n An A-Salt on Our Oce es	eans: The Effects of Salinity on Rate of Thermal Ex Sebastian Charter Junior High School	pansion
Junior Ariana Bolto J0606 Gianna Dyke J1303	n An A-Salt on Our Oce es	eans: The Effects of Salinity on Rate of Thermal Ex Sebastian Charter Junior High School	pansion
Junior Ariana Bolto J0606 Gianna Dyke J1303 Third Place	n An A-Salt on Our Oce es Vermiponics: Wiggly \	eans: The Effects of Salinity on Rate of Thermal Ex Sebastian Charter Junior High School	pansion

13 awards for Indian River Region

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#### Lake

#### **Honorable Mention Junior** Sophie Barr Modern Schoolhouse **ENEV** Water You Waiting for? Let's Filter It! J0807 Recognition **Junior** James Do Lake Pointe Academy **PLNT** The Effects of Fertilizer on Elodea Plant Growth and its Implication on Algae Growth J1306 **Senior** Ayla Sevilleno Mount Dora High School **BEHA** Mozart and the Art of Concentration S0208

Mount Dora High School

Questionaire on Cardiocascular Health in Relation to Diet - Year 2

Screening an Underrepresented Demographic, Lake County, through a Cumulative

**BMED** 

4 awards for Lake Region

Niya Patel

S0312

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# **Manatee STEM Competition**

#### **Fourth Place**

#### Junior

Kinley McC	Caw	Dr. Mona Jain Middle School	ANIM
J0108	How Are Fruit Fly Offs	spring Impacted by Climate Change?	

#### Recognition

# Junior

Malachi Summer	Martha B. King Middle School	MICR
----------------	------------------------------	------

J1109 Bro, Wash Your Face!

2 awards for Manatee STEM Competition Region

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#### Martin

#### **First Place**

#### **Junior**

Nina Goyal Hidden Oaks Middle School CMBI A New Weed Management Strategy: RNA Interference Modification of Phytoene J0402 Desaturase (PDS) And 5-Enolpyruvyshikimate-3-Phosphate Synthase (EPSP) to

Control Purple Nutsedge (Cyperus rotundus)

#### **Senior**

Nira Goyal Martin County High School **PLNT** Quantification of Macrophomina phaseolina Survival after Organic Soil Treatments S1305 Under Multiple Temperature Regimes

#### **Honorable Mention**

#### **Junior**

Kira Lawle	ess	Saint Joseph Catholic School	ANIM
J0103	Superworms		

#### Recognition

#### **Junior**

Samuel Calho	oun	Saint Joseph Catholic School	ENEV
J0825	Solar Power in the Sur	nshine State	

#### **Senior**

Varun Singh		South Fork High School	ENMS
S0704	Self Filling Water Bottl Conditions)	le Using the GWAC(Generation of Wa	ater using Atmospheric

#### **Third Place**

#### **Junior**

_				
	Elliana Lovatt		Stuart Middle School	ENEV
	J0801	St. Lucie Inlet Sand De	eposition	

6 awards for Martin Region

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#### **Monroe**

# **Division Grand Award Winner And First Place**

#### **Junior**

Parks Meadow Dunn Plantation Key School PLNT

J1329 Microgravity vs Seed Germination

#### **Fourth Place**

#### **Junior**

Taylor Thomason Sugarloaf School ENMS

J0729 Sorbent Oil Spills

#### **Honorable Mention**

#### Senior

Mia Milchman		Coral Shores High School	PLNT
S1330	Rhizophora mangle Gi	rowth in Sunscreen	

#### Recognition

#### **Junior**

Carol Alva	rez	Sigsbee Charter School	EAEV
J0640	Can't Flush This		
Samara Q	. MacDonald	Sigsbee Charter School	EAEV
J0640	Can't Flush This		

#### **Third Place**

#### **Senior**

Nina Bowen	k	Key West High School	PLNT
S1329	The Effect of Aeration o	on Algal Blooms by Agricultural Runoff	

6 awards for Monroe Region

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#### Northeast Florida

Matthew E Salek

S1210

#### First Place **Junior** Marco A Chua St. Paul's Catholic School - Riverside **EAEV** Wave Force Dissipation: Year Two J0627 **Fourth Place** Senior Kristi Biswas Paxon School for Advanced Studies **BMED** Elucidating TDP-43's Role in SYT7 Cryptic Exon Inclusion Reveals Novel Insights on S0325 ALS/FTD Pathology William B Li Stanton College Preparatory School **CMBI** Investigating the Factors for p120 Catenin and PLEKHA7 Co-localization at the S0411 Adherens Junctions Yangying Jiang Stanton College Preparatory School ABCA7 Deficiency Disturbs Mitochondrial Properties in hiPSC-derived Neurons and S0414 Mouse Synaptosomes William R Rosenberg Episcopal High School MACO Use of Unsupervised Machine Learning Algorithms to Identify Shared Bacteriophage S1012 Genomic Regions **Honorable Mention Junior** Arnav Khanolkar Julia Landon College Preparatory Middle School **ENMS** Optimization of Photovoltaic Cell Performance using Static and Dynamic Orientation J0716 Models Senior Sara M Wasserman The Bolles School **BMED** Effect of Anti-Inflammatories on the Growth and Treatment of Breast Cancer Cells S0326 Nia E Atcherson Episcopal High School **CMBI** Role of ANGPTL4 in Regulation of Alpha-Synuclein Gene Expression S0415 Jacob Hobensack Bishop Kenny High School **EAEV** Alum Effectiveness for Improving Water Quality S0617 Parthiv T Reddy Episcopal High School **MICR** The Effect of UV Light on Cyanobacteria Strains S1114 Recognition **Junior** Joshua J Inocencio St. Paul's Catholic School - Riverside **BEHA** Could a Statement Being Positive or Negative Affect its Credibility? J0213 Martin J Gottlieb Day School Noah N Neihaus **CMBI** Effects of Number of Organisms on Speed of Nitrogen Cycle Completion J0412 Senior Nyla T Searl Stanton College Preparatory School **CMBI** Investigating Pharmacodynamic Biomarkers in the PKCi-SOX2-Hh Signaling S0412 Pathway with LDE-225 and ANF Alan M Alwakeel Stanton College Preparatory School **IMRS** Using Artificial Intelligence to Diagnose Tumors in MRI Scans of the Brain S0915

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Episcopal High School

Plasma Diagnostics of Magnetically Confined Plasmas

**PHYS** 

Sofia Davila		Episcopal High School	PLNT
S1318	Addition of Potassium	to Make Lettuce More Drought Resistant	
Second Place			
Senior			
Sarah C Par		The Bolles School	BEHA
S0217	Spark Care+: Persona Mobile and Al Approa	alized Music Therapy for Relaxation and Energizin ch	g Using a
Tom C Com	mander	Episcopal High School	CHEM
S0515	Use of Magnetic Nano Multiforme	ochains to Increase Drug Delivery and Efficacy in	Glioblastoma
Ryan N Nap	oleon	Episcopal High School	EAEV
S0618	Nutrient Controlled Ex Eutrophication	pression of Glut1 Gene in Diatoms for Enhanced	Prevention of
Third Place Junior			
Andrew Luka	aj	Saint Joseph Catholic School	ANIM
J0111	Effect of Calcium Carl	oonate on Hatch Speed of <i>Artemia salina</i>	
Juliana J We	eldon	Christ the King Catholic School	BEHA
J0214	How does Visualization	n Affect Academic Performance in Middle School	ers?
Ashwin Venk	ratesh	Julia Landon College Preparatory Middle School	BMED
J0314	Blocking the Blue		
Mithra Vasar	nthan	Julia Landon College Preparatory Middle School	EAEV
J0628	Climate Change: How	are Freshwater Organisms Affected?	
Abigail P Do	oley	San Jose Catholic School	EAEV
J0629	Can Saharan Silver A	nt Hair Structures Preserve Earth's Polar Ice?	
Lukas A Nye		Julia Landon College Preparatory Middle School	ENEV
J0815	Where Has This Energ	gy Bean? Upcycling Spent Coffee Grounds	
Aaron D Zac	haria	Julia Landon College Preparatory Middle School	ENEV
J0815	Where Has This Energ	gy Bean? Upcycling Spent Coffee Grounds	
Viktoriia Galı	ushchak	St. Paul's Catholic School - Riverside	IMRS
J0911	How Can People That Use it?	Don't Know Sign Language Communicate with P	eople That
Senior			
Riya Kar		The Bolles School	ANIM
S0115	The Role of VEGF-B a Ischemic Heart Diseas	and NRP-1 Axis in Regulating Mitochondrial Home se	eostasis in
Vineet A Kha	anolkar	Stanton College Preparatory School	BEHA
S0216	White Bears Paradox Process Theory	of thought Suppression : Evaluation of Determina	nts of Ironic
Claire M Hua	ang	Episcopal High School	ENEV
S0818	The Energy Generation Solar Cell, Year 2	on Efficiency and Storage Capability of a Novel Dy	e-Sensitized

30 awards for Northeast Florida Region

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#### Osceola

# Fourth Place Junior Clara Silva Bellalago Charter Academy K-8 BEHA J0215 The Effect of Faith on the Brain Graycin Daly Canoe Creek K-8 ENMS J0718 How Strong Is 3-D Printing

2 awards for Osceola Region

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#### Palm Beach

vision Grand	d Award Winner And	d First Place	
Junior			
Kasey Tiffany	Moore	American Heritage School of Boca/Delray	BMED
J0301		benditis miller (Aloe Vera) in Regeneration of Eisorm) Cultured in a Prodiabetic Environment Using	
Senior			
Maya Mohant	•	American Heritage School of Boca/Delray	BMED
S0301		crescentus to Target the Bcl-2 Gene and NF-KB true	
Nolan Chen V		American Heritage School of Boca/Delray	CHEM
S0501	based Hydrogel	aracterization of a Novel Instantaneous-Crosslink	
Deeksha Kun		American Heritage School of Boca/Delray	ENMS
S0702	Diagnostic Method for		
Chloe Barreto		American Heritage School of Boca/Delray	MICR
S1102	Discovering Evergree	-based Bacteriophages that Infect Gordonia rubri n	pertincta:
rst Place Junior			
Julian James	Cebollero	The Weiss School	ANIM
J0101	Tardigrade Tolerance	to Extreme Temperatures	
Dylan Michae	l Kiesling	The Weiss School	IMRS
J0901	Interactive Virtual Rea	ality Learning Program to Improve the Fractured S	STEM Pipe
Bhav Jain		Don Estridge High Tech Middle School	MICR
J1101	Studying the Antibacte	erial Properties of Curcumin and the Influence of	Piperine
Senior			
Rohith Karthil	K	American Heritage School of Boca/Delray	BMED
S0302	Investigating the Effective Cells and Prostate Ca	cts of Vinblastine and Alpha Tocopheryl on A549 incer Cells	Lung Can
Samara Rash	nid	American Heritage School of Boca/Delray	ENEV
S0801		al-bacterial Symbioses (E. Coli K-12, C. Fruendii l Hydrogen Production	, & E. Coli
urth Place			
Junior			
Caitlin Joseph	nine O'Sullivan	A.D. Henderson University School	ANIM
J0102		Digital Image Analysis of Shark Denticles to Detern nsity and Size on Speed	mine the
Senior			
Maya Behura		American Heritage School of Boca/Delray	ANIM
S0103	The Effect of HPI Axis	Disruptions on Thrombocyte Production in Zebra	afish
Corynne Gab	riella Pereira	Spanish River Community High School	BEHA
S0201	The Effect Of Frequen	ncy Changes on Danio rerio Spatial Memory	
Tara Muthusv	vamy	American Heritage School of Boca/Delray	BEHA
		ionship between Item Memory and Source Memo	

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Shelly Balla			
		Spanish River Community High School	EAEV
S0601	Development: Year		<u> </u>
Siddhartha		Suncoast Community High School	ENMS
S0703	Using Magnesium a	nd CO2 as a Fuel Source for Future Mars Colo	nization Attemp
Samhita Ko		American Heritage School of Boca/Delray	ENEV
S0802	Irrigation Systems	Membrane Distillation Systems as Efficient and	
Ayush Gowo		Florida Atlantic University High School	IMRS
S0901	A 2D-Based Framev	work Using Artificial Intelligence for Biomechan	ical Analysis
Gavin Antho	ny Martin	Palm Beach Central High School	PHYS
S1201	Detection of Meteor	Activity with Various Lens Types	
Gavin J Em	erick	Palm Beach Central High School	PLNT
S1302	lycopersicum	tory Stress on the Production of VOCs in the Ro	oots of Solanum
onorable Me Junior	ention		
Savannah C	ipyak	A.D. Henderson University School	CHEM
J0501	Image Analysis of N	atural Shibori Indigo Dye on Various Textiles	
Senior			
Dylan Thom		American Heritage School of Boca/Delray	IMRS
S0902		Deep Q Reinforcement Learning Algorithm to 0 of a Swarm Robot System	Optimize the
Anik Krish S	ahai	A.D. Henderson University School	
10003		A.B. Henderson University School	IMRS
J0902	The Nose Knows	A.D. Helidelson onliversity school	IMRS
Senior	The Nose Knows		
Senior Sneha Ann	The Nose Knows	Palm Beach Central High School	EAEV
Senior	The Nose Knows  Joseph The Effect of Basalt	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and	EAEV
Senior Sneha Ann S0602	The Nose Knows  Joseph  The Effect of Basalt  Soybean Plant (Glyo	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)	EAEV I Growth of a
Senior Sneha Ann S0602	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glyconar Sobhani	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Contro	EAEV I Growth of a ENMS
Senior Sneha Ann S0602 Areesh Man	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glyconology) ohar Sobhani The Development of Amplifier Parameter	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Contro	EAEV I Growth of a ENMS
Senior Sneha Ann S0602 Areesh Man S0701	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycon) ohar Sobhani The Development of Amplifier Parameter ushy	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action	EAEV I Growth of a ENMS ol of Instrumenta MICR
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus a	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action	EAEV I Growth of a ENMS ol of Instrumenta MICR
Senior Sneha Ann S0602  Areesh Man S0701  Samer Elho S1103	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glyco) ohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max) American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria	EAEV I Growth of a  ENMS I of Instrumenta  MICR In in the Inhibition
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho S1103 Ava Katherin S1301	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria  Florida Atlantic University High School	EAEV I Growth of a  ENMS I of Instrumenta  MICR In in the Inhibition
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho S1103 Ava Katherii S1301	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria  Florida Atlantic University High School	EAEV I Growth of a ENMS I of Instrumenta MICR In in the Inhibition
Senior Sneha Ann S0602  Areesh Man S0701  Samer Elho S1103  Ava Katherii S1301  econd Place Junior	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max) American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria Florida Atlantic University High School Microplastics Effects on Raphanus sativus Pla	EAEV I Growth of a  ENMS of of Instrumenta  MICR In in the Inhibition  PLNT Int Structure and
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho S1103 Ava Katherii S1301  econd Place Junior Michael Alor	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria  Florida Atlantic University High School Microplastics Effects on Raphanus sativus Pla	EAEV I Growth of a  ENMS I of Instrumenta  MICR In in the Inhibition  PLNT Int Structure and
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho S1103 Ava Katherii S1301  econd Place Junior Michael Aloi J0201	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate  Inso Gomez Glossophobia Preva	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria  Florida Atlantic University High School Microplastics Effects on Raphanus sativus Pla  A.D. Henderson University School alence in Native vs Non-Native English Speaker	EAEV I Growth of a  ENMS of of Instrumenta  MICR of in the Inhibition  PLNT of Structure and  BEHA
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho S1103 Ava Katherii S1301  econd Place Junior Michael Alor	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate  Inso Gomez Glossophobia Prevail	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls  American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria  Florida Atlantic University High School Microplastics Effects on Raphanus sativus Pla  A.D. Henderson University School alence in Native vs Non-Native English Speake The Weiss School	EAEV I Growth of a  ENMS of of Instrumenta  MICR In in the Inhibition  PLNT Int Structure and  BEHA IS  ENMS
Senior Sneha Ann S0602 Areesh Man S0701 Samer Elho S1103 Ava Katherii S1301  Econd Place Junior Michael Aloi J0201	The Nose Knows  Joseph The Effect of Basalt Soybean Plant (Glycohar Sobhani The Development of Amplifier Parameter ushy The Effect of a Nove of Staphylococcus and Tracy Testing to See PVC Germination Rate  Inso Gomez Glossophobia Prevail	Palm Beach Central High School Rock Dust on CO2 Levels, Proline Levels, and cine max)  American Heritage School of Boca/Delray f a Hands-Free System to Automate the Controls American Heritage School of Boca/Delray el Therapy to Optimize the Mechanism of Action aureus Bacteria Florida Atlantic University High School Microplastics Effects on Raphanus sativus Pla  A.D. Henderson University School alence in Native vs Non-Native English Speake The Weiss School or Collecting and Testing Water Quality in South	EAEV I Growth of a  ENMS of of Instrumenta  MICR In in the Inhibition  PLNT Int Structure and  BEHA IS  ENMS

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	- 1	,	

Lia Lapidot		American Heritage School of Boca/Delray	ANIM
S0102	The Effect of Metformi	n on Reproduction in the Fruit Fly Drosophil	la melanogaster
Sruthi Balasubramanian		American Heritage School of Boca/Delray	BMED
S0303	The Effect of Nicotinamide on the II-6 Expression and Cell Count of Barrett's Esophagus Expressing Cells		
Isabella Lackner		Florida Atlantic University High School	ENEV
S0803	O.D.O.B.A (Object Detection Of Blood Abnormalities)		

#### **Third Place**

#### **Junior**

Arianna Lian		A.D. Henderson University School	CMBI	
J0401	Investigating the Effects Of Ocean Acidification On Strombus alatus Conch Shells through Quantitative Image Analysis			
Lenny Jean H	anisko	Don Estridge High Tech Middle School	EAEV	
J0601	An Exclamation On Ac Water	idification: The Relationship Between CO2 and A	lgae In Ocean	
Mili Mohanty		The Weiss School	EAEV	
J0602	Comparing the Effects magna	of Different Concentrations of Microplastics on D	aphnia	

#### **Senior**

Aayushi Ran	jan	American Heritage School of Boca/Delray	ANIM
S0101		of Turmeric & Curcumin on Tau Aggregation & bditis elegans and its Further Implications into	
Ava Allwardt		St. Andrew's School	MACO
S1001	Computational Analysis of Human Antibody Repertoires to Inform Design of HIV-Vaccines		
Ruby Lily Aubin		Florida Atlantic University High School	PHYS
S1202	RUBES: Resonators U	Jsed in Building Emergency Sensors - Simula	ted

39 awards for Palm Beach Region

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## **Pasco**

ourth Place			
Junior			
Nidhi Kashya	p	Dr. John Long Middle School	CMBI
J0403	Beacon of the Sea	3	
Aiden Kirkley		Cypress Creek Middle School	ENEV
J0805	Fire Detection Towers	• •	
Senior			
Dikembai Wo		Wiregrass Ranch High School	CMBI
S0401	INO1 and INO2 Expre	Mitigate Endoplasmic Reticulum Stress in Yeast by ession Pathways Using Lithium	
Caroline McH		Wiregrass Ranch High School	PLNT
S1307	An Innovative Approaction Sound Waves	ch to Promoting Lignin Biosynthesis in <i>S. lycopersi</i>	<i>cum</i> Using
onorable Mei Junior	ntion		
Ariana Alicea		Bishop Larkin Catholic School	MACO
J1002	3D Distortion		
Senior			
Karolina Porc	elli	J. W. Mitchell High School	BMED
S0308	Probiotics: An Innovat	tive Solution to Lactose Intolerance	
Andrew Lamb	pert	Wiregrass Ranch High School	ENMS
Andrew Lamb S0705		Wiregrass Ranch High School ehicle Sensor to Improve Driver Performance Durir itions	
S0705  ecognition Junior	Developing a Novel V Winter Weather Cond	ehicle Sensor to Improve Driver Performance Durir itions	ng Adverse
soros  ecognition Junior  Vandana Raja	Developing a Novel V Winter Weather Cond asekar	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8	
ecognition Junior Vandana Raja	Developing a Novel V Winter Weather Condi asekar Operation Cellphone F	ehicle Sensor to Improve Driver Performance Durir itions  Starkey Ranch K-8 Radiation	ng Adverse
ecognition Junior Vandana Raja J0703 Gabriel Foote	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone F	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8	ng Adverse
ecognition Junior Vandana Raji J0703 Gabriel Foote J0903	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone Formula Smart Sprinkling	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School	ENMS
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone Formula Smart Sprinkling	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School	ng Adverse
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce J1001	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School	ENMS IMRS MACO
ecognition Junior  Vandana Raja J0703  Gabriel Foote J0903  Harold Boyce J1001  Amelia Peepl	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School	ENMS
ecognition Junior  Vandana Raja J0703  Gabriel Foote J0903  Harold Boyce J1001  Amelia Peepl J1304	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School	ENMS IMRS MACO
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce J1001 Amelia Peepl J1304 Senior	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es	ehicle Sensor to Improve Driver Performance Durin itions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School  Sound Frequencies on Plant Growth	ENMS IMRS MACO PLNT
ecognition Junior  Vandana Raja J0703  Gabriel Foote J0903  Harold Boyce J1001  Amelia Peepl J1304	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es The Effect of Different	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School  Sound Frequencies on Plant Growth  Wiregrass Ranch High School	ENMS IMRS MACO PLNT BMED
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce J1001 Amelia Peepl J1304 Senior	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es The Effect of Different  Developing a Novel Trees	ehicle Sensor to Improve Driver Performance Durin itions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School  Sound Frequencies on Plant Growth	ENMS IMRS MACO PLNT BMED
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce J1001 Amelia Peepl J1304 Senior Kate Niehoff S0307	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es The Effect of Different  Developing a Novel Trees	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School  Sound Frequencies on Plant Growth  Wiregrass Ranch High School  reatment Utilizing Nutraceuticals to Enhance Neuro	ENMS IMRS MACO PLNT BMED
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce J1001 Amelia Peepl J1304 Senior Kate Niehoff S0307	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone For Smart Sprinkling  Watch Your Language es The Effect of Different  Developing a Novel Trees	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School  Sound Frequencies on Plant Growth  Wiregrass Ranch High School  reatment Utilizing Nutraceuticals to Enhance Neuro	ENMS IMRS MACO PLNT BMED
ecognition Junior Vandana Raja J0703 Gabriel Foote J0903 Harold Boyce J1001 Amelia Peepl J1304 Senior Kate Niehoff S0307	Developing a Novel Volumer Weather Condition  assekar Operation Cellphone Formula Service Serv	ehicle Sensor to Improve Driver Performance Durinitions  Starkey Ranch K-8 Radiation  Dayspring Academy Middle School  Paul R. Smith Middle School  Raymond B. Stewart Middle School  Sound Frequencies on Plant Growth  Wiregrass Ranch High School  reatment Utilizing Nutraceuticals to Enhance Neuro	ENMS IMRS MACO PLNT BMED

13 awards for Pasco Region

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## **Pinellas**

### **Fourth Place**

### **Senior**

Ella Baum		Saint Petersburg Collegiate High School	ANIM
S0110	Biological Control of T Fungi	icks to Prevent Tick-Borne Illness Using Er	ntomopathogenic

### **Honorable Mention**

### Senior

Erin Glenn		Indian Rocks Christian School	BMED
S0315	The Effectiveness of a	in Alternative Shunt Design	

# Recognition

### Junior

Emmaline	Gambino	Pinellas Park Middle School	ENMS
J0712	Using Wearable Heal	th Technology	
Camila Va	ica Aguirre	Pinellas Park Middle School	ENMS
J0712	Using Wearable Heal	th Technology	

### **Third Place**

### **Junior**

Ella Belve	dere Winogradsky	Sanderlin K-8 IB World School	CHEM
J0524 Spherification			
Senior			

S0813 Calcium Batteries: A Green Alternative

6 awards for Pinellas Region

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# Polk

Fourth Place Junior					
Mia Gindlesbe	erger	Ridgeview Global Studies Academy	CHEM		
J0519	The Wait Is Killing Me!				
Matias Quinor	nez Arguedas	Resurrection Catholic School	PLNT		
J1308	Rise of the Pumpkins				
Ishaan Lakhar	ni	Lawton Chiles Middle Academy	PLNT		
J1309	Plants in Outer Space				
Honorable Men	ition				
Junior					
Teresa Zamor	a	Resurrection Catholic School	ENEV		
J0810	Rainwater as Drinking	Water			
Second Place					
Junior					
Hunter Wilson		Resurrection Catholic School	CHEM		
J0517	Sugar Rush				
Third Place					
Junior					
Akshit Ladega	onkar	Lawton Chiles Middle Academy	EAEV		
J0645	Spills in Saltwater				

6 awards for Polk Region

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### Sarasota

### **Division Grand Award Winner And First Place**

#### **Junior**

Aadi Bhenso	dadia	Pine View School	ENMS
10722	Litilizing 3D Additive M	Manufacturing to Develop a Riccompatible	Customizable and

J0733 Utilizing 3D Additive Manufacturing to Develop a Biocompatible, Customizable, and Durable Mechanical Aortic Valve

### **Fourth Place**

### Senior

Anja Schw	arzbauer	Sarasota High School	ANIM
S0125		veness of the <i>Zophoba satratus</i> Suplysthylene and Polypropylene Plast	
Jessica Ri	tchie	Sarasota High School	CHEM
S0528	The Effect of BPA and	Endocrine Disruptor on Phytohorn	nones in <i>Chlorella vulgaris</i>
Anika Sac	kerlotzky	Sarasota High School	EAEV
S0634	The Effect of Varying	Oxybenzone Concentrations on Ab	scisic Acid Levels in

### **Honorable Mention**

### Senior

Tyler Isaacso	on	Sarasota High School	ENEV
S0827	Optimization of Paint F	ormulation for Antifouling Properties	
Riley Plank		Sarasota High School	ENEV
S0827	Optimization of Paint F	Formulation for Antifouling Properties	

## Recognition

### **Junior**

Zachary H	larshman	Sarasota School of Arts and Sciences	BMED
J0325	Development of a Pat Cancer Patients	ch to Protect Central Lines from Water Intrusior	in Pediatric

#### Senior

Anna Davis-Lunardi		Sarasota High School	BMED
S0342	Observing the Effect o Encapsulated Inside H	f Suboptimal Temperature on the Behavior of <i>Esc</i> lydrogels	herichia coli
Rohan Dash	·	Pine View School	MACO
S1023 Using Novel Al Detecti		on Systems to Identify Skin Abnormalities	

## **Second Place**

#### **Senior**

Nicholas Co	ox	Sarasota High School	CMBI
S0428	Wastewater Treatmer	it Chemicals' Effect on	n <i>Escherichia coli</i> WP2 pKM101 Mutation
	& Antibiotic Resistanc	e Genes	

10 awards for Sarasota Region

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### **Seminole**

S1313

#### **First Place** Senior Kevin Perez Crooms Academy of Information Technology MACO Cryptographic and Empirical Evaluations of Strong Goldbach Conjecture with Sieving S1008 Algorithms and Fourier Transformations **Fourth Place Junior** Sanford Middle School Ethan Bai **ENMS** Solutions to Avoid Obstacles on the Road for an Autonomous Driving Car J0713 Senior Naman Doad Oviedo High School **BEHA** Associations between Activity in Frontal Lobe during Command-tasks Directed by S0213 Anthropomorphic A.I. and Emotional State, Perception and Efficiency Gargi Paranjape Oviedo High School **ENEV** Ion Exchange Treatment as an Alternative to Biologically Active Filtration (BAF) for S0814 **Direct Potable Reuse Honorable Mention** Senior Alicia Bomhoff Oviedo High School **BEHA** Recognition and Perceptions of Neural Network and Human Generated Metal Music S0212 Recognition **Junior** Milwee Middle School Stella Pham **CMBI** Comparing the DNA Mass of Different Fruit Types J0409 Second Place Junior Adhip Maitra Jackson Heights Middle School **BMED** The Use of Deep Learning to Aid in the Early Detection of Ptosis in the Eye as a J0312 Possible Indicator of other Serious Diseases and Disorders Shrinidhi Raghavan Seminole Science Charter School **EAEV** Desalination Innovation - A Foreseeable Solution to Drought J0621 **IMRS** Ankan Das Sanford Middle School A Novel Shape Memory Alloy-based Mobile Robot for Surveillance and Planetary J0909 **Explorations** Hannah Seth Sanford Middle School MACO Facial Recognition Using Python J1008 Senior **PHYS** Arvid Vaidyanathan Winter Springs High School Anti-Static and Anti-Reflective Solar Panels for Dust free use on Earth, the Moon, S1207 and Mars Oviedo High School **PLNT** Jenna Leiss Effect of Lunar Highland Simulant Particle Size on Tagetes patula's Root Structure S1312 and Growth Moitri Santra Oviedo High School PI NT

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Potential Drug Delivery Applications

Development of Novel Ocimum Sanctum-derived Biotherapeutic Nanoparticles for

## **Third Place**

## Junior

ourno.			
Arpita Kumar		Teague Middle School	BEHA
J0210	Age vs Memory (Year	2)	
Aiden Xu		Sanford Middle School	CHEM
J0525		ant and Skin-friendly Mosquito/Insect Repellent and via Custom-designed Experiments	and its
Sanjit Prakas	h	Sanford Middle School	ENMS
J0714	Building a Solar Track	ing Energy Estimator	
Priscilla An		Seminole Science Charter School	PHYS
J1218	Electromagnetic Speci Affect How a Solar Pa	trum vs Solar Panels: How Different Parts of the nel Charges a Battery	EM Spectrum
Senior			
Ella Pilacek		Oviedo High School	ANIM
S0111		itioning to Promote Attraction of <i>Apis mellifera</i> to rosthechea cochleata: Year 2	the
Ethan Resha	d	Oviedo High School	BMED
S0317	Exploring Tissue Viabi Smooth Muscle Cells	lity and Tubule Formation of 3D Bio-printed MDC	K and Canine
Anouska Sea	nl	Hagerty High School	CMBI
S0406		Therapeutics Leveraging a Novel Protein Coating the Coating Pro-inflammatory Geneby Systems (1) The Coating Pro-inflammatory Geneby Systems (2) The Coating Pro-inflammatory G	
Banmeet Sin	gh	Oviedo High School	ENMS
S0710	Enhanced White Cane Improved Sensors & M	Object Detection for Visually Impaired Individua  Modules: Year 2	ls Using

21 awards for Seminole Region

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## South Florida

South Florid	da		
Fourth Place	)		
Junior			
Trulie Feing	gold	Ruth K Broad Bay Harbor K-8 Center	EAEV
J0636	Pastic Sporks	,	
Magnus Ag	ıuila-Roehr	George Washington Carver Middle School	PHYS
J1228	Synchronization		
•	·		
Senior			
James Cai	Data stin u Dua stata	Miami Palmetto Senior High School	BMED :
S0329	Detecting Prostate	Cancer from MRI Imaging Using Machine Learn	
Jane Zhao	T	School for Advanced Studies	BMED
S0330		f SOX7 as a Novel Susceptibility Gene for Autis Omics and Human Brain Organoid Analysis	m through the
Lucas Gutr		iPrep Academy North	MACO
S1018		on Model Representing the Genetic Landscape	
31010		sorder 1 and Bipolar Disorder 2	Dillererioes
	•	·	
Honorable M	ention		
Junior			
Benjamin J	aurequi	Archimedean Middle Conservatory	PHYS
J1227	*	nce of Cosmic Rays	
Senior			
Luke Yang		Miami Palmetto Senior High School	ENMS
S0717	The Mini Magneton	neter: Portable Alternating Current Magnetomete	er
<b>Second Plac</b>	е		
Junior			
Alejandra S	Stephanie Perry	Paul W. Bell Middle School	CHEM
J0538	An Alteration of Aci	dic and Alkaline Adhesives	
Sophia But	ori	Ruth K Broad Bay Harbor K-8 Center	EAEV
J0635	Power of Plastic	,	
Senior			
Ethan Thor	nas	Ransom Everglades School	IMRS
S0917	Novel Deep Learnii	ng Approach to Assess Cardiac Function	
Third Place			
Junior			
Elizabeth D	)ykxhoorn	George Washington Carver Middle School	CMBI
J0413	Plastic on the Brain		
Senior			
Sunny You		Miami Palmetto Senior High School	EAEV
S0627		tensification Convolutional Neural Network: A No	
	Learning Modelfor l Satellite Rainfall Da	Predicting Tropical Cyclone Intensification Using	Twenty Years of
Isabella Go		iMater Preparatory Academy High School	PLNT
S1326		lated Microgravity on the Cherry Belle Radish (	
	ma Dapena The Effects of Simu	iMater Preparatory Academy High School	PLNT
S1326	The Eπects of Simil	ılated Microgravity on the Cherry Belle Radish (	raprianus sativus)

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S1326

The Effects of Simulated Microgravity on the Cherry Belle Radish (Raphanus sativus)

15 awards for South Florida Region

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## St. Johns

### **Honorable Mention**

#### **Senior**

Manish Kota Creekside High School CMBI

S0422 Investigating Cellular Localization and Aggregation Properties of Chimeric Dipeptide

Repeat Proteins in C9ORF72-associated FTD/ALS

# Recognition

### Senior

Hazel Pare	nt	Ponte Vedra High School	BMED
S0335	Targeted Gold Nanop Vitro	articles Enhance Radiosensitivity of Pa	ancreatic Cancer Cells in
Kathryn Sh	apiro	Ponte Vedra High School	BMED
S0336	Sex Differences in Ca	rdiac Energetics During Viral Myocard	itis

### **Third Place**

### **Junior**

Emma York		Freedom Crossing Academy	ENMS
J0728	Testing the Number of Solar Cell Efficiency	Thermoelectric Coolers (TEC) on a Solar Ce	Il to Improve the

#### **Senior**

Benjamin	York	Creekside High School	ENMS
S0719	Designing and Testing Combustion Air	Heat Exchanger Types for Solar Pre	heating of Gas Turbine
Lalit (Saila	alit) Mudunuri	Ponte Vedra High School	IMRS
S0921	A Novel Approach to E	Electric Vehicle Battery Protection fror	n Floods
Aadithyaa	ı Vishegu	Ponte Vedra High School	IMRS
S0921	A Novel Approach to E	Electric Vehicle Battery Protection fron	n Floods

7 awards for St. Johns Region

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### St. Lucie

#### **Fourth Place**

#### Senior

**Dominique Thomas** Treasure Coast High School CHEM

Color Wave - Investigating the Impact of Organic Dyes on Dye Sensitized Solar Cell S0506

Performance

### **Honorable Mention**

#### **Junior**

Aiden Hong Pal Pointe Educational Research School PLNT Algae-rrific

# Recognition

J1310

#### **Junior**

Camila Salcedo-Lind West Gate K-8 School **BMED** J0308

Trendy Low Sugar Diets: What Is the Impact on Yeast Colonization in the Gut

Biome?

### **Second Place**

#### **Junior**

Camilla Nieves-Rivera Oak Hammock K-8 School **ENMS** Water Saver

4 awards for St. Lucie Region

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# **Suwannee Valley**

### **First Place**

#### **Junior**

Cyler Robinson Fort White High School CHEM

J0535 How Can The Dissolved Oxygen Concentration Be Increased In A Hydroponic

Solution?

### **Fourth Place**

#### **Junior**

Cody Andrews Lake Butler Middle School CHEM

J0534 The Rubber Rivalry

### **Honorable Mention**

#### **Junior**

Kiley-Jo Harrison Lake Butler Middle School CHEM

J0533 Perplexed by Porous Paper Towels

3 awards for Suwannee Valley Region

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## **Thomas Alva Edison**

	Edison		
ourth Place			
Junior			
Emma Elfenb		L. A. Ainger Middle School	EAEV
J0643	Which Compost Is the	Best Plant food?	
Thor Wikman		Charlotte Virtual School	ENMS
J0732	Strength	uel Efficiency: Percent Infill Of 3D Printed Airfoils v	
Shourigna Ma	•	Paul Laurence Dunbar Middle School	PHYS
J1231	Dented Versus Non-D	ented Instruments: Do Dents Matter on an Instrum	ent?
Senior			
Aum Dhruv		Fort Myers High School	BMED
S0340		<ul> <li>r-Cost Machine Learning Diagnostic Device and M</li> <li>Approach to Combating Retinal Diseases</li> </ul>	edical IoT
Yusef Mujtab		Fort Myers High School	CHEM
S0527	Tackling the Global E- Sustainable Cellulose-	Waste Problem: Constructing and Testing the Effice- Derived Batteries	ciency of
Caroline Gue	rra	Community School Naples	ENMS
S0722	Transforming Corn Hu Bioplastics, 2nd Year	sks and Plantain Peels into Eco-Friendly, Resourc	ceful
lonorable Mei Junior	ntion		
Charlie Della-	-Luna	Oak Hammock Middle School	CHEM
J0544	Rise Above the Rest!	Which Sugar Substitute Reacts the Best?	
Senior		•	
Dhruva Sharr	na	Fort Myers High School	MACO
S1022		v: Implementing Neural Networks And Deep RL Ma o Make Traffic Management More Effectual	achine
ecognition			
Junior			
Sephora Esp	erance	Saint Andrew Catholic School	BEHA
J0219	The Rashomon Effect		
_			
Senior			
Megan D'Sou		Community School Naples	CMBI
S0427		t of Acetic Acid on Alginate Bead Membrane Perma Allogeneic Transplantation without Immunosuppre	
econd Place			
Senior			BMED
		Community School Naples	
Senior	Corneal Applanation S	Community School Naples Scleral Buckling Model (C.A.S.B.M)	
Senior Sonia Patel	• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	EAEV
Senior Sonia Patel S0341	es Utilizing Nutrient Enric	Scleral Buckling Model (C.A.S.B.M)  Canterbury School  hed Biologically Activated Bioremediation Units as	EAEV
Senior Sonia Patel S0341 Morgan Barne	es Utilizing Nutrient Enric Amendment in a Cycli	Scleral Buckling Model (C.A.S.B.M)  Canterbury School	EAEV

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Kurukulasuriya Fernando		Dunbar High School	PLNT
S1334		is and Comprehensive Evaluation of of Six Native Plant Species: Innovat	

### **Third Place**

## Senior

Advaith Menon		Dunbar High School	IMRS
S0927	LesionGAN: A Genera	GAN: A Generative Adversarial Network-based Image Augmentation Algorithm	
	to Improve CNN Perfo	rmance in Lesion Detection	
Mason Huffma	an	Cape Coral High School	PHYS
S1219	Data Analysis of Gravi	tational Wave Signals Using Python	

16 awards for Thomas Alva Edison Region

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### **Tomoka**

#### **Fourth Place** Junior Layne Keeran New Smyrna Beach Middle School CHEM Roasting Rainbow J0509 Tej Patel David C. Hinson Middle School **EAEV** Which Produces More Electricity in a Microbial Fuel Cell? Mud vs Compost? J0608 Kaden Janania River Springs Middle School **PHYS** J1210 How Different Materials Affect Sound Absorption Senior Amy King Burns Science and Technology Charter School **EAEV** Recycling Polyethylene Terephthalate to Reduce Plastic Waste S0605 **Honorable Mention** Senior Alexander Mikheyenko Spruce Creek High School **ANIM** Effects of Varied Concentrations of Polyvinyl Chloride Microplastics on the Early S0105 Embryonic and Post-Hatching Development of Danio reirio as a Model Organism Gabrielle Flynn Spruce Creek High School BEHA How Does Verbal Positive Reinforcement Improve Student Performance S0205 Academically? Recognition **Junior** Rani Gupta David C. Hinson Middle School **FAFV** Does the Conversion of Florida Marginal Land into Biomass Producing Panicum J0609 virgatum Change Soil Quality? Senior Ahmed Eldeeb Spruce Creek High School **EAEV** S0604 Utilizing a Novel Two-Step Method of Ultraviolet Photocatalytic Oxidation with the Addition of Reusable Magnetic Nanoparticles for the Removal of Microplastics in Aquatic Environments **EAEV** Jacob Friedman Spruce Creek High School Utilizing a Novel Two-Step Method of Ultraviolet Photocatalytic Oxidation with the S0604 Addition of Reusable Magnetic Nanoparticles for the Removal of Microplastics in Aquatic Environments Second Place Junior Creekside Middle School CHEM Ethan Muller Extracting Hydrogen Out of Water to Utilize as an Alternative Energy Source J0510 **Third Place** Junior Lilly Downs Galaxy Middle School **ENMS**

### 11 awards for Tomoka Region

Optimal Gear Ratio of a Gravity Battery

J0704

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## **West Panhandle**

#### **Honorable Mention Junior** Lilyana Durham Holley Navarre Middle School BEHA Fear Factor J0204 Kyle Galloway Saint Paul Catholic School **BMED** J0303 Do Blue Light Filtering Glasses Improve Sleep Quality? Kate Aldridge Saint Paul Catholic School CHEM What's in Your Water J0512

3 awards for West Panhandle Region

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