



FLORIDA DEPARTMENT OF  
**EDUCATION**  
fldoe.org

# Gifted Supervisors Quarterly Call

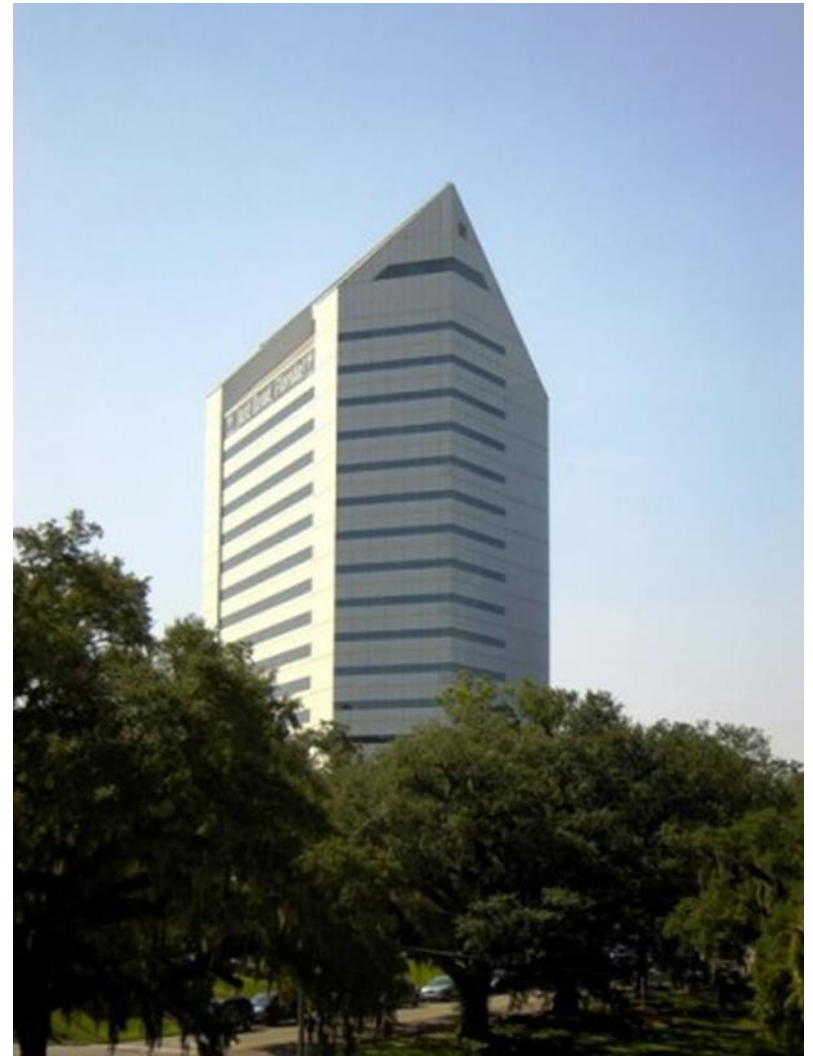
Bureau of Standards and Instructional Support

Gifted Education Programs

Alicia Foy

September 8, 2020

Provide quality services  
and resources in  
collaboration with  
partners in education to  
serve the  
state of Florida's  
gifted education program



# Housekeeping Information

- Participants are muted; please enter questions into the questions panel
- If you are having trouble hearing the audio, please call (562-247-8422) and enter
  - access code: 220-458-801#

# Session Overview

- Gifted Updates
- Thompson Earth Systems Institute: Scientist in Every Florida School
- Survey Reminder

# Updates



Virtual [NAGC conference](#)  
November 12-17<sup>th</sup>, 2020

# Updates

- 2020 NAGC Award Recipients Named
  - Visit [NAGC Awards and Scholarships](#) to find the awardees
- Javits-Frasier Scholar
  - Nominations open March 2021
  - For details visit the [Scholars webpage](#)



# Updates

## Gifted Education Week November 1-7<sup>th</sup>, 2020

- Plan to highlight district gifted programs and activities!





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# PAEMST

Presidential Awards for Excellence in  
Mathematics and Science Teaching





## PAEMST Applicant Cycles 2020-2021

- Elementary applications close October 26, 2020. Review cycle for elementary nominees will begin October 27 with finalists notified in December. Please contact Alicia Foy [aliciafoy@fldoe.org](mailto:aliciafoy@fldoe.org) for further information
- Secondary nominations open November 1, 2020. Please nominate outstanding secondary math, science or computer science teachers for this prestigious award. For more information visit [www.paemst.org](http://www.paemst.org)



# Collaborative Efforts to Support Gifted Education in Florida

*Scientist in Every Florida Classroom*



UF Thompson Earth Systems Institute

Bruce MacFadden, Director

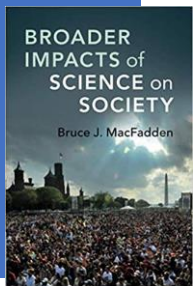
# Scientist in Every Florida School

8 September 2020



# Some background-- About me

- UF Faculty since 1977
- Worked with STEM teachers for almost a decade
  - Field & research experiences in Panama
- 2015-2016—Visiting Scientist in Santa Cruz California County Office of Education
- Many teacher PDs (Fossils, paleontology, evolution, nature of science)
- Teach in UF Honors Program
- Recent book *Broader Impacts of Science on Society* (2019, Cambridge)



# Talk outline

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- Our backgrounds
- Thompson Earth Systems Institute (TESI)--Bruce
- UF President's Moonshot--Bruce
- Scientist in Every Florida School—Brian
- UF Honors Program—Stephanie
- Helping BIPOC gifted students to transition to UF Honors
- How you can get involved--Stephanie



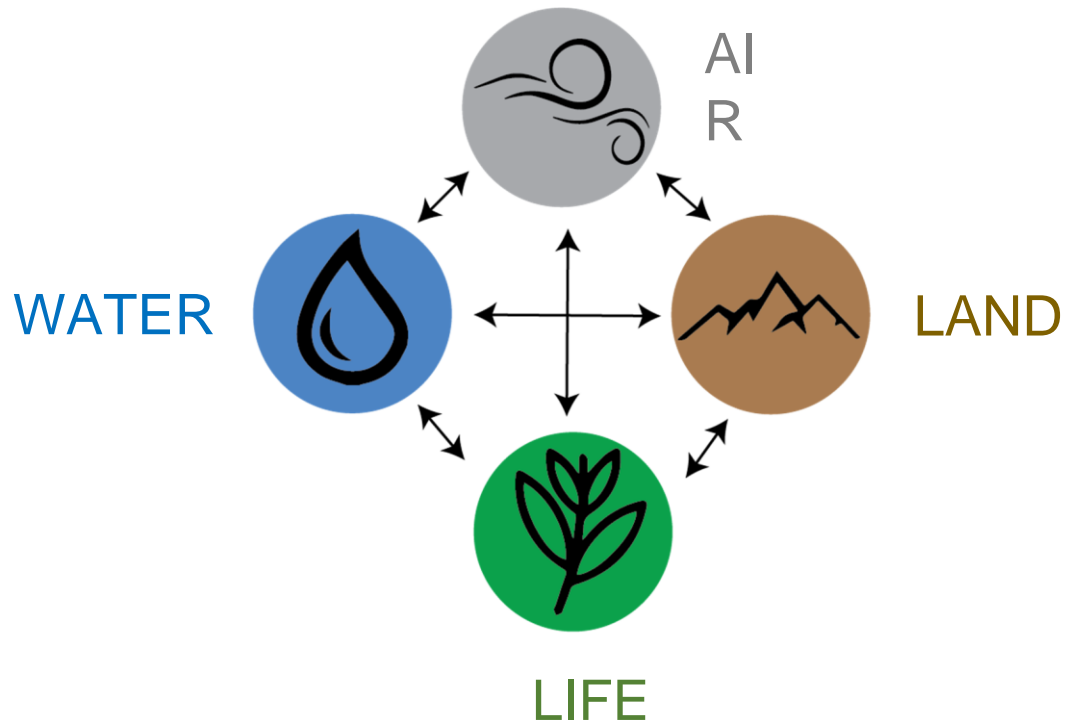




“The research carried out at the University of Florida is critical to our understanding of Earth’s systems.”

— Beverly and Jon  
Thompson  
2018

# WHAT ARE EARTH SYSTEMS?





A high-angle photograph of a massive crowd of people gathered for a protest or rally on a city street. The crowd is dense and diverse, with many individuals holding up signs and banners. The scene is set in an urban environment with trees, streetlights, and a building visible on the left. The text "Human impacts" is overlaid in white, sans-serif font across the center of the image.

Human impacts



Why should someone living in Florida care that the polar ice caps are melting?

Nuisance Flooding in Downtown Miami



# Florida's Earth Systems Impacts



Air (Atmosphere) – extreme storms, drought, pollution



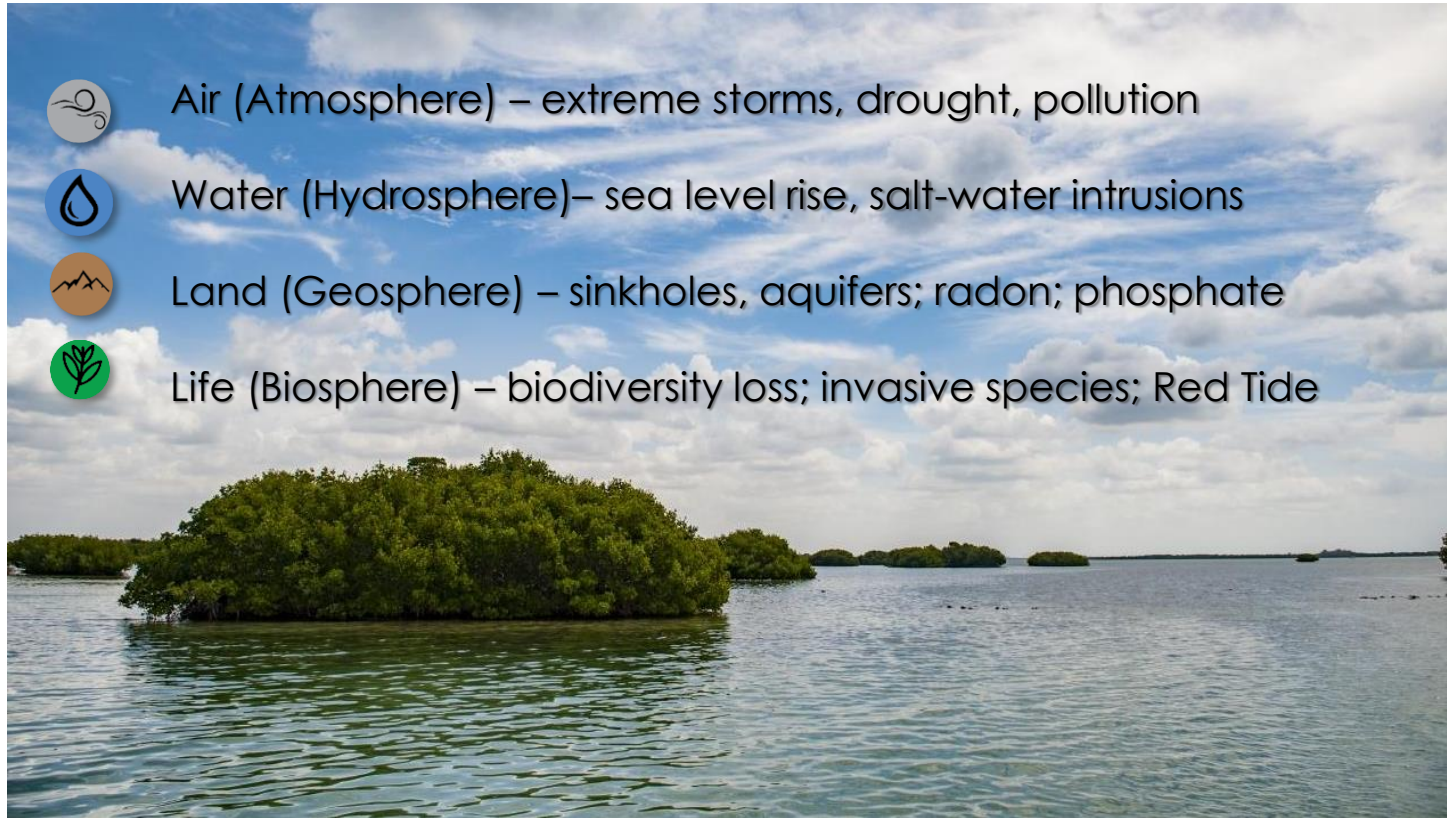
Water (Hydrosphere)– sea level rise, salt-water intrusions



Land (Geosphere) – sinkholes, aquifers; radon; phosphate



Life (Biosphere) – biodiversity loss; invasive species; Red Tide



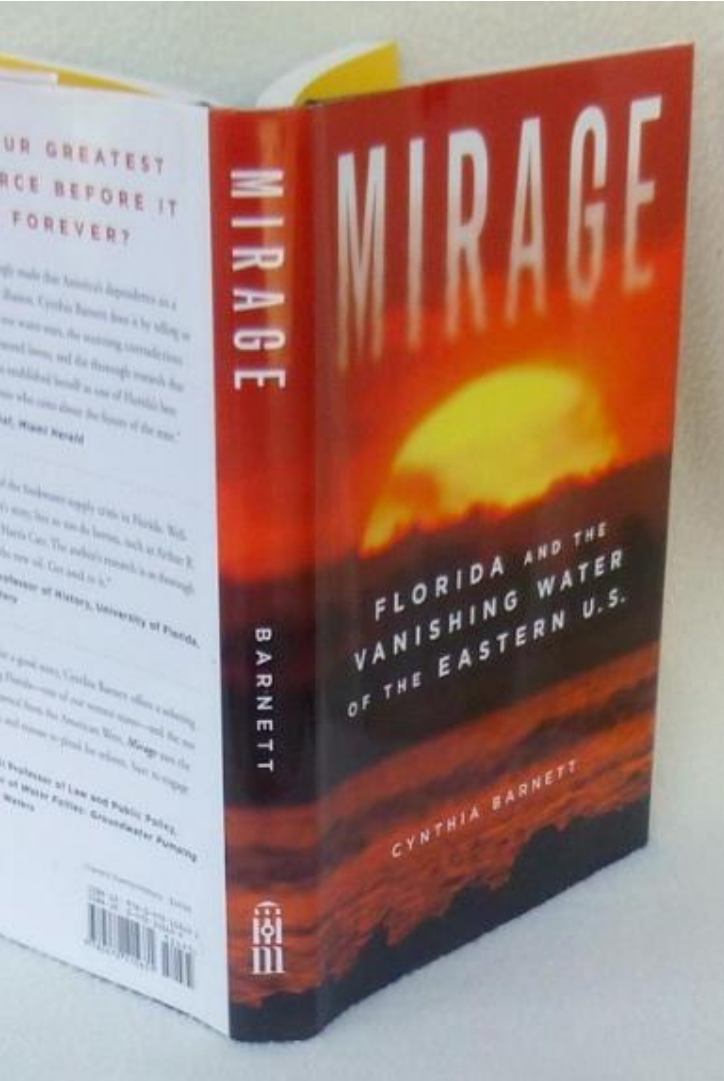


## Our Mission

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*To advance communication and public understanding of current research discoveries about Earth's natural systems in Florida, and beyond.*

*To better inform Floridians in the 21st century, including the next generation of decision makers.*



# Audiences we serve

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- Undergraduates--Including Honors Program\*
- UF scientists
- Lifelong learners
- Policy makers
- K-12 schools\*--via Moonshot

\*Potentially intersecting audiences

- UF President's Moonshots, September 2018



*Envision a bold, seemingly unattainable goal that benefits society.*



- UF President's Moonshots, September 2018



*Envision a bold, seemingly unattainable goal that benefits society.*



# Program Evaluation

- We set (realistic) goals—aligned to our mission and capacity.
- We collect outcome data from all programs and activities, for example.
  - Number of teachers reached
  - Number of students reached
  - Number of school visits
  - Number of professional development sessions
- We collect qualitative feedback—



*"Thank you for the BEST professional development I have ever attended....I feel so rejuvenated and can't wait to go back to school and share what I learned with students and colleagues..."* HS teacher



# Background

- B.A. in Secondary Education & Earth Sciences – Syracuse University
- M.Ed. in Adolescent Special Education – Hunter College
- Spent 5 years teaching biology, AP biology, AP Environmental Science, IB Environmental Systems and Societies in Dallas



## More About the Moonshot Initiative

Through this free program, our mission is to...

Build long-term collaborative relationships between teachers and scientists

to better integrate current scientific research and big data into classroom lessons that adhere to Florida Sunshine State Standards

**Connect a scientist with every public Florida school in the state. (Focus on Title 1 schools)**



**NOW  
OFFERING  
VISITS  
STATEWIDE**





**WICKED PLANTS!**  
LIVESTREAM EVENT WITH MOUNTS BOTANICAL GARDEN

**Dr. Pam Soltis**  
Florida Museum

PRESENTED BY:  
MOUNTS BOTANICAL GARDEN  
Scientist in Every Florida School

38:42

FLORIDA MUSEUM UF FLORIDA

**Scientist in Every Florida School Spotlight**

UF Thompson Earth Systems Institute September 2019

**K-12 TEACHING TOOL**

**Philosophical Chairs with a Twist**

The **Environmental Literacy Council** is a rich resource when it comes to environmental issues. For example, under the "Land Use" tab, teachers can find resources, data and maps, laws and treaties, and a number of projects and activities for the classroom, like the "Neighborhood Mapping Project" for primary grades.

Another favorite is the **Firesom**. Thinking Critically about Environmental Issues page for middle and high school grades. Here, students take on roles of different people and organizations who have a stake in environmental decisions after researching topics like, "Can we sustain the ecological and aesthetic benefits of our natural resources and reap economic benefits at the same time?"

<https://envirliteracy.org/>

## SEFS ACTIVITIES TARGETING STRATEGIC IMPACTS

CLASSROOM VISITS – CONTENT  
CLASSROOM VISITS – ROLE  
MODEL

PHYSICAL OR VIRTUAL

PROFESSIONAL DEVELOPMENT  
WORKSHOPS

K-12 TEACHER TOOLS AND  
OPPORTUNITIES AROUND  
FLORIDA

SOCIAL MEDIA  
PLATFORM/SCIENTIST-  
TEACHER FORUM

SEFS SPOTLIGHT MONTHLY  
NEWSLETTER



**FM**  
FLORIDA  
MUSEUM



Tuesday, July 7	Wednesday, July 8	Thursday, July 9	Friday, July 10
Use the following Zoom link for morning session (9:00am-12pm): <a href="https://ufl.zoom.us/j/92390255502">https://ufl.zoom.us/j/92390255502</a>	Use the following Zoom link for morning session (9:00am-12pm): <a href="https://ufl.zoom.us/j/99521489298">https://ufl.zoom.us/j/99521489298</a>	Use the following Zoom link for morning session (9:00am-12pm): <a href="https://ufl.zoom.us/j/99412309109">https://ufl.zoom.us/j/99412309109</a>	Use the following Zoom link for morning session (9:00am-12pm): <a href="https://ufl.zoom.us/j/93750420965">https://ufl.zoom.us/j/93750420965</a>
<a href="#">SEFS Intro</a>	<a href="#">The Floridian Aquifer and its Springs</a>	<a href="#">Using Ants to Understand the Nature of Science</a>	<a href="#">Improving Flavor in Tomatoes</a>
Dr. Bruce MacFadden 9:00 - 9:10	Jessica Mostacedo 9:00 - 9:15	Jacob Hornfeldt 9:00 - 9:15	Modesta Abugu 9:00 - 9:15
<a href="#">Accurately and Effectively Teaching the Nature of Science</a>	<a href="#">Environmental Archeology in the Sunshine State</a>	<a href="#">Research in Bioprocessing Lab</a>	Spark 2
Dr. Michael Clough 9:10 - 9:30	Kendal Jackson 9:15 - 9:30	Dr. Jack Yang 9:15 - 9:30	Galen Cobb 9:15 - 9:30
Keynote: <a href="#">The Characteristics of Scientific Knowledge</a>	Keynote: <a href="#">The Practice of Science</a>	Keynote: <a href="#">The Role of Theories, Laws, Hypotheses and Models</a>	Keynote: <a href="#">Science and Society</a>
Dr. Pam Soltis 9:30 - 10:00	Dr. Stephen Kajjura 9:30 - 10:00	Dr. Bingkan Xue 9:30 - 10:00	Dr. Jo Muller 9:30 - 10:00
morning presentation Q & A 10:00 - 10:15	morning presentation Q & A 10:00 - 10:15	morning presentation Q & A 10:00 - 10:15	morning presentation Q & A 10:00 - 10:15
Bathroom Break 10:15 - 10:30	Bathroom Break 10:15 - 10:30	Bathroom Break 10:15 - 10:30	Bathroom Break 10:15 - 10:30
<a href="#">SEFS + Stipend Overview</a> 10:30 - 11:00	Virtual Field Trip 10:30 - 12:00	Modeling NOS lab exemplar:  <a href="#">How Big was the Megalodon?</a> 10:30 - 11:30	Final showcase of developed products  10:30 - 12:00
<a href="#">Testimonials from returning teachers</a> Speakers: Tredina, Elizabeth & Jonathan 11:00 - 11:15			
<a href="#">UF Honeybee Lab Tour</a> 11:15 - 12:00			
		<a href="#">Whitney Sea Turtle Hospital Lab Tour</a> 11:30 - 12:00 OR <a href="#">Emerging Aquatic Animal Viruses Lab Tour</a> 11:30 - 12:00	
Lunch Break 12:00 - 1:00	Lunch Break 12:00 - 1:00	Lunch Break 12:00 - 1:00	<a href="#">PD Evaluation Survey</a> 12:00 - 12:15 <a href="#">SEFS Wrap up</a> Dr. Bruce MacFadden 12:15 - 12:30
Collaboration with scientist lab group 1:00 - 3:00	Collaboration with scientist lab group 1:00 - 3:00	Collaboration with scientist lab group 1:00 - 3:00	
	Sweetwater Wetlands Virtual Field Trip		

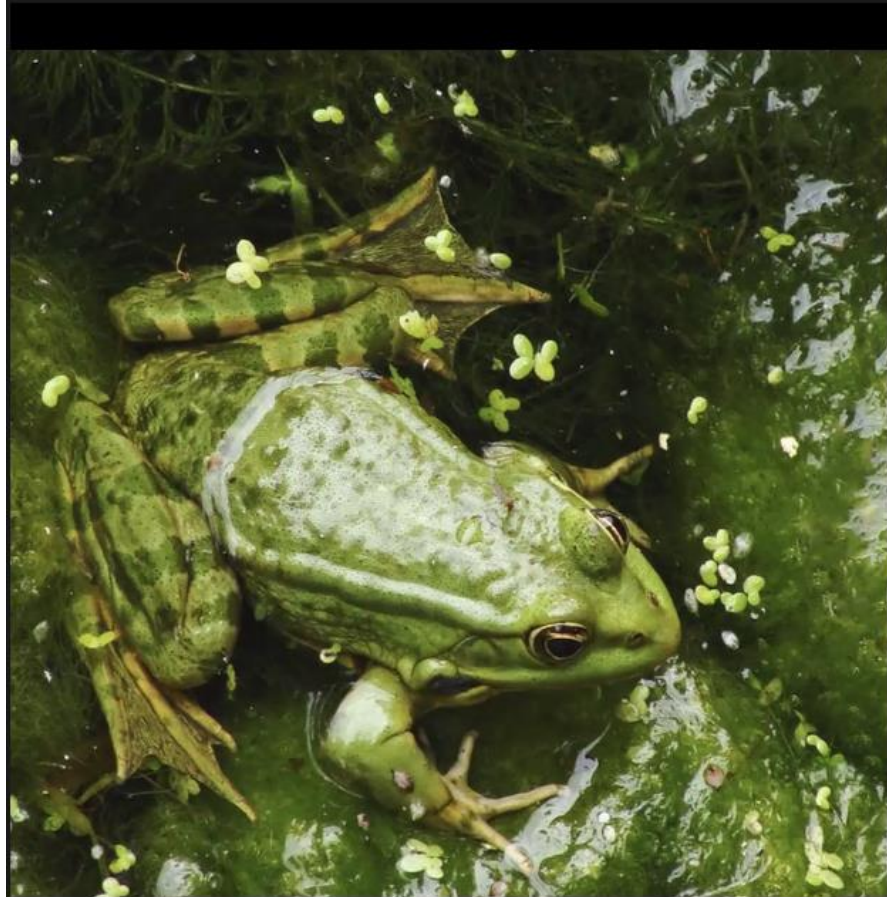
# July 2020 Nature of Science Teacher PD









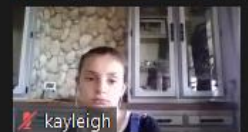


# AMPHIBIANS

- Class Amphibia
- Young live in water, most adults can live on land
- Have smooth, moist skin
- Young breathe with gills, adults breathe with lungs and through skin
- Lay jelly-like eggs with no shells
- Undergo metamorphosis



Scientist in Every  
Florida School  
Thompson Earth Systems Institute



# Me at sea



41 You

Andres Quevedo

Claudia Jimenez

L

Lena Carbo

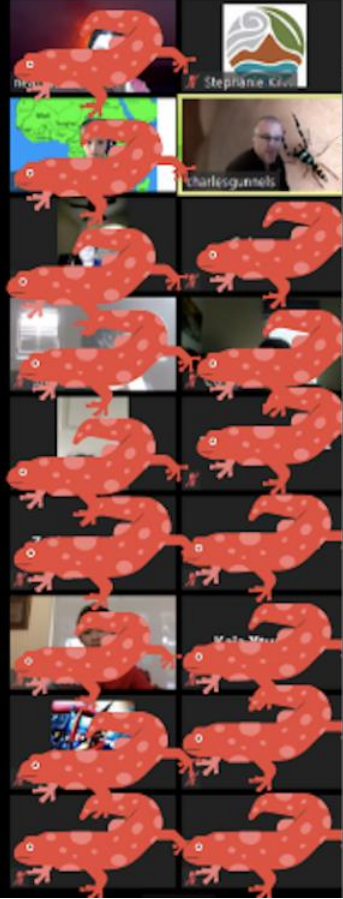
C

Claire Gacel

Renellys Perez - NOAA

Gabriel Brache





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UNIVERSITY OF  
FLORIDA

**FM**  
FLORIDA  
MUSEUM



Scientist in Every  
Florida School  
Thompson Earth Systems Institute



Pamela Soltis

# Pollination

- Pollination is the act of transferring pollen grains from one flower to another.
- This is the way that plants reproduce.
- "Bee" thankful! Without pollinators we wouldn't have some of our favorite foods!

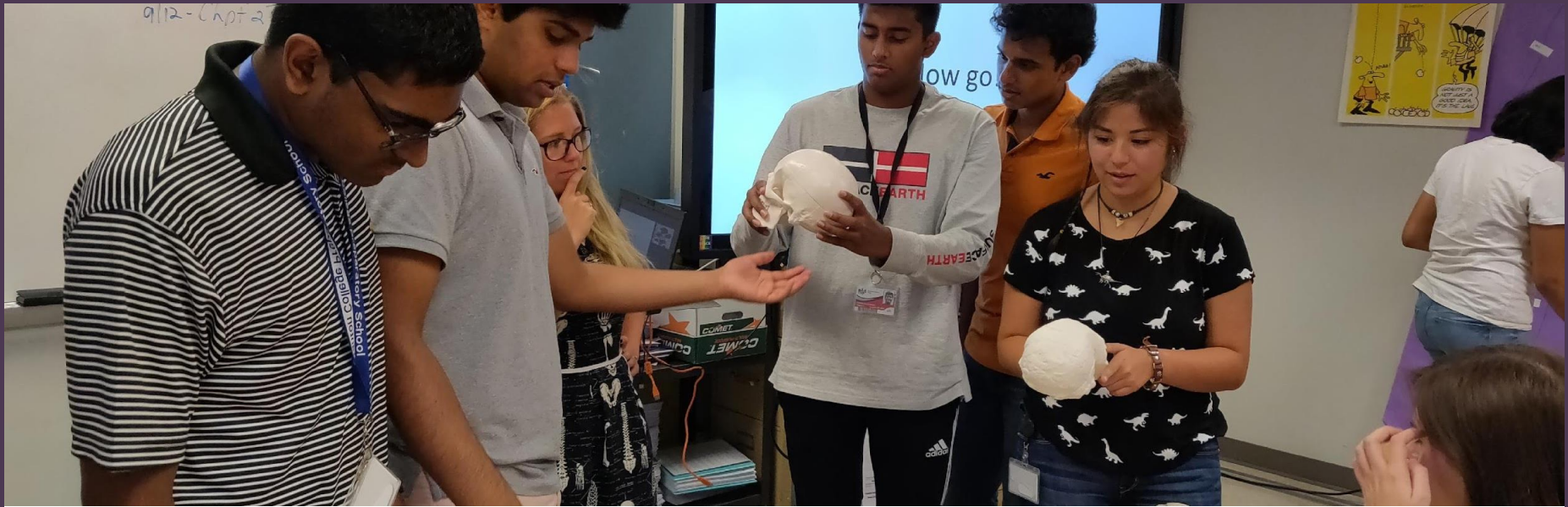


Cara



Leave





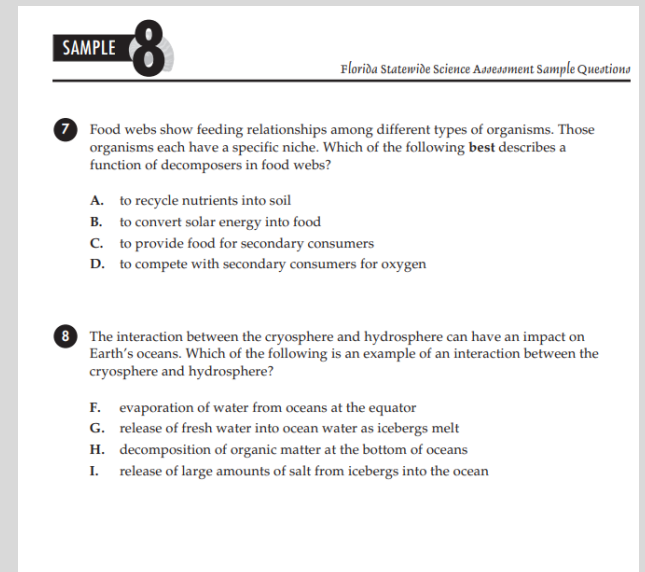
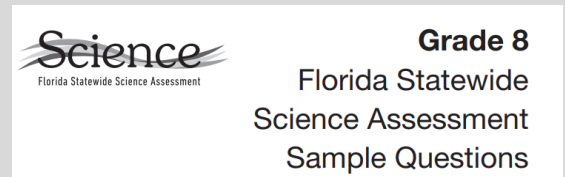
## K-12 classroom preparation

# Standards and Standardized Tests

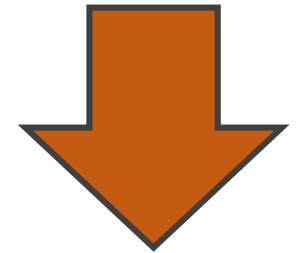
**Standards** are what students are expected to know and be able to do at a specific stage in education.

**State Science Assessment (SSA)** is the Florida Statewide standardized test. This science test was formerly known as the FCAT, or Florida Comprehensive Assessment Test.

**Testing Years** are 5th and 8th grade. High School Biology has an **End of Course (EOC)** exam.



# Finding Florida Standards



# CPalms

<https://www.cpalms.org/Public/>

Grade: 8

Body of Knowledge **SC.8.L: Life Science**

Big Idea 18 **SC.8.L.18: Matter and Energy Transformations** [read more](#)

Date Adopted or Last Revised: 02/08

**SC.8.L.18.1**

Describe and investigate the process of photosynthesis, .....

#### More Information

**Content Complexity:** Level 3: Strategic Thinking & Complex Reasoning

**Date Adopted/Revised:** 02/08

**Belongs to:** [Matter and Energy Transformations](#)

**SC.8.L.18.2**

Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.

#### More Information

**Content Complexity:** Level 3: Strategic Thinking & Complex Reasoning

**Date Adopted/Revised:** 02/08

**Belongs to:**

**SC.8.L.18.3**

Construct a scientific model of the carbon cycle to show how .....

#### More Information

**Content Complexity:** Level 3: Strategic Thinking & Complex Reasoning

**Date Adopted/Revised:** 02/08

**Belongs to:** [Matter and Energy Transformations](#)

**SC.8.L.18.4**

Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.

#### More Information

**Content Complexity:** Level 3: Strategic Thinking & Complex Reasoning

**Date Adopted/Revised:** 02/08

## SC.8.L.18.1

Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.

**Subject Area:** Science

**Body of Knowledge:** Life Science

**Big Idea:** [Matter and Energy Transformations](#) -

A. Living things all share basic needs for life.

B. Living organisms acquire the energy they need for life processes through various metabolic pathways (photosynthesis and cellular respiration).

C. Matter and energy are recycled through cycles such as the carbon cycle.

**Content Complexity Rating:** [Level 3: Strategic Thinking & Complex Reasoning](#) - [More Information](#)

[Reasoning](#) - [More Information](#)

**Status:** State Board Approved

**Grade:** 8

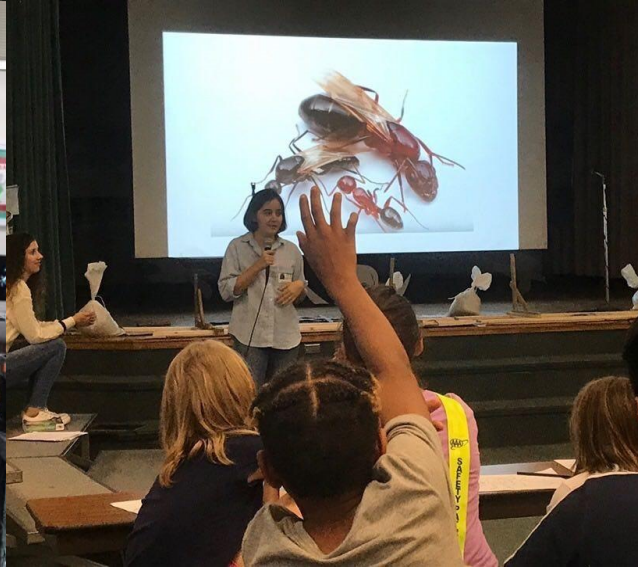
**Idea:** Level 3: Strategic Thinking & Complex Reasoning

**Date Adopted or Revised:** 02/08

**Date of Last Rating:** 05/08

**Assessed:** Yes





By the numbers:

- 194 scientist visits
- 260 scientists in network
- 800+ in teacher/scientist community
- 36 livestream events for distance learning
- 16,385 Florida students reached
- 140 schools reached

# How to get involved:



Educators can request a scientist visit here:

**[bit.ly/scientistrequest](https://bit.ly/scientistrequest)**  
(case sensitive)

# My Background

*Stephanie Killingsworth*

- B.A. Human Biology- University of Kansas
- Graduate Studies in Microbiology- University of Kansas
- Florida Certified Teacher 6-12 Biology
- Gifted Endorsed Teacher
- IB-gifted 7th and 8th grade science teacher (Conniston Middle School-Palm Beach County)
- Award winning teacher at the local, state, and national levels



# UF Honors Program

## Mission:

Connect, nurture and engage the next generation of scholars who change the world.



## Admissions:

- Application essays as part of the UF application process (extremely important)
- Quality of high school academic record (very important)
- Extracurricular involvement (very important)

# A Closer Look at the UF Honors Program

## **Director's Message:**

UF Honors is an uncommon community of scholars. UF is a big place and UF Honors works to make it feel smaller and to help you build a peer group of students serious about academics. We're looking for students that want to challenge themselves and get the most out of their academic undergraduate experience. Because UF is a diverse place with hundreds of possible majors, we allow you to tailor your honors experience with help from our faculty advisors to your interests and career goals. (Dr. Mark E. Law)



# UF Honors Program Benefits

- Residential academically-focused living learning community (Hume Hall)
- Opportunities with honors student organizations
- Access to specialized advising and coaching support
- Become part of powerful peer and alumni network
- Early registration for courses, access to honors classes, scholarship support

# A Closer Look at the UF Honors Program

Program matriculates around 700 students annually (10% of incoming class)  
Approximately 66% of Honors Program students are in the STEM fields

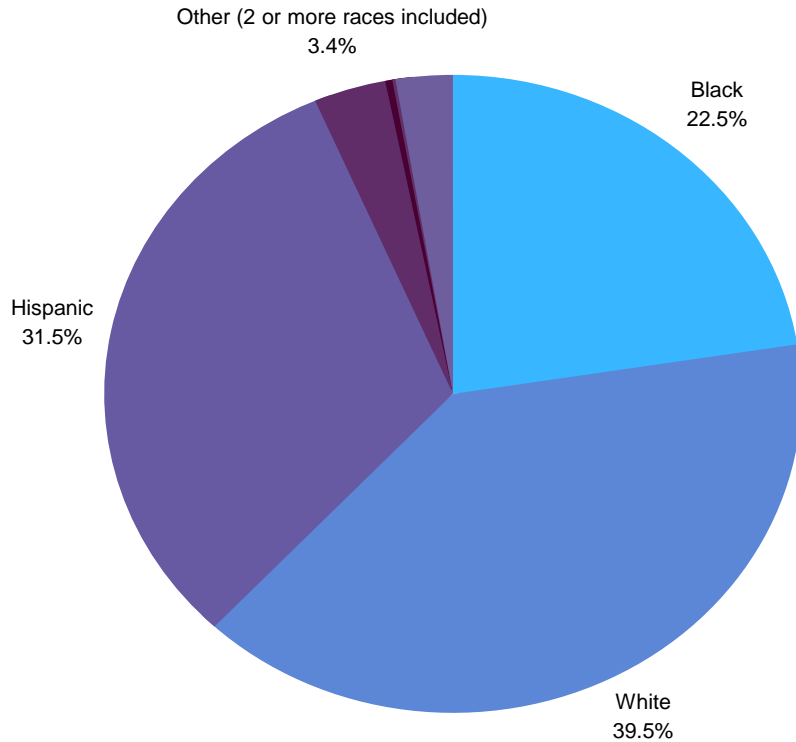
## Two Key Issues

- Program demographics are not reflective of UF student or Florida population
- Communication-It's unclear if schools and BIPOC (Black, Indigenous People of Color) know about this program

# What Do the Data Say for Florida K-12?

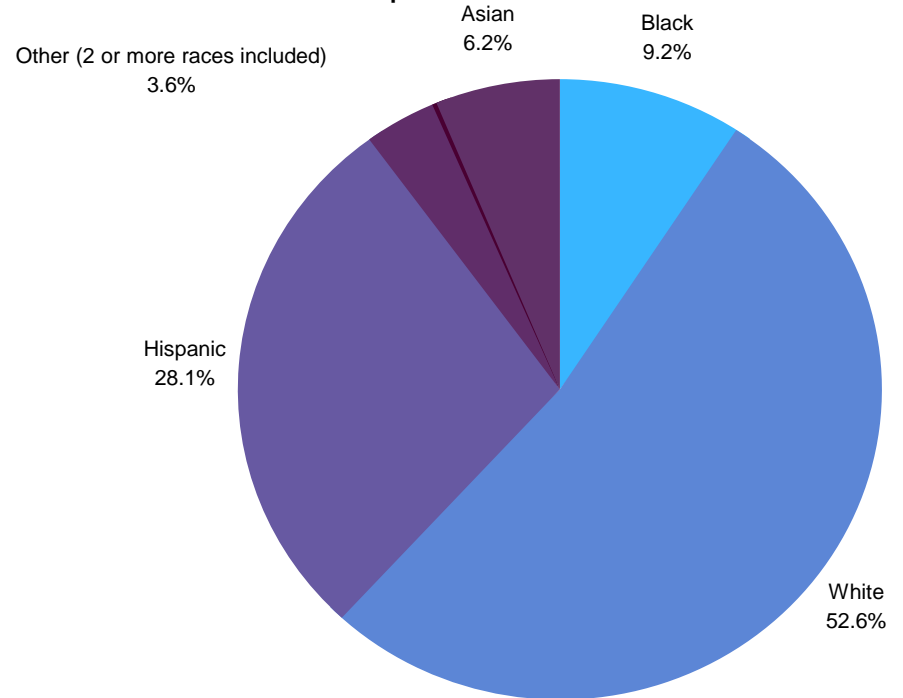
Total Student Demographics in Florida 2015-2016

Florida Department of Education



Gifted Program Demographics in Florida 2015-2016

Florida Department of Education



AROUND 6% OF STUDENTS IDENTIFIED AS GIFTED

# Key Objectives of the Gifted Endorsement Course

- Understanding the role of societal, cultural, emotional, experiential, and economic factors in supporting or inhibiting the development of giftedness
- Identify issues related to identification of gifted students
- **Recognize diverse types of gifted students-identification of subgroups and underserved populations**
- Examine the challenges of finding these students and the need to modify and differentiate the curriculum in terms of needs

# How Do We Create Change?



CHANGE

CHANGE



# Envisioning More SEFS & Honors Program Vision

## Rising High School Seniors

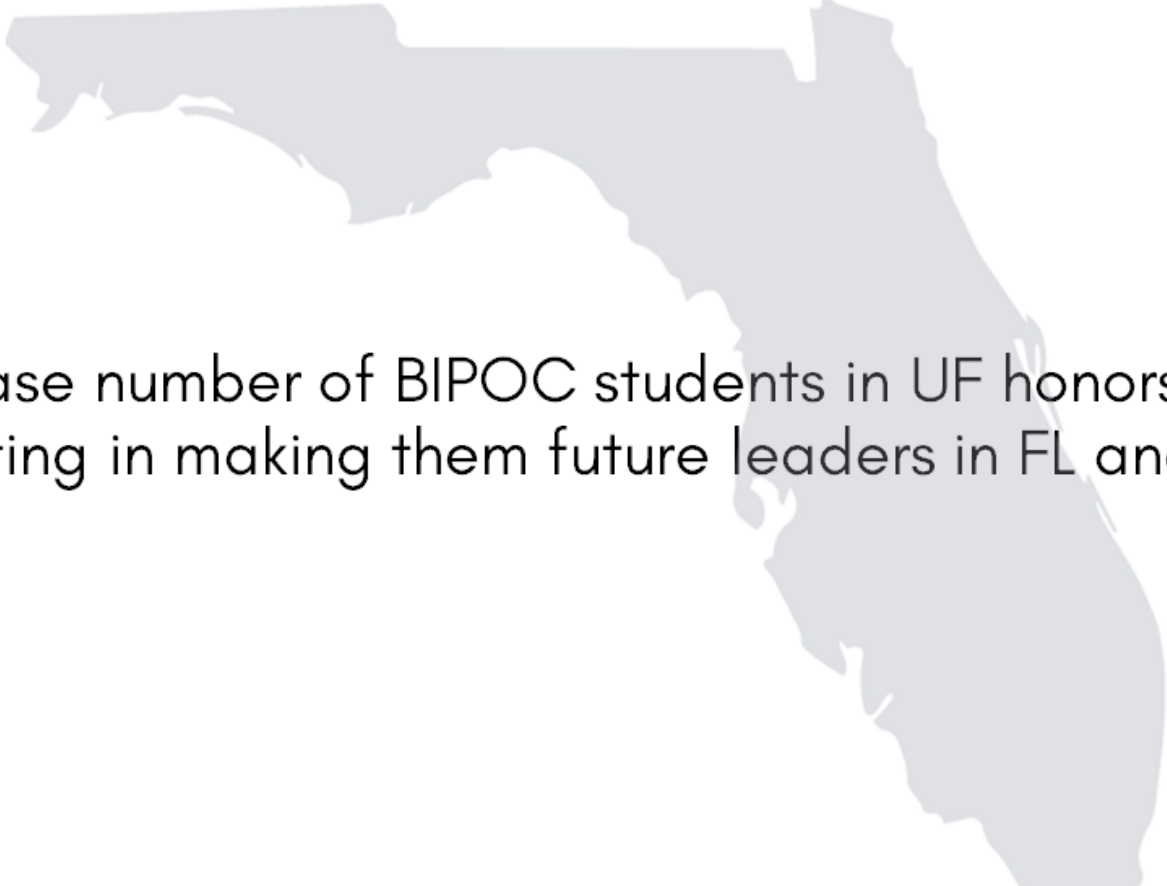
- Raise awareness and understanding of the UF Honors Program at K-12 level
- Target IB, Cambridge, AICE, Honors (AP) in Florida districts
- Work with gifted endorsed teachers and school counselors around the state
- Identify BIPOC (Black, Indigenous People of Color) gifted students in K-12

# Envisioning More SEFS & Honors Program Vision

## When Accepted to UF

- HS STEM focused program
- Summer institute for rising Seniors interested in Earth Systems science emphasis on entering honors program
- If selected they would be mentored by TESI-SEFS team of scientists while at UF
- Follow selected students and record program outcomes

# Long Term Impacts and Vision



Increase number of BIPOC students in UF honors program resulting in making them future leaders in FL and beyond

# Call To Action

In order to build such a program we need YOU!

If you are interested or can let us know how to get involved in your district in order to pilot the SEFS-UF Honors Program

CONNECT WITH US:  
[Bit.ly/SEFSsite](http://Bit.ly/SEFSsite)



**Scientist in Every  
Florida School**  
Thompson Earth Systems Institute

**THANK YOU**





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Questions?

## Survey Reminder

- Please fill out the survey as it will help guide us to better serve our stakeholders in education. The link is found in the question box on the webinar or in the followup email you will receive later today.



**THANK YOU**

## Resources

- [Gifted Education Programs](#)
- [Thompson Earth Systems Institute](#)
- [Scientist in Every Florida School](#)
- [PAEMST](#)
- [Javits-Frasier Scholars](#)

## Contact Information

For further information about collaborative efforts and the gifted education program at FDOE, please contact Alicia Foy at [Alicia.Foy@fldoe.org](mailto:Alicia.Foy@fldoe.org)



[www.FLDOE.org](http://www.FLDOE.org)



[www.FLDOE.org](http://www.FLDOE.org)