75 Years of FAST

Florida Association of Science Teachers’ Annual Conference
St. Augustine, Florida
October 27-29, 2022
As president of FAST, it is both my honor and pleasure to welcome you to the 2022 FAST Annual Conference celebrating “75 years of FAST.” I encourage you to take advantage of this professional development that will reignite your passion for science teaching and learning. We have an excellent learning experience planned for you provided by experienced Florida educators and organizations for teacher leaders. The sessions will not only focus on STEM strategic instruction, they will help you to make real world connections to real world problems especially environmental. Numerous sessions offer lesson plans and access to free websites that can be used in the classroom immediately. We are welcoming Page Keeley, world renowned author in educational strategies, to our speaker luncheon. The conference also provides the opportunity to network and connect with fellow science educational leaders, share stories, strategies and best practices. This year’s vendor hall is a must see with science education companies and organizations showcasing various products and programs, services and curricula that directly connect to in-classroom instruction. Hopefully, you will find something new and exciting for your science teaching and learning experience. Attend the “Meet and Greet” to learn how to best navigate the conference and network with peers and your FAST board of directors. I hope to see you at the selfie booth! I want to personally thank the conference committee for their hard work and dedication in bringing the 2022 FAST Conference, “live and in person!”

Dr. Marjorie Miles Dozier
2022 FAST President

2022 Conference Committee
Barbara J. Rapoza
Nancy Besley
Dr. Gary A. Yoham

Sharon Cutler
Dr. Yvette Greenspan

Cover designed by Stephanie Killingsworth
Microscopes Engineered For Classroom Applications

- Rugged & Portable
- Student-proof Features
- 360° Rotatable Head for Easy Storage
- Ergonomic & Eco-friendly

EXS-210-13
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Compact and rechargeable for corded or cordless operation with built-in transmitted & incident LED lighting making this ideal for education and field work.

List Price: $295.00
Show Price: $229.00

EXM-150
Monocular Microscope
High performance at an affordable price, the LED illumination provides bright, even illumination in both corded and cordless operation.

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EXC-123-HDS
Teaching Microscope
Teaching configuration includes microscope & camera/monitor system featuring on-board software for use without a PC. The included CaptaVision™ imaging software let’s you do more: perform measurements, annotations & more!

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NOTE: To receive Special Show Prices, orders must be processed through an ACCU-SCOPE authorized dealer. Call 631-864-1000 for a dealer near you.

USE THE QR CODE TO ENTER FOR YOUR CHANCE TO WIN SIX HIGH SCHOOL LEVEL MICROSCOPES FOR YOUR CLASS!!!

Winner must be present for the drawing during the closing ceremonies on Saturday, October 29th to claim their prize.

Empowering Discovery. Advancing Results.
Congratulations to our $500 Classroom and $400 Travel Grant Winners

**Classroom Grants**

**Brandon Boswell**
Cypress Bay High School
"CRISPR Gene Editing in the Classroom"
FAST Area 6: Hillsborough County

**Donna Clark**
Clark Elementary
“Tracking Sea Turtles and Sharks”
FAST Area 6: Hillsborough County

**Matthew Delorey**
Bay Point Middle School
“Young Scientists are SPROUTING Up”
FAST Area 6: Pinellas County

**Julie Gladden**
Morgan Woods Elementary
“Crazy Traits”
FAST Area 6: Hillsborough County

**Marjorie Miles Dozier**
Davenport High School
“Mangrove Restoration Project”
FAST Area 6: Polk County

**Travel Grant**

**Marie Place**
Knights Elementary
School Garden
FAST Area 6: Hillsborough County

**Jay Rosenberg**
Cypress Bay High School
“Crystal Violet Kinetics Experiment”
FAST Area 10: Broward County

**Diana Techentien**
Christ the King Catholic School
“First Grade Chicken Husbandry”
FAST Area 6: Hillsborough County

Both Travel and Classroom Grant recipients must see Nancy Besley, FAST treasurer, to receive the award packet!
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For Title I Schools

Summer Camp

Teacher Workshops

MarineLab
51 Shoreland Drive Key Largo FL 33037
305.451.1139  www.marinelab.org
## Thursday, October 27, 2022

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00 AM – 4:30 PM</td>
<td>FAST Attendee Registration</td>
<td>Convention Center (Lobby)</td>
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<tr>
<td>10:00 AM – 4:00 PM</td>
<td>WORKSHOPS</td>
<td>Convention Center (Rooms)</td>
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<tr>
<td>5:30 PM – 7:30 PM</td>
<td>Meet &amp; Greet</td>
<td>Hotel (Pool Area)</td>
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<td></td>
<td>Join FAST board members and</td>
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<td></td>
<td>other attendees and discuss how</td>
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<td>to get the most out of the conference</td>
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</tr>
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<td></td>
<td>(Beverages and light appetizers)</td>
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<td></td>
<td>Pre-Registration Required</td>
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## Friday, October 28, 2022

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<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>7:00 AM – 4:00 PM</td>
<td>FAST Attendee Registration</td>
<td>Convention Center (Lobby)</td>
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<tr>
<td>8:00 AM</td>
<td>Free Coffee/Sweets</td>
<td>Convention Center (Vendor Hall)</td>
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<tr>
<td>8:00 AM – 5:00 PM</td>
<td>VENDOR EXHIBITS</td>
<td>Convention Center (Vendor Hall)</td>
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<tr>
<td>11:45 AM – 1:00 PM</td>
<td>SPEAKER LUNCHEON</td>
<td>Convention Center (St. Augustine B)</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>COOKIE BREAK (FREE)</td>
<td>Convention Center (Vendor Hall)</td>
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## Saturday, October 29, 2022

<table>
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<tr>
<th>Time</th>
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<tr>
<td>7:00 AM – 9:00 AM</td>
<td>FAST Attendee Registration</td>
<td>Convention Center (Lobby)</td>
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<tr>
<td>7:45 AM</td>
<td>Free Coffee/Sweets</td>
<td>Convention Center (Vendor Hall)</td>
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<tr>
<td>7:45 AM – 11:30 AM</td>
<td>VENDOR EXHIBITS</td>
<td>Convention Center (Vendor Hall)</td>
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<tr>
<td>8:00 AM – 11:30 AM</td>
<td>CONCURRENT SESSIONS</td>
<td>Convention Center (Rooms)</td>
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<tr>
<td>9:15 AM – 11:30 AM</td>
<td>FEATURED SESSION:</td>
<td>Convention Center (St. Augustine C)</td>
</tr>
<tr>
<td></td>
<td>Brevard’s Famous Make &amp;</td>
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<tr>
<td></td>
<td>Take for Elementary Standards</td>
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<tr>
<td>11:30 AM – 12:30 PM</td>
<td>Raffle</td>
<td>Convention Center (Vendor Hall)</td>
</tr>
</tbody>
</table>

PARKING: Self-Parking is Free for all day Attendees during the Conference. Overnight parking is free if registered through our website!

Schedule can change without notice! Please check back often.
Social Events

Meet and Greet!
Thursday, October 27, 2022

Time: 5:30 PM – 7:30 PM
Cost-FREE!

Even though the cost was free to everyone, you MUST have REGISTERED by October 7, 2022 to ATTEND! Your registration allows us to order enough food and drink so all attendees will have a great time! You must be REGISTERED for the conference to attend. You still might be able to attend if there were cancelations, check the registration desk.

Location: Pool Area
Educators only, no guests!

Come as you are and enjoy snacks, adult beverages, and the company of your colleagues.

Sponsored by FPL

Speaker Luncheon!
Friday, October 28, 2022

Time: 11:45 am until 1:00 pm
Cost: $15.00 (discounted rate of $7.50 for Life Members/Past Presidents, ALL must have pre-registered by October 7th, 2022)

Location: St. Augustine B in the Convention Center

Open to all attendees (must have preregistered by October 7th, 2022)
You still might be able to attend if there were cancelations, check the registration desk.

Enjoy a buffet lunch that includes grilled chicken, pasta, salad and dessert while listening to Page Keeley, an internationally known leader in science education! Her books help provide teachers with formative assessment resources and help them understand how students think about science concepts. She is a past president of NSTA and has received a Presidential Award for Excellence in Secondary Science teaching.

Past Presidents, the Outstanding Teacher Recipients and the PAEMST nominees will be recognized.

maximum: 60
Bring your classroom to life.
jacksonvillezoo.org/education

The Presidential Award for Excellence in Mathematics and Science Teaching

Did you know that the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the nation’s highest honors, bestowed by the U.S. government, for STEM teachers? Each year, the National Science Foundation (NSF), on behalf of the White House Office of Science and Technology Policy recognizes up to 108 teachers for K-12 science, technology, engineering, mathematics, and/or computer science teaching. The award recognizes those teachers that have both deep content knowledge of the subjects they teach and the ability to motivate and enable students to be successful in those areas.

Recipients of the award receive:
* A certificate signed by the President of the United States.
* A paid trip to Washington, D.C., to attend a series of recognition events and professional development opportunities.
* A $10,000 award from the National Science Foundation.
* An opportunity to build lasting partnerships with colleagues across the nation.

Teachers like you deserve recognition! Visit www.paemst.org for more information. APPLY NOW!
1. Engaging Science Activities That Work!

**Presented by:** Jeffrey Dudukovich, Physics Bus Teacher, Seminole County Public Schools

New and innovative hands-on activities which are sure to engage your students. You will participate in numerous physics activities that you can use with your students. Included activities (but not limited to): Gravity Well; Earth-Moon-Sun System; Roller Coaster physics; Hot Wheels speedometry; Seeing sound; Electromagnetic Spectrum; Electricity; Magnetism; Forces and Motion - Jedi training; Raingutter Regatta; and much, much more.

This workshop is geared toward 3-8 grade science teachers, STEM teachers, and coaches. Join Jeff, who serves as the Seminole County Public Schools Physics Bus teacher and introduces physics to over 9,500 4th and 5th grade students annually! He has served as an elementary, middle, and high school science teacher and instructional coach.

**Audience:** Elementary and Middle School Teachers  
**Time:** 10:00am - 12:00pm  
**Cost:** $5.00  
**Location:** St. Augustine F  
**Maximum:** 25  
**Minimum:** 15

2. Minecraft in the Science Classroom

**Presented by:** Kimberly Niebauer, Teacher of Gifted, Minecraft Mentor, Duval County Public Schools

Minecraft is a game-based learning platform that promotes creativity, collaboration, and problem-solving in an immersive digital environment. Educators in more than 115 countries are using Minecraft: Education Edition across the curriculum. During this training, you will be introduced to the Microsoft Innovative Educator course through which you can access Minecraft for Education and so much more. Learn to teach with Minecraft, find activities to engage your students across subjects and join our global community. Whether you are new to Minecraft or looking to improve your skills, this training will help. Walk away with how to implement Minecraft into your classroom while being aligned to Science Benchmarks.

Participants will need to bring their own laptops and ideally, they should have access to M:EE. (If they are DCPS teachers it can be downloaded in the Company Portal.)

**Audience:** All Teachers  
**Time:** 10:00am - 12:00pm  
**Cost:** $5.00  
**Location:** St. Augustine E  
**Maximum:** 30  
**Minimum:** 5
3. Argument-Driven Inquiry in Grades 3-5: How to give children more opportunities to use science and literacy to make sense of the world around them

Presented by: Dr. Victor Sampson, Ph.D., Associate Professor of STEM Education, The University of Texas at Austin

This session introduces a way to create learning experiences that will give students opportunities to talk, read, and write in the service of sense making as they use the DCIs, CCs, and SEPs to explain natural phenomena.

The session will give teachers an opportunity to participate in the same sort of rich and meaningful learning experiences that are called for by the NGSSS. Such learning places the focus squarely on the nature of instruction. It is rooted in ongoing, active experiences that will prompt teachers to expand their content knowledge, pedagogical knowledge, and expand their beliefs about what is possible inside the classroom. The presenter will guide the participants in a series of focused, small-group demonstration activities that are structured like a typical day’s lesson, allowing teachers to experience instruction as students do. The demonstration activities will focus on making sense of magnetic fields.

Audience: 3-5th grade teachers
Time: 12:00pm - 2:00pm
Cost: $5.00
Pre-registration Required
Location: Wentworth
Maximum: 26
Minimum: 8

4. Junior Solar Sprint (JSS) Car Building Workshop

Presented by: Susan Schleith, Program Lead, and, Penny Hall, Program Coordinator, K-12 Education, Florida Solar Energy Center, University of Central Florida

The Junior Solar Sprint (JSS)* is a hands-on, project-based program for 4th-8th grade students emphasizing STEAM knowledge and skills, while introducing students to solar electric (photovoltaic) technology. Working in groups of 2 to 4 students, each team designs, builds and races a model-sized vehicle, powered by photovoltaic (PV) technology. JSS competitions are held throughout Florida and the United States, with a national event held annually in conjunction with the National TSA Conference. This teacher workshop introduces the process for implementing the JSS program by allowing participants to work in teams as the students would, to design, build and race a vehicle. Each teacher team builds a vehicle and tests it on a track in a “mock” race in order to experience the entire process. The workshop is four hours in duration. Each attendee will receive a JSS solar panel and vehicle motor, as well as a $50 gift card for their participation in the workshop.

*JSS is a program created by Argonne National Laboratory and was implemented by the National Renewable Energy Laboratory (NREL) in Colorado. The Florida Solar Energy Center (FSEC) has coordinated JSS races in Florida in cooperation with NREL since 1992. The program is endorsed by the National Science Teachers Association (NSTA) and is currently one of the STEM programs supported by the Army Educational Outreach Program (AEOP) and the Technology Student Association (TSA).

Audience: Elementary and Middle School Teachers
Time: 12:00pm - 4:00pm
Cost: $5.00
Pre-registration Required
Location: Troon
Maximum: 20
Minimum: 5
5. Argument-Driven Inquiry: How to Make Science Learning Experience More Meaningful, Rigorous, and Equitable

Presented by: Dr. Victor Sampson, Ph.D., Associate Professor of STEM Education, The University of Texas at Austin

This session will describe how to make learning experiences in science more meaningful, rigorous, and equitable for students. Meaningful learning occurs when students have opportunities to make sense of the world around them. Rigorous work presses learners to go beyond what they currently know and can do. A rigorous learning experience gives students an opportunity to use core ideas and practices of science to figure something out. Equity means giving all students, rather than a select few, a fair opportunity to learn. It also means doing everything possible to ensure that every student feels like their ideas and participation are valued because they have unique life experiences and ways of talking or thinking that are useful for figuring out how or why something happens.

The session will give teachers an opportunity to participate in the same sort of rich and meaningful learning experiences that are called for by the academic standards. Such learning places the focus squarely on the nature of instruction. It is rooted in ongoing, active experiences that will prompt teachers to expand their content knowledge, pedagogical knowledge, and expand their beliefs about what is possible inside the classroom. The presenter will guide the participants in a series of focused, small-group demonstration activities that are structured as a typical learning experience, allowing teachers to experience instruction as students do.

Audience: All Teachers
Time: 2:00pm - 4:00pm
Cost: $ 5.00

Location: Wentworth
Maximum: 26
STUDENTS. STRATEGIES. SUCCESS
providing quality professional development
improving teaching and learning
modeling practical application of educational theory

We will:
- align to standards
- tailor for content and/or grade level needs
- support your initiatives and objectives
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EnergyWhiz
Empowering Student Innovation for a Clean Energy Future

EnergyWhiz is a forum for elementary, middle and high school students to demonstrate their STEAM capabilities through project-based, energy-focused learning activities.

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February 21-24, 2023
Cocoa, FL
April 22, 2023

For more information, contact:
Penny Hall
321-638-1018
penny@fsec.ucf.edu
Congratulations!

2022 FAST Awards

**Outstanding Elementary Teacher**

**Navia Gomez**

Dante Fascell Elementary, Miami

**Outstanding Science Educator**

**Melissa Sleeper**

Storm Grove Middle School, Vero Beach

Florida PAEMST Science Finalists

**Scott Sowell**

2019 Secondary national presidential awardee

**Katrina Madok**

2020 Elementary national presidential awardee

**Madge Nanney**

2022 Elementary state presidential finalist
Please note: As you review the sessions on the following pages, you will see that the sessions are in different rooms as listed.

The abbreviations you will see are E (Elementary), M (Middle), H (High), C (College) and A (All—General). Pedagogy is not specifically identified but include “Making Connections across the Curriculum”, “Differentiating Instruction”, “Science and Literacy” and “Research and Applications in Technology”. There is something for every interest. Many wonderful presentations were proposed and accepted.

Example:

![Diagram of a session program]

The title of the presentation is “Roller Coaster Physics” and is at the elementary and middle level. The session is in Room 102. The name of the Presenter is Jane Doe from an Elementary School.

Note: There will be a couple of sessions that will take 2 block periods. These are on Saturday and labeled in the program.
**Engaging Science Activities That Work!**

**E, M**
St. Augustine F

Jeffrey Dudukovich, Physics Bus Teacher, Seminole County Public Schools

New and innovative hands-on activities which are sure to engage your students. You will participate in numerous physics activities that you can use with your students. Included activities (but not limited to): Gravity Well; Earth-Moon-Sun System; Roller Coaster physics; Hot Wheels speedometry; Seeing sound; Electromagnetic Spectrum; Electricity; Magnetism; Forces and Motion - Jedi training; Raingutter Regatta; and much, much more.

This workshop is geared toward 3-8 grade science teachers, STEM teachers, and coaches. Join Jeff, who serves as the Seminole County Public Schools Physics Bus teacher and introduces physics to over 9,500 4th and 5th grade students annually! He has served as an elementary, middle, and high school science teacher and instructional coach.

Cost: $5.00
Pre-registration Required
Maximum: 25
Minimum: 15

---

**Minecraft in the Science Classroom**

**A**
St. Augustine E

Kimberly Niebauer, Teacher of Gifted, Minecraft Mentor, Duval County Public Schools

Minecraft is a game-based learning platform that promotes creativity, collaboration, and problem-solving in an immersive digital environment. Educators in more than 115 countries are using Minecraft: Education Edition across the curriculum. During this training, you will be introduced to the Microsoft Innovative Educator course through which you can access Minecraft for Education and so much more. Learn to teach with Minecraft, find activities to engage your students across subjects and join our global community. Whether you are new to Minecraft or looking to improve your skills, this training will help. Walk away with how to implement Minecraft into your classroom while being aligned to Science Benchmarks.

Participants will need to bring their own laptops and ideally, they should have access to M:EE. (If they are DCPS teachers it can be downloaded in the Company Portal.)

Cost: $5.00
Pre-registrations Required
Maximum: 30
Minimum: 5

---

**Junior Solar Sprint (JSS) Car Building Workshop**

**E, M**
Troon

Susan Schleith, Program Lead, and, Penny Hall, Program Coordinator, K-12 Education, Florida Solar Energy Center, University of Central Florida

The Junior Solar Sprint (JSS)* is a hands-on, project-based program for 4th- 8th grade students emphasizing STEAM knowledge and skills, while introducing students to solar electric (photovoltaic) technology. Working in groups of 2 to 4 students, each team designs, builds and races a model-sized vehicle, powered by photovoltaic (PV) technology. JSS competitions are held throughout Florida and the United States, with a national event held annually in conjunction with the National TSA Conference. This teacher workshop introduces the process for implementing the JSS program by allowing participants to work in teams as the students would, to design, build and race a vehicle. Each teacher team builds a vehicle and tests it on a track in a “mock” race in order to experience the entire process. The workshop is four hours in duration. Each attendee will receive a JSS solar panel and vehicle motor, as well as a $50 gift card for their participation in the workshop.*JSS is a program created by Argonne National Laboratory and was implemented by the National Renewable Energy Laboratory (NREL) in Colorado. The Florida Solar Energy Center (FSEC) has coordinated JSS races in Florida in cooperation with NREL since 1992. The program is endorsed by the National Science Teachers Association (NSTA) and is currently one of the STEM programs supported by the Army Educational Outreach Program (AEOP) and the Technology Student Association (TSA).

Cost: $5.00
Pre-registrations Required
Maximum: 20
Minimum: 5
### Argument-Driven Inquiry: How to Make Science Learning Experience More Meaningful, Rigorous, and Equitable

**A Wentworth**

**Dr. Victor Sampson, Ph.D., Associate Professor of STEM Education, The University of Texas at Austin**

This session will describe how to make learning experiences in science more meaningful, rigorous, and equitable for students. Meaningful learning occurs when students have opportunities to make sense of the world around them. Rigorous work presses learners to go beyond what they currently know and can do. A rigorous learning experience gives students an opportunity to use core ideas and practices of science to figure something out. Equity means giving all students, rather than a select few, a fair opportunity to learn. It also means doing everything possible to ensure that every student feels like their ideas and participation are valued because they have unique life experiences and ways of talking or thinking that are useful for figuring out how or why something happens.

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**Cost: $5.00**

**Pre-registration Required**

**Maximum:** 26

**Minimum:** 8
**Friday, October 28, 2022**

**Free Coffee/Sweets in the Vendor Hall @ 8:00am**

---

### 8:15—9:15AM Concurrent Session 1

#### Dialogues - Get Your Students Reading, Writing, and Learning Content

**M, H**

**Legends 1**

**Craig Berg,** University of Wisconsin-Milwaukee, **Anne Levendusky,** University of Florida

*Learn how to use dialogues, a powerful strategy for learning content and increasing student engagement for online or classroom use. Receive a 237 page free book.*

#### Going Beyond the Classroom: Leveraging Hands-On Activities for Afterschool and Summer Programs

**E**

**Legends 2**

**Pam Caffery,** National Consultant, Hands2Mind

*Are you looking for engaging ways to extend the learning and build solid home connections? In this session, we’ll explore afterschool and summer school activities and materials that engage students in conceptual understanding as well as engaging and fun.*

#### Introducing ScienceSaves, a Project that Promotes Science Appreciation

**E, M, H**

**Legends 3**

**Kenny Coogan,** ScienceSaves

*ScienceSaves promotes the fact that thanks to science, individual lives are healthier and easier. Our free lessons teach graphing, data analysis, engineering practices, and more. They include teacher notes with curriculum standards, student response sheets, rubrics, and lesson plan documents.*

#### Aquaculture in the Classroom

**E, M**

**St. Augustine A**

**Katrina Bayliss,** Biological Scientist IV, Florida Department of Agriculture and Consumer Services

*This presentation will provide an overview of aquaculture around the world and real-world examples of how aquaculture can be incorporated into traditional science courses as well as offer information on the numerous free resource available to Florida teachers.*

#### Magnets and the National MagLab

**E**

**St. Augustine E**

**Carlos Villa,** Director of K-12 Education Programs

*The National Magnet Lab (Tallahassee, FL) presents the ultimate session on magnetism for elementary grades. This session covers magnets, their properties, and lesson ideas for your classroom. A unique souvenir for all teachers that attend!*
9:30—10:30AM Concurrent Session 2

Guy Harvey Ocean Foundation Elementary Collections
E
Lesley Kirkley, Sr. Instructional Specialist K-8 Science, Pasco County

Hands on session designed for participants to experience the GHOF K-5 lessons. Lessons were created by Florida educators to integrate Florida Science and Art standards and utilize Dr. Guy Harvey’s art work and marine biology research.

Online Student Tutorials and What’s New on CPALMS.
A
Jim Reynolds, Carrie Meyers, Robert Hanna, & Kahiesha Clark, STEM Specialist, FCR-STEM at Florida State University

Looking for resources that are Florida standards-aligned? CPALMS is the go-to resource for all your teaching needs including interactive student tutorials and a curriculum mapping tool that auto generates student and parent web pages to ease communication.

Seamless Integration: Early Childhood STEM, Language and the Arts
E
Juliana Texley, Lesley University, Past NSTA President, & Ruth Rudd

Early Childhood STEM isn’t about subjects. It is about Habits of Mind and is intrinsically integrated with great literature.

Climate and Wildlife Activity Module
M, H
Gina Long, Project WILD Coordinator, Florida Fish and Wildlife Conservation Commission

Project WILD released a Climate and Wildlife module in 2022. This brand new mini-guide is provided free to all attendees.

Increase Student Engagement Using Current High-profile Cases
H
Ruth Bickel, Forensics Teacher at Florida State University Schools

This session will provide creative ways for students to analyze high-profile criminal cases using social media and news sources in cross-curricular activities for Forensics classrooms.

Headwaters Science Institute: Student Driven Research
M, H, C
Jennifer Cotton, Program Manager, Headwaters Science Institute

Teachers will learn the process of facilitating a research program in their classroom. They will be guided in teaching the steps to engage students in critical thinking by completing research projects.

Using Roles to Increase Student Participation and Learning in Collaborative Groups
E, M, H
Shari Sipka, Science Teacher, Liberty Middle School, Orange County

Explore the use of roles in collaborative groups. Participants will actively participate in a simulation using roles, will be able to determine what roles are appropriate for their science activity and establish norms for using roles.

Activate Learning with OpenSciEd
M
Ellen Mintz, Professional Learning Coordinator, Andrew Whittet, Regional Sales Manager, Activate Learning

With OSE from Activate Learning, students can apply learning, authentically engage like scientists, record their learning, and address feedback in real-time. Featuring an all-new user experience, teachers have everything they need to plan, teach, assign, and assess lessons in a platform that is integrated with leading learning management systems.

STEAM-EE Solar Cookers
E, M, H
Penny Hall, Education Coordinator, Susan Schleith, Education Lead, & Stephanie Salmon, & Sherri Shields, Director, Communications & Marketing, Florida Solar Energy Research Center, University of Central Florida

Building and using solar cookers is an effective way to integrate Science, Technology, Engineering, Arts, Mathematics, Energy and the Environment. Learn strategies for classroom implementation. Attendees receive free standards-aligned activities, design plans, and presentation materials. Door prizes!
TIME TO MAKE AN IMPACT

Nova Southeastern University's
Dr. Kiran C. Patel's College of Osteopathic Medicine offers undergraduate programs in:

Health Informatics
Health and Wellness Coaching
Human Nutrition
Public Health

For more info, scan the QR code or visit:
www.nova.edu/visitcampus
We're moving Florida forward by investing in STEM education

FPL has deployed a variety of programs and tools to help educators tap into opportunities to enrich their curricula.

To provide a deeper understanding of energy concepts, FPL is providing a comprehensive energy curriculum for grades 4-6 that covers energy standards in science, English language arts and math.

This open source curriculum can be used by any interested teacher or school district, and contains lessons and hands-on experiments for the classroom.

To access materials, please visit www.energycurriculum.com.
How to Make STEM Instruction Meaningful, Rigorous, and Equitable for Students

Dr. Victor Sampson, Associate Professor, University of Texas, Austin

This session introduces a way to create learning environments that give all students a chance to learn how to use the core ideas and practices of science, math, and engineering to make sense of the world around them.

Guy Harvey High School Curriculum Resources in Action

Mark Butler, GHOF Ambassador, Pasco County 6-12 Science

Participants will experience hands-on activities from the GHOF curriculum. These activities will be focused on high school science standards and are applicable in a variety high school science courses. Participants will have full access to the FREE GHOF curriculum

Putting Down STEM Roots with Permaculture

Jessica Marcolini, Assistant Director, Heather Skaza Acosta, Associate Professor, Marco Acosta, Coordinator, Whitaker Center for STEM Education, Florida Gulf Coast University

FGCU’s Food Forest engages individuals in permaculture design through hands-on STEM activities, tied directly to state and national standards. Student-centered activities and resources will be shared and participants will leave with practical uses for their own schoolyards.

Green Schools, Worth the Work? You Betcha!

John Martinez, & Dawn Chehab, Third Grade Math/Science Teachers, Millennia Gardens Elementary, Founders Eco Club

Your school is a GS (Green School), a NGS (Non-Green School), or a GSC (Green School Curious). Attend this session to get tips on starting, funding, and seeking partnerships from a team that has won district, state, and federal Green School Awards. Door Prizes!!
Spacegate Station - A Free on-line STEM activity Children's Program & Student Astronaut Challenge

E, M Wentworth

Alisa Barber, STEM Instructor and Peter Carafano, STEM Coordinator, Department of Science, Duval County Public Schools

Spacegate Station is a free STEM educational program for elementary and middle school students. Teachers can access engaging Science activities, remediation or enrichment lessons provided by the Astronaut/Teachers who are working in a fictional futuristic "space laboratory" orbiting the moon. An update on the Student Astronaut Challenge - An aerospace-STEM competition will also be provided.

Growing Aquaculture Education in Florida: Emerging Opportunities and Resources

A Legends 1

Marcy Cockrell, Education Program Manager & Katrina Bayliss, Biological Scientist, Florida Department of Agriculture and Consumer Services

Recent experiences of the Florida Department of Agriculture in aquaculture education, from small scale to state-wide federally-funded programs. Opportunities to bring aquaculture to your school will be discussed and select teaching resources will be provided.

Integrating Science into Other Content Areas

E, M Legends 2

Jim Reynolds, Carrie Meyers, & Robert Hanna, STEM Specialist, FCR-STEM at Florida State University

Looking for innovative ways to integrate grades 3-8 science lessons with math, coding, or civics? Preview integrated science resources CPALMS has to offer including integrated SaM-1 physical science lessons and computer science, block coding resources.

Educating for Environmental Civic Action: Issues of the Everglades

M, H St. Augustine E

Alicia Torres, K-12 Everglades Champion Schools Program Manager

Give your students learning opportunities that empower them to create meaningful change addressing environmental issues of the Everglades and their local communities. Join us to learn strategies for incorporating student-led civic action into your middle and high school curriculum.

FREE Digital Resources to Support STEM Learning for the Real World

E, M, H St. Augustine F

Diamond Anderson, EverFi Specialist

Learn about EVERFI's free digital programs that address critical skills around sustainability, data science, STEM, & career exploration! You will get access to a full suite of resources including lesson plans! Come prepared to win a raffled prize. Bring your own device.
STOP & STEAM

E, M, H  
Troon
Andrew McIntosh, and Joseph Noel, Fort Pierce
Westwood Academy, WEST Prep Magnet

STOP & STEAM approach is to deliver standard/project-based, cross curricular instruction through engaging hands on activities for the 21st century learners using Science, Technology, Engineering, the Arts and Mathematics as themes for guiding student inquiry, dialogue, and critical thinking.

Space Station Explorers - Bringing Space to the Classroom and the Classroom to Space!

E, M, H  
Wentworth
Courtney Black, Education Project Managers, & Samantha Thorstensen, Education Program Director, ISS National Lab

Space Station Explorers offers standards-aligned, highly engaging activities that leverage actual science on the International Space Station and provides robust curriculum for any classroom or education organization.

Wakelet: A Free Collaboration Tool for All

A  
Legends 1
Amy Trujillo, Gifted Coordinator, Osceola Science School

Wakelet is a free digital tool that is used for curation, collaboration, creativity, communication, citizenship, and critical thinking. Participants will have resources to take home with them and be able to practice doing the session.

Engineering Design Challenges in the STEM Classroom

A  
Legends 2
Stacey O'Connor, STEMscopes by Accelerate Learning

In this interactive and hands-on session, the Engineering Design Process is investigated, collaboration and consensus are challenged, and facilitation techniques are modeled. Engineering design challenges bring authentic, real-world application of science concepts to life in your classroom.

Discover How BIOZONE Meets the Florida State Standards

H  
Legends 3
Lissa Bainbridge-Smith, Author, & Gianny Morales, BIOZONE Corporation

Discover BIOZONE’s wide range of science programs. Learn how our innovative interactive worktext produces flexible, engaging, student-centered resources, and how BIOZONE’s Teacher Toolkit supports teachers plan, delivery, and assessments. Attendees receive a FREE one-year ebook license.

Dissection – Evolving Views and Practices

M, H  
St. Augustine A
Sally Sanders, Science Education Strategist, Teach-Kind

Join us for an exploration of the evolution of dissection practices and the role of dissection in the life science standards. Get hands-on experience with dissection software and models. Two SynFrogs will be given away through a random drawing!

We All Need Trees... More than You May Think

E, A  
St. Augustine E

How well do you know your tree products? Through a fun, engaging, collaborative effort, you can explore many items and decide for yourself if they come from trees! You will receive the lesson plan and tree product sample goody bag!

Place-Based Case Study: Using Florida Scrub Jays to Teach Experimental Design and Data Analysis

H  
St. Augustine G
Katie Caldwell, Education Assistant, Archbold-Station

This presentation showcases Archbold Biological Station’s new lesson plan, which teaches students the process of science and basic data analysis. Using long-term Florida Scrub Jay data, students make hypotheses, analyze models, and propose their own management plans.
Genes in Space: Genetics on the International Space Station
M, H Wentworth
Ally Huang, miniPCR Bio
Genes in Space is an experimental design competition for students in middle and high school. Join us to learn about the contest and hear how you can receive a free classroom loan of ISS biotechnology equipment.

Biology Wars
M, H Legends 1
Demetra Williamson, Biology Teacher, Columbia High School, Dr. Ashley Shidner, Lecanto High School Department Chair & Yolando Carlisle, Nutrition Laboratory Supervisor
In this presentation, the speakers will demonstrate events that were administered and tested annually during the Biology EOC. This tournament is a competition between biology students that can be implemented within a single class, as well as between science classes.

Do You Start Your Chemistry Lessons with a Lab? You Should!
H Legends 2
Christopher Moore, University of Nebraska Omaha
What comes first in your chemistry classroom, explanations or lab? Traditionally, chemistry is “taught” and then followed with a highly structured lab to reinforce learning. This model is backwards. We’ll show you why and how lab-first works.

Making Meaningful Science Connections with Blended Learning: Bridging the Past, Present, and Future
E Legends 3
Julie Gabrovic, TOY, Science Lab Teacher & Instructional Coach, Wekiva Elementary School, & April Barnes, Elementary Science Specialist, Seminole County Schools
Blended Learning utilizes traditional great science teaching while leveraging new resources that create a more personalized learning experience for students. We plan to share both primary and intermediate well-tested resources for two amazing lessons that will include everything needed!

All Middle and High School Students' Ideas Matter!
M, H St. Augustine A
Page Keeley, Consultant/Author, NSELA President, NSTA Past-President
The best 6-12 teaching draws upon the best evidence-learn how to use formative assessment strategies to uncover grades 6-12 students’ ideas and use them as starting points for responsive instruction. Free book giveaways.

Connecting Classrooms to Conservation
A St. Augustine B
Emily Blum, School Program Specialist, Jacksonville Zoo & Gardens
Learn ways to connect your classroom to conservation efforts! All students can make a real impact while you reinforce the academic standards. In this session, you will take part in a small hands-on conservation action that you can replicate!

Visible Biology: An Immersive 3D Dive into Biology
M, H, C St. Augustine E
Elizabeth Sanker & AJ Retto-Kane, Visible Body
Introducing Visible Biology - the groundbreaking 3D biology platform! Visible Biology provides a hands-on immersive learning experience. Virtual biology models can be dissected and manipulated to learn difficult concepts. Come see this brand new way of teaching and learning biology!

Using A Driving Question Board with a Modeling Activity
M St. Augustine F
Lisa Kelp & John Garrett, Lab-Aids
Make phenomena meaningful and connected to science content. Several DQB will be showcased for in classroom and on different platforms (Jamboard, Padlet, etc). Each participant will have access to each as a template to take back to your classrooms.
Exploring Physics Phenomena
E, M, H
St. Augustine G
Dr. Anatoliy Glushchenko, Dr. Curcio, PHYSCI-RA, Susan Schleith, Director K-12 Education, & Penny Hall, Coordinator K-12 Education, Florida Solar Energy Center (FSEC)
Exploring physics phenomena with appropriate BOX materials plus technical support. Engages students/teachers. Offers a pathway to STEM success. Attendees will experience an easy to implement activity facilitated by PHYSICS IN A BOX creator, Dr. Anatoliy Glushchenko. Door prizes!

The Inspiration and Innovation Path
E, M, H
Troon
Desiree Sujoy, Director of Teaching & Learning, Discovery Education
In a time when we are inundated with negativity, it is critically important to illuminate a pathway of hope. Leave the session with inspiring science teaching ideas from scientists and innovators, along with resources that can spark the path ahead.

The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)
M, H
Wentworth
Alicia Foy, PAEMST Math and Science State Coordinator and PAEMST Finalists and Awardees
The Presidential Awards for Excellence in Mathematics and Science Teaching are the nation’s highest honors for K-12 teachers of STEM, including computer science. Please join this session to learn of updates to the program, and bring your questions pertaining to the application and vetting process. Individual components and the timeline of the application for secondary teachers, grades 7-12, will be shared.

TOYing Around with STEM
E
Legends 1
Jennifer O’Sullivan, Assistant Professor, K-5 STEAM Lab, A.D. Henderson University School, Meredith Ness, 2nd Grade Teacher, STEM Coach, Laurel Hill School, Lilly Chap, STEM Teacher, Southside Elementary School
As 2020 district teacher of the year winners from across Florida, these three educators will share ideas and resources for STEM education that you can use regardless of your classroom setup.

Civics Integrated Lessons
A
Legends 2
Jim Reynolds, Carrie Meyers, Robert Hanna, STEM Specialists, FCR-STEM at Florida State University
Are you ready to integrate the new Florida civics standards into your science and math lessons? CPALMS has K-12 lesson resources available that integrate the new Civics Standards with science and math concepts.

Exceptional Learners in the Science Classroom
M, A
Legends 3
Lacie Conner, ESE Middle Grades Science Teacher, Richard L. Sanders Schools, Pinellas County
Do you often get lost on how to reach your exceptional (ESE) learners in the whirlwind of current science education trends? This session will provide strategies including take home resources to assist in creating an equitable classroom for exceptional learners.

Taking the Mystery Out of Modeling
E, M
St. Augustine B
Lisa Deslaurier, Curriculum Director, EduSmart
Modeling is unfamiliar to most students, but the process is critical to making student thinking visible. Come and learn how modeling works in concert with other science and engineering practices to promote reasoning and understanding of core concepts. Free templates!
Let’s Engage Students through Inquiry and Phenomena-based Instruction
E, M St. Augustine E

Stacey O’Connor, STEMscopes by Accelerate Learning

Are you looking for a way to increase student ideas in the development of investigative phenomena? We will work in collaborative teams while experiencing an anchoring phenomenon routine that provides students with skills to develop a driving question board.

Teaching Biology in a Time of Conflict: Challenge, Opportunity, and Optimism
M, H St. Augustine F

Kenneth Miller, Professor of Biology, Brown University, Providence, RI

Are these the “Worst of Times” for science education? Perhaps—but behind every challenge is an opportunity. Today’s crises have scientific solutions, and each provides a way to make science meaningful, interesting, and exciting to our students.

Medical Technology Devices Utilized in Health Informatics
A St. Augustine G

Michelle Ramin, College of Osteopathic Medicine, Nova Southeastern University

The presentation will include a demonstration of wearable medical/technology devices used in the Health Informatics program at Nova Southeastern University. These devices are designed for health maintenance, and patient and disease management. In addition, a demonstration of the use of social humanoid robots capable of exhibiting emotions such as empathetic expressions will be provided. See how social humanoid technology is utilized in health care.

Thinking and Acting Like Scientists
A Troon

Cheri Dame, Elementary Science Program Specialist, Sarasota County

Participants will investigate natural overlaps between the Science and Engineering Practices, the Mathematical Thinking and Reasoning Standards, and ELA Expectations.

Science Instruction for ALL Learners: Bridging Science Education and Neuroscience
E Wentworth

Dr. Praba Soundarajan, Founder, Boo-dah Books, Dr. Milton Huling, Professor of STEM Education, Polk State College

Strategies for making STEM learning approachable for ALL students. This will be a focus on the intersection between visual literacy, storytelling, and dyslexia.

Vendor Hall

Closes Friday at 5:00pm and reopens Saturday at 7:45am
Make and Take
Elementary and Middle
Saturday
9:15—11:30AM
St. Augustine B

Drop by anytime between 9:15 and 11:30 AM to join Brevard Public School Teachers and their sponsor STEMscopes to "make and take" standards aligned activities K - 8Navigate through stations engaged in hands-on activities. Lesson plans for each activity will be provided on a flash drive.

Selected Teachers, Michele Ferro, K-6 Science Content Specialist, Rhonda Rhipperger, Smart Lab Facilitator, Brevard County Schools

Concurrent Sessions

start at 8:00am tomorrow morning.

Vendor Hall
opens at 7:45am with FREE coffee for attendees!

SAVE the DATE!

Next year’s
FAST conference
will be held at the

Embassy Suites by Hilton Tampa USF Busch Gardens
3705 Spectrum Blvd, Tampa, FL 33612

October 19-21, 2023

See you all there!
Your conference committee
8:00—9:00 AM Concurrent Session 8

Asteroids & Astrobiology: Investigating Cosmic Curiosities in Middle School Science
E, M, H

Legends 1

Deanna Ferguson, Hollie Nelson, & Brittany Lear, Middle School Science Teachers, Sarasota School of Arts and Sciences

Can you construct a comet in the classroom? Could a 1950’s comicbook novelty unlock secrets about future life in our universe? Learn how we use hands-on labs to drive inquiry and engage students in the nature of science.

Mystery Solved! How to Use Technology to Promote Student Collaboration & Discourse
A

Legends 2

Nicole Golden, STEM Instructor, Hillsborough County Public Schools

What's ideal when it comes to collaboration using technology in our classrooms? Join us to find out! The tools are FREE, and you will have access to all resources via Microsoft TEAMS.

Everglades Restoration Fights Climate Change: Place-Based Learning in the Classroom Using Scientific Data
M, H

Legends 3

Bianca Cassouto, Education Program Manager, The Everglades Foundation

How do we make progress on climate change? Learn how Everglades restoration makes Florida more resilient to the impacts of climate change. Discover the Everglades Literacy Program, an interdisciplinary STEAM curriculum that provides hands-on, free lessons and professional development.

It's Phenomenal! Using Real-World Connections to Support Three Dimensional Learning
E, M

St. Augustine F

Jessi Davis, National Science Specialist, Savvas Learning Company

Join us for an engaging workshop as we explore the purpose of phenomena, the power of using it to drive instruction and the way it will support students. Attendees will leave with purposeful strategies they can replicate in their classrooms.

8am to 10:15am

Aquatic Species Collection Workshop

Dawn Miller-Walker, FMSEA, Science Eye, ECO

Learn best practices for collection, transport, holding, how to minimize environmental impact and collection alternatives. No fishing license required. This workshop is for Florida educators/volunteers of schools or educational centers. The certification through FWC is good for 3 years.

Elementary Science Olympiad 2023

Valerie Ledford, Director, Florida Science Olympiad, Billy Ledford, Columbia High School

Come learn about the events for the 2023 season of Science Olympiad, a national STEM competition. Participants will get digital resources to assist them in coaching an elementary team for Science Olympiad. Door prizes will be awarded!

9:15—10:15 AM Concurrent Session 9

Making Sense of PASCO STEM SENSE

Eric Gardner, Education Consultant, PASCO Scientific

Explore one of the free, standards based, PASCO sensor experiments. STEM Sense solutions help build early excellence in science and STEM education with cross-curricular investigations that empower young learners to build strong foundations in science, programming, and data literacy.

Exploring Exploravision: A National Science Competition For K-12 Students

Jennifer O'Sullivan, Assistant Professor, K-5 STEAM Lab at A.D. Henderson University School

Learn about the Exploravision competition and how it can bring STEM and the standards into the classroom, as well as give students and teachers a chance to earn recognition and prizes.
Using Crosscutting Concepts as Lenses to Learn About, Explain, and Model Phenomena and Relationships Related to Skin and Skin Color

Legends 3

Brenda Breil, Assistant Professor, PK Yonge Developmental Research School

Help students learn and communicate through the deliberate application of crosscutting concepts. Workshop participants will be entered in a lottery for NSTA’s Book, Crosscutting Concepts: Strengthening Science and Engineering Learning (J. Nordine and O. Lee editors, 2021)

It Takes Guts to Teach Body Systems

E, M, H St. Augustine A

Jody Hodges, Science Wear

Integrate art with science with in-class, body system projects student’s love– Anatomy shirts/aprons, 2-dimensional body boards, personalized pasta skeletons, and a hand model demonstrating musculoskeletal interaction. Events for Human Body Olympics will be shared. Door prizes!

Make and Take Standards-Based Activities for K-8

E, M St. Augustine B

Selected Teachers, Michele Ferro, K-6 Science Content Specialist, Rhonda Rhipperger, Smart Lab Facilitator, Brevard County Schools

9:15—11:30AM

Drop by ANYTIME between 9:15 and 11:30 AM to join Brevard Public School Teachers and their sponsor STEMscopes to "make and take" standards aligned activities K-8 Navigate through stations engaged in hands-on activities. Lesson plans for each activity will be provided on a flash drive.

Florida’s Tesla Tale

M, H St. Augustine E

Carlos Villa, Director of K-12 Education Programs

The National MagLab in Tallahassee, Florida leads the world in electromagnetic research. Come learn how we built the world’s strongest magnet and what we do to keep that record here. A giveaway for every teacher!

Celebrating the Holidays with Science

E St. Augustine F

Jennifer Schmitt, K-12 Science Specialist, Santa Rosa County District Schools

Holidays are not just for parties; they are full of science! Attendees will receive access to eight holiday themed lesson plans that are all Florida NGSSS standards-based for grades 3-5. Included: Christmas, Groundhog Day, Halloween, and more!

Recharge Students’ Interest in STEM with FPL’s Energy Programs

M, H St. Augustine G

Chelsea Bennice, Education & Outreach Associate Project Manager, Florida Power and Light

The FPL Education Group’s new Energy Curriculum will recharge students’ interest in STEM. This session will showcase FPL’s educational programs and funding opportunities along with hands-on demonstrations. Prizes will be offered!

Explore Earth: NASA Satellites, Data, and Citizen Science

M, H Wentworth

Samuel Garcia, NASA STEM Education Specialist

In this interactive session, educators will learn about how clouds are a key factor influencing local weather as well as the Earth’s climate system and ways to support NASA science missions by observing and collecting cloud data.

Classroom Microgreens, Outdoor Raised Gardens, Aquaponics, and Hydroponics

A Legends 1

Michele Madison, Farming The Future

Learn how to use Microgreens, Hydroponics, and outdoor raised gardens to teach science standards. Attendees will be awarded one of our STEM Microgreen Student Kits. All grade levels K-12.
Play, Learn, and Explore in the Discovery Education Science Playground

E, M, H  
Legends 2

Desiree Sujoy, Director of Teaching & Learning, Discovery Education

Put on your lab coat and meet our scientists in the Discovery Education Science Playground! Join us for hands-on activities that connect students and teachers to real-world science innovation. Leave with swag and resources to use right away!

Classroom Metamorphosis: Students Exploring Standards with True Inquiry Based Methods

M, H  
Legends 3

Suzanne Williamson & Nicole Embler, Teachers, American Heritage School Palm Beach

This session will equip educators with inquiry methods that allow students to explore the standards and drive instruction by asking their own questions. Participants will receive a drive folder with lessons and resources that are adaptable to any science standard.

Build Your Own Planetarium

E  
St. Augustine A

Teri Oconnor, K-5 STEM Lab Teacher

Learn to build a planetarium for your classroom out of inexpensive materials. Take your students to the solar system and beyond without leaving the classroom with lessons for K-5.

Make and Take Standards-Based Activities for K-8

E, M  
St. Augustine B

Selected Teachers, Michele Ferro, K-6 Science Content Specialist, Rhonda Rhipperger, Smart Lab Facilitator, Brevard County Schools

9:15—11:30AM

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Environmental Connections: Bringing Manatees and Marine Science into Your Classroom

A  
St. Augustine E

Rachel Shanker, Conservation Liaison & Educator, Manatee Lagoon – An FPL Eco-Discovery Center

Explore engaging resources from Manatee Lagoon – An FPL Eco-Discovery Center to bring marine science to life in your classroom. Discover live and recorded lessons, join a coral lesson demonstration and maybe win a prize!

The Art of Science, The Science of Art

E, M, H  
St. Augustine F

Mary Ward, Science Lab Teacher, & Caitlin Bauer, 2D Art and Ceramics, Ashton Elementary School, Sarasota County

Come and discover engaging ways that your students can extend their science knowledge through the arts regardless of your grade level. You will leave with activities, lessons, research templates, and science art that you created.

Odyssey of the Mind, a Creative Problem Solving Program Meeting All of the STEM Criteria

A  
St. Augustine G

Amanda Smith, Manatee Region, Florida Odyssey of the Mind

Odyssey of the Mind provides a year-long hands-on opportunity for students to interact and develop solutions to one of five new problems prepared annually. Learn how the program can be integrated into classroom curriculum/learning. The participants will be divided up into small groups and given materials to solve a spontaneous problem within an allotted time period, just as the students are tasked with completing as part of the program criteria.

Connecting STEAM Project-Based Learning to the Workforce

A  
Wentworth

Dr. Candace Finley, Founder and Executive Director of eSTEAMed Learning, Inc

Are you tired of STEAM lessons that don't transfer student learning? Join us as we will use STEAMUNITY PD to guide you in creating STEAM project based learning lessons. A free copy of STEAMUNITY PD for everyone who attends.

Raffle

in the Vendor Hall

Saturday

11:30am to 12:30pm

Thank You for Attending!

See you next year!
# FAST Board for 2021-2022

## Executive Board
- **Dr. Marjorie Miles Dozier**  
  President
- **Mary Tweedy**  
  Immediate Past President
- **Sharon Cutler**  
  President–Elect
- **Dr. Gary A. Yoham**  
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  Area 1
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  Area 2
- Dr. Mayra Cordero  
  Area 3
- Janet Schnauss  
  Area 4
- Dr. Melissa Parks  
  Area 5
- Amber Robinson  
  Area 6
- Dr. Janice Novello  
  Area 7
- Angel Alexander  
  Area 8
- Katie Schlotterbeck  
  Area 9
- Stephanie Killingsworth  
  Area 10
- Khyanne Green  
  Area 11

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- **Brad Tanner**  
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- **Sharon Cutler**  
  Vendors
- **Dr. Gary A. Yoham**  
  Website
- **ZoEllen Warren**  
  Journal/Newsletter
- **Debi Bowen**  
  Membership/History

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The Florida Association of Science Teachers (FAST) is the state's largest [non-profit](#) professional organization dedicated to improving science education at all levels, pre-school through college. It is operated by a board of [volunteers](#) who have extensive experience in science education.  

[www.fastscience.org](http://www.fastscience.org)
<table>
<thead>
<tr>
<th>President</th>
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<td>Mildred Reed</td>
<td>1958-1959</td>
<td>Carol Houck</td>
<td>1984-1985</td>
<td>Brad Tanner</td>
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Sponsors
THANK YOU!
for your additional Support for Science Education at FAST 2022

FPL
(Florida Power & Light)
Meet and Greet & Participant Bags

ACCU-SCOPE
Teacher grant and Classroom set-12 Binocular microscopes

Marine Resources Dev. Foundation Marine Lab
Cookie Break/coffee break

Science Wear
20 Shirts for the past presidents

World Strides
Lanyards for all teachers

Edmentum
Cookie Break/coffee break

Everglades Foundation
Cookie Break/coffee break

Amplify
Cookie Break/coffee break

ExploreLearning
Cookie Break/coffee break
FAST has Area Directors to serve your needs. Please contact your Area Director for area specific information or ideas to support your teaching.

**AREA DIRECTORS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Area</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tammy Pinnella</td>
<td>Area 1 Director</td>
<td><a href="mailto:tammy.pinnella@hdsb.org">tammy.pinnella@hdsb.org</a></td>
</tr>
<tr>
<td>Carlos Villa</td>
<td>Area 2 Director</td>
<td><a href="mailto:villa@magnet.fsu.edu">villa@magnet.fsu.edu</a></td>
</tr>
<tr>
<td>Mayra Cordero</td>
<td>Area 3 Director</td>
<td><a href="mailto:mcordero@pky.ufl.edu">mcordero@pky.ufl.edu</a></td>
</tr>
<tr>
<td>Janet Schnauss</td>
<td>Area 4 Director</td>
<td><a href="mailto:schnaussj@duvalschools.org">schnaussj@duvalschools.org</a></td>
</tr>
<tr>
<td>Melissa Parks</td>
<td>Area 5 Director</td>
<td><a href="mailto:mparks@stetson.edu">mparks@stetson.edu</a></td>
</tr>
<tr>
<td>Amber Robinson</td>
<td>Area 6 Director</td>
<td><a href="mailto:ber_robinson@hotmail.com">ber_robinson@hotmail.com</a></td>
</tr>
<tr>
<td>Dr. Janice Novello</td>
<td>Area 7 Director</td>
<td><a href="mailto:jmnovello6@gmail.com">jmnovello6@gmail.com</a></td>
</tr>
<tr>
<td>Angel Alexander</td>
<td>Area 8 Director</td>
<td><a href="mailto:fastsciencearea8@gmail.com">fastsciencearea8@gmail.com</a></td>
</tr>
<tr>
<td>Katie Schlotterbeck</td>
<td>Area 9 Director</td>
<td><a href="mailto:klschlot@aol.com">klschlot@aol.com</a></td>
</tr>
<tr>
<td>Stephanie Killingsworth</td>
<td>Area 10 Director</td>
<td><a href="mailto:skillingsworth@floridamuseum.ufl.edu">skillingsworth@floridamuseum.ufl.edu</a></td>
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<td>Khyanne Green</td>
<td>Area 11 Director</td>
<td><a href="mailto:kgreen@dadeschool.net">kgreen@dadeschool.net</a></td>
</tr>
</tbody>
</table>

**Areas:**

- **1:** Escambia, Santa Rosa, Okaloosa, Walton, Holmes
- **2:** Washington, Jackson, Bay, Calhoun, Gulf, Liberty, Gadsden, Leon, Wakulla, Franklin, Jefferson, Madison, Taylor
- **3:** Hamilton, Suwannee, Lafayette, Dixie, Columbia, Gilchrist, Levy, Baker, Union, Bradford, Alachua, Marion, Putnam
- **4:** Nassau, Duval, Clay, St. Johns
- **5:** Flagler, Volusia, Lake, Seminole, Orange
- **6:** Citrus, Hernando, Sumter, Pasco, Hillsborough, Pinellas, Polk
- **7:** Manatee, Hardee, Sarasota, De Soto, Highlands
- **8:** Brevard, Osceola, Indian River, Okeechobee, St. Lucie, Martin
- **9:** Charlotte, Glades, Lee, Hendry, Collier
- **10:** Palm Beach, Broward
- **11:** Monroe, Dade
Convention Center Map

Troon
Wentworth
Restrooms
Royal Melbourne
Business center
Registration desk

Legends Ballroom

Legends 1
Legends 2
Legends 3

Exit

E
F
G

A
B
C

Vendor Hall

D

Vendord Hall

St. Augustine Ballroom

Registration Desk

Parking

Hotel

Restrooms

To hotel

Convention Center Map

Registration Desk

Parking

Hotel

Restrooms

To hotel

Convention Center Map

Registration Desk

Parking

Hotel

Restrooms

To hotel

Convention Center Map

Registration Desk

Parking

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Restrooms

To hotel

Convention Center Map

Registration Desk

Parking

Hotel

Restrooms

To hotel

Convention Center Map

Registration Desk

Parking

Hotel

Restrooms

To hotel
# Session Planner

## Thursday 10/27

<table>
<thead>
<tr>
<th>Room</th>
<th>Name of Session</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Workshop</td>
</tr>
<tr>
<td></td>
<td>Workshop</td>
</tr>
<tr>
<td></td>
<td>Workshop</td>
</tr>
</tbody>
</table>

## Friday 10/28

<table>
<thead>
<tr>
<th>Room</th>
<th>Name of Session</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Session 1</td>
</tr>
<tr>
<td></td>
<td>8:15-9:15 am</td>
</tr>
<tr>
<td></td>
<td>Session 2</td>
</tr>
<tr>
<td></td>
<td>9:30-10:30am</td>
</tr>
<tr>
<td></td>
<td>Session 3</td>
</tr>
<tr>
<td></td>
<td>10:45-11:45am</td>
</tr>
<tr>
<td></td>
<td>11:45am-1:00pm</td>
</tr>
<tr>
<td></td>
<td>St. Augustine B</td>
</tr>
<tr>
<td></td>
<td><strong>Speaker Luncheon</strong></td>
</tr>
<tr>
<td></td>
<td>with <strong>Page Keeley</strong></td>
</tr>
<tr>
<td></td>
<td>(pre-registration was required)</td>
</tr>
<tr>
<td></td>
<td>Session 4</td>
</tr>
<tr>
<td></td>
<td>12:15-1:15pm</td>
</tr>
<tr>
<td></td>
<td>Session 5</td>
</tr>
<tr>
<td></td>
<td>1:30-2:30pm</td>
</tr>
<tr>
<td></td>
<td>Session 6</td>
</tr>
<tr>
<td></td>
<td>2:45-3:45pm</td>
</tr>
<tr>
<td></td>
<td>Session 7</td>
</tr>
<tr>
<td></td>
<td>4:00-5:00pm</td>
</tr>
</tbody>
</table>

## Saturday 10/29

<table>
<thead>
<tr>
<th>Room</th>
<th>Name of Session</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Session 8</td>
</tr>
<tr>
<td></td>
<td>8:00-9:00am</td>
</tr>
<tr>
<td></td>
<td>Session 9</td>
</tr>
<tr>
<td></td>
<td>9:15-10:15am</td>
</tr>
<tr>
<td></td>
<td>Session 10</td>
</tr>
<tr>
<td></td>
<td>10:30-11:30am</td>
</tr>
</tbody>
</table>
Florida Association of Science Teachers presents this Certificate of Participation to

For participation in the FAST 2022 Science Teachers' Conference
“75 Years of FAST”
St. Augustine, Florida
October 27-29, 2022
22 Credit Hours

FLORIDA ASSOCIATION OF SCIENCE TEACHERS

Dr. Marjorie Miles Dozier
FAST President 2021-2022