

Concurrent Sessions are 60-minute sessions that run concurrently beginning at 8:15 AM and ending 5:00 PM on Friday and noon on Saturday. There is something for every interest and grade level. Be prepared to take resources directly back to your classroom.

These sessions are presented by our Florida teacher leaders for you, our science educators.

The following 80+ concurrent sessions have been accepted for this year's conference. **DO NOT Pre-Register for Concurrent Sessions on Friday/Saturday.**

Be sure to **PRE-REGISTER** for our **Thursday Workshops** and **Evening Social**. <https://fastscience.wildapricot.org/FAST-Conference>

Abbreviations for targeted audiences are **E**(Elementary), **M**(Middle) **H**(High), **C**(College), and **A**(ALL). Scheduled times and room assignments will be available on site in the program book.

Developing and Using Models in the Science Classroom

Teia Anderson and Crystal Emery, Regional STEM PD,
STEMscopes by Accelerate Learning

LEVEL: E, M

Be part of the fun and be ready to talk science! This hands-on session will explore current standards to discover ways students can use models to develop and communicate scientific understandings. Reflect on ways models can enhance your instruction while adhering to your state education standards.

Engaging Students through Phenomenon-based Lessons in 30 Minutes or Less

Madison Evans, Science Development Editor, Hand2Mind,

LEVEL: E

Let's explore how to evoke curiosity and investigation, all in 30 minutes or less! During this session, we will dive into science phenomena by leveraging the 5E instructional model, and model engaging science lessons!

Creating Public Health Influencers for the 21st Century

Barbara Garcia, West Coast University

LEVEL: M, H, C

Students become influential agents of change by leveraging social media for communicating crucial public health messages. This classroom activity, The Influencer Challenge, involves selecting topics, researching, creating impactful content, and collaborating with peers to inspire positive behavioral shifts in health. We have the ability to leverage the transformative power of students as influential agents of change to improve public health messaging.

Exploring Energy: Hot Bulbs

Lisa Kelp, VP, Learning and Development for Lab-Aids

LEVEL: M, H

Explore the concepts of energy transfer by measuring and comparing the amount of thermal energy produced, applying the law of conservation of energy, and calculating how much of the electrical energy supplied was converted to light energy.

Ignite Curiosity..... Elevate Engagement

Zipporah Miller, Savvas Author

LEVEL: A

This session will model how to create purposeful, scaffolded problem-based learning experiences. Participants will engage in experiences that model how to use storylines based on student questions to drive learning. Shift the learning from focusing on a single topic to focusing on trying to figure out why something is happening.

Using Engineering Design to Spark Curiosity in Grades K-5

Desiree Siegel, Kim Seaver, Ryan Carlson, Matt Timm, and Nancy Golden, Elementary Science Program Specialists, and Jill Adcock, Elementary Science Senior Administrator, Orange County Public Schools

LEVEL: E

This session will engage elementary teachers in using the hands-on engineering design process to provide meaningful grade level standards instruction, spark curiosity, and increase proficiency in student achievement.

The OpenSciEd Instructional Model: Routines for Advancing Students through a Storyline

Andrew Whittet, Consultant, Activate Learning

LEVEL: M

Using a storyline approach, a logical sequence of lessons that are motivated by students' questions that arise from their interactions with phenomena. We will do activities that play specific roles in advancing the storyline with structures to help students grades 6-8.

Taking Your Environmental & Ecology Curriculum to the next level

Kim Brown and Kaitlin Plante, Classroom Teachers, iCEV

LEVEL: M, H

In this session you will learn how to earn acceleration points for your school, extra funding for your classroom and a monetary bonus for the teacher. All attendees will receive a free 30 day pilot of the full program. Florida DOE has approved a CAPE Certification and Ducks Unlimited for Environmental and/or Ecology courses. Per State Board of Education Rule 6A-6.0573(15)(c), these academic courses may test and earn the acceleration points along with the funding that is allowed to all CTE courses.

Connecting STEAM PBL to the Workforce

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

LEVEL: A

Do you want to make you STEAM PBL more meaningful? Join me as I introduce you to the STEAM In Unity Model to cultivate career focused STEAM lessons! The first 20 attendees will receive a free copy of the book.

From Television to the Classroom

Patrick Greene and Dr. Mike Heithaus, Co-founder, Symbio Education, LLC

LEVEL: A

In this session, we will discuss how using modern television technology and strong storytelling techniques increases engagement and inspires students about science. We will showcase the high-tech tools used in filmmaking and how they blend with data collection for scientists.

Why Can't We Walk through Walls?: A Quantum Storyline

Christopher Moore, Director, STEM TRAIL Center, University of Nebraska Omaha

LEVEL: H

A sugar cube. That's the volume of the particles in your body. Why can't you walk through walls? We'll connect forces, electrostatics, and an exciting quantum storyline. Attendees will use a simple Hooke's Law mass-spring system to develop a model of chemical bonds in solids, called an Einstein solid model.

Effective Literacy and Writing Strategies in the Science Classroom

Emery, Crystal; STEMscopes by Accelerate Learning

LEVEL: E, M

Come learn how to use effective literacy strategies so that students can better understand science content. Student understanding and critical-thinking skills will improve with these techniques. Join our constructivist approach that promotes literacy in the science classroom.

Hands-on Strategies for Creating Curiosity, Relevance, and Fun in the Biology Classroom!

Tiffany Oliver, IB Biology instructor and PAEMST Awardee, Robinson High School, Hillsborough County Schools

LEVEL: M, H

Do and learn fun hands-on strategies that can be adapted to almost any lesson topic with minimal resources. Help students connect the classroom and the real world, and make them excited to learn biology!

Python Problems: Pairing Place-based Phenomena and Modeling for Positive STEM Outcomes

Heather Skaza Acosta and Jessica Marcolini, Florida Gulf Coast University

LEVEL: A

Participants are introduced to a 5E lesson that integrates live laboratory experience with systems modeling to understand the complexity of invasive Burmese python population growth. Participants will be introduced to engaging tools that support student model use and creation.

Integrate and Educate

Juliana Texley, Lesley University (adjunct) and JASON Learning (Author and trainer), and Ruth Ruud, Cleveland State University

LEVEL: E, M

STEM is not 4 letters! It is an integrated approach to the whole child that uses literature, arts, science and engineering.

Minecraft in the Classroom: It's Not Just for Gaming

Michelle Roberts, STEM Camp Director, State College of Florida Coding Academy

LEVEL: A

Are you looking for a way to get instant buy in with your students in lessons? Looking for high engagement yet critical thinking ideas? Just say Minecraft to your students. Ideas and lesson plans included with presentation.

Level Up: Green Schools Inspiring STEM Engagement

Christy Folk, Program Manager and Karolyn Burns, Karolyn, Curriculum Manager, The CLEO Institute

LEVEL: A

Curiosity is rooted in questions, and the driving question behind green schools is, How sustainable is our school, and how could we improve? Learn from successful case studies and get resources to implement your own green school program. These competitive green school programs can be implemented on various scales, from competition between students within a single classroom, to classes within a school, to schools within a district, and even on a national scale.

Hands-on Plus! Driving Student Centered Learning with the Smithsonian

Hoover Herrera, Carolina Biological Supply Co

LEVEL: E

Learn through doing investigations how Smithsonian Science for the Classroom engages students with science and engineering practices and promotes scientific literacy for all students. Leave with classroom materials.

Using the Arts to Teach Patterns and Cycles Associated with the Earth in Space and Time

Jody Hodges, Science teacher, creator of ScienceWear.net

LEVEL: E, M

Participate in songs, skits, and hands-on projects to make Earth and space less intimidating and fun for all. Create an apron (wearable anchor chart) illustrating moon phases and other standards like rotation, revolution, seasons, tides, and eclipses. Door Prizes!

Claims, Evidence & Reasoning (CER) and Interactive Word Walls

Julie Jackson, Texas State University

LEVEL: A

CER statements scaffold students as they write and speak about science. We will describe what counts as evidence, consider the connection between scientific claims and evidence, and practice using interactive word walls and CER statements to support scientific discourse.

Curiosity? Not your USUAL Elementary STEM Workshop

Lisa Kelp, VP, Learning and Development for Lab-Aids

LEVEL: E

Join us in this engaging workshop where participants are challenged to design, build and test a vehicle that will move a toy. This activity is one of 10 engineering challenges that you can incorporate into your class.

Engaging Students in Science on Day One!

Cheyenna Novotny, Science Specialist, Escambia County Public Schools

LEVEL: M, H

What if you engaged students right away in inquiry? What if they went home and said science was their favorite class? Learn how to easily facilitate a controlled experiment over the first few days of school! Participants will be given an investigable question and work in groups to design an experiment from start to finish during this session.

Digital Tools for Engaging Students in STEM

Serena Utz, Implementation Specialist, Everfi

LEVEL: A

EVERFI provides no-cost, web-based programs to address critical skills around sustainability, data science and career exploration. All participants will leave with full access to EVERFI's suite of resources, lesson plans, lab activities and much more!

Florida's Tesla Tale

Carlos Villa, Director of K-12 Education Programs, National High Magnetic Field Laboratory, FSU

LEVEL: M, H

The National MagLab (Tallahassee) leads the world in electromagnetic research. Learn how we built the world's strongest magnet and what we do to keep that record. A giveaway for every teacher!

I Can't Do It! Failure Equals Success

Sue Bedard, President and Linda Gowen, iBuild Academy

LEVEL: A

We have all heard that cry during a STEM project. But what to do about it? This session helps you embrace failure. Proven strategies to overcome the fear of failure to complete a STEM Challenge will be shared. Some of the strategies and ideas are personalizing a project, confidence building, and concept generation before beginning to build and then sharing those ideas with peers.

Engaging Curiosity Across Linguistic Differences

Maria Hill, Teacher, Oakridge Middle School, Collier County Public Schools

LEVEL: M

A workshop developed from real life classroom experiences effectively teaching science to English language learners while fostering their curiosity and love for scientific exploration. You will leave with a toolkit of strategies, resources and experiences to support your ELL students.

How Interactive Simulations and STEM Cases Address the Florida Statewide Science Assessments

Mario Junco, Senior Implementation Coordinator, ExploreLearning

LEVEL: A

In this session, participants will learn how online simulations and case studies can directly address item specifications in grade 5, grade 8, and grade 10 (EOC) Florida Statewide Science Assessments. The simulations highlighted here will be ExploreLearning Gizmos.

Impacts of Undergraduate Students Contributing to STEM K-12 Teacher Professional Development Programming

Jessica Marcolini, Assistant Director, Heather Skaza Acosta, Director, and Patria Ale, Undergraduate Student, Whitaker Center for STEM Education, Florida Gulf Coast University

LEVEL: A

Research from our STEM teacher PD program investigates the influence of undergraduate students' contributions to teacher PD. Attendees will receive firsthand perspectives from undergraduate students and preliminary findings that highlight the impacts of these reciprocal relationships.

From CRISPR to 3-Parent Babies: The Revolution in Human Genetics

Kenneth Miller, Professor of Biology, Brown University

LEVEL: M, H

Techniques such as CRISPR, mitochondrial transfer, and mRNA therapeutics have opened up new possibilities for genetic manipulation, bringing with them new possibilities that can energize the biology curriculum.

Solar Cookers: Thinking Outside the Box (Oven)

Susan Schleith, Program Director K-12 Education, Florida Solar Energy Center, University of Central Florida

LEVEL: A

Explore solar cooker designs, building techniques, low and no-cost materials and how to use cookers with STEAM-E(nergy) results. Receive design plans for a variety of cookers and activities aligned with science standards. Prizes and give-aways!

CS Connections Simulating Marine Ecosystems: A Hands-on STEM Learning Experience for Elementary Students

Donna Barton, Teacher, Clay County Schools

LEVEL: E

Code.org's new module teaches students the impacts of overfishing. By utilizing basic programming skills, students will create ecosystem simulations as they restore balance to a digital marine life ecosystem on the verge of overfishing.

Expeditionary Learning: Unveiling Worlds Through Explore With ERM and Live Virtual Field Trips

Heather Magill, STEM Coordinator, Kristen Karvonen, STEM Teacher, Palm Springs Middle School, Palm Beach

LEVEL: M, H

Embark on a journey of discovery, where you'll learn to harness the power of Explore With ERM and craft immersive virtual field trips with real-life scientists guiding you through the wonders of the world

Promoting Science Appreciation with #ScienceSaves

Kenny Coogan, Associate, The Teacher Institute for Evolutionary Science and Bertha Vazquez

LEVEL: A

ScienceSaves promotes the fact that science makes life safer. Our free lessons teach graphing, data analysis, and engineering practices. They include teacher notes, standards, rubrics, and lesson plans. Check out our \$15,000 scholarship for US seniors. (www.sciencesaves.org)

Integrating the Arts into the Science Classroom

Crystal Emery and Teia Anderson, Regional STEM PD, STEMscopes by Accelerate Learning

LEVEL: A

Arts integration is a holistic approach that includes creativity, critical thinking, collaboration, and communication. Learn how poetry, music, storytelling, drama, visual art, and creative movement can be meaningfully embedded within the science curriculum.

Outdoor Learning, Field Trips & Data Collection Using Survey 123

Kandi Follis, TSA Secondary Science, and Ryan Westberry, Secondary Science Coordinator, Collier County Schools

LEVEL: M, H

A Survey123 will be used to collect data, and you will create your own Survey 123 that will enable your students to collect data in the field.

Supporting Open-Ended, Inquiry-based Instruction through CPALMS

Robert Hanna, Jim Reynolds, and Carrie Meyers, STEM Specialists, CPALMS / Learning Systems Institute at FSU

LEVEL: A

Looking to grow your instructional toolbox to include more open-ended strategies? Join CPALMS to explore some of our FREE open-ended resources and learn about the research that supports their effectiveness in the K-12 classrooms.

Solar Eclipse Double Header of the 2023-2024 School Year

Katrina Madok, STEM, Gifted Teacher, Gerald Adams Elementary School

LEVEL: A

Are you ready for the solar eclipse of April, 2024? Come discover valuable tips and teaching resources to engage your students learning about solar eclipses and safe viewing techniques. Attendees will learn creative ways to make solar viewers.

Saving Silver Springs

Matthew Stanley, K-12 Outreach Scientist, Brian Abramowitz, Outreach Coordinator, Thompson Earth Systems Institute, and Erin Benavides, Resource Teacher, Silver River Museum

LEVEL: E

Saving Silver River utilizes research and hands-on activities to pique students' curiosity and take charge of Florida's water quality. Students will examine environmental challenges impacting water quality and explore the balance between natural areas and recreational activities

Man's Best Friend, Mendelian Genetics and Modeling

Amy Strong, Consultant, National Geographic Learning/Cengage

LEVEL: H

Develop models and create an argument from evidence while addressing Mendelian laws of segregation and independent assortment to analyze patterns of inheritance in dog breeds.

Quick and Easy Experiments Using the Latest Technology

Ann Hammersly, Vernier

LEVEL: M, H

Collecting and analyzing experimental data has never been easier using Vernier technology in your lab. Bring your own device with our Graphical Analysis 4 app installed or use our devices during the workshop. All activities are available as a free download for attendees.

Aquaculture in the Classroom

Katrina Bayliss, Biological Administrator, Florida Department of Agriculture and Consumer Service

LEVEL: M, H

Learn about aquaculture in Florida and around the world, take a crash course on starting an aquaculture program at your school, and learn about the free resources available to you and your fellow Florida educators!

No Time to Lose! Innovating TESOL Strategies for Science Education

Dr. Tony De Souza and Milt Huling, STEM Professors, Polk State College

LEVEL: A

Join No Time to Lose! Innovating TESOL Strategies for Science Education, a predominantly Japanese-led session. We'll explore ELL experiences, introduce immersive activities, engage science teaching methodologies, and demonstrate their transformative effect on ELL students' academic achievements.

Curiosity will Set You Free: A Science Escape Room

Susan Doss-Sheater, Global Learning Academy, and Suzanne DeLay, Science TSA, Escambia County Public Schools District

LEVEL: E

ESCAPE ROOM!! Have fun working through hands-on review activities in a Florida NGSSS-based escape room. You will leave with access to a digital copy of all resources, ready to print and go! Great for Family Science Night!

Presidential Awards for Excellence in Mathematics and Science Teaching

Alicia Foy, Florida Department of Education

LEVEL: A

The PAEMST awards are the nation's highest honors for K-12 teachers of STEM. Updates to the award application and answers to questions will be provided.

Using an Engineering Mindset to Enhance Science Instruction through Problem-based Learning

Jim Reynolds, Robert Hanna, and Carrie Meyers, STEM Specialists, CPALMS/LSI, FSU

LEVEL: M, H

Ready to engage your students with real-world problem-based learning opportunities? CPALMS has FREE resources for public K-12 classrooms to foster an engineering mindset and support transfer of learning!

Storyline Mastery: Empowering Students through Engaging Lessons with the 5E Model

Nicole Holman, District Coach, Hillsborough County Schools

LEVEL: H

Transform the science classroom into a student-led journey where students' curiosity is sparked through immersive storylines that seamlessly integrate the Next Generation Science Standards (NGSS) and Florida Benchmarks (NGSSS), delivering captivating and impactful science learning experiences.

Classroom Use of the Florida Geomorphology Atlas

Christopher Williams and Michelle Ladle, Professional Geologists, Florida Geological Survey, Florida Department of Environmental Protection

LEVEL: A

The Florida Geomorphology Atlas is an online publication that classifies and describes Florida's landforms. Explore: the science practices used to create the Atlas, earth processes that craft Florida's landforms, and how to investigate these with your students.

Shift Your School's Environmental Stewardship Culture: Interdisciplinary Everglades Curriculum and Champion Schools Program

Alicia Torres, AlyssaSaldarriaga, Jennifer Diaz, Everglades Literacy Program

LEVEL: A

Give your students inquiry-based learning opportunities that empower them to ask questions and create meaningful change addressing environmental issues of the Everglades and their local communities. Learn strategies for incorporating student-led action into your K-12 curriculum!

Enhancing Science Education through the Use of ChatGPT: Exploring the Benefits and Challenges

Brandon Boswell and Jay Rosenberg, Teacher, Cypress Bay High School, Broward County Public Schools

LEVEL: M, H

ChatGPT was released to much fanfare and consternation last November. Its brief utilization in my Biology classroom has had a compelling impact on my practice, students, and assessments. The dramatic and recent rise of generative AI applications will be discussed.

Science Starts with a Question

Christine Angel Danger, University of South Florida Stavros Center, and Lisa Lawson, Hillsborough County Public Schools

LEVEL: A

When students create their own questions, they activate a part of their brain that is searching for an answer. We will provide a model illustrating how to help students ask good questions and use student questions to fuel inquiry.

MarineLab's FREE Learning Resource: How to Bring Ecology of the Florida Keys into Your Science Classroom!

Sarah Egner, Senior Vice President, MarineLab/Marine Resources Development Foundation

LEVEL: A

MarineLab has an array of FREE marine science lesson plans, videos and activities available online. Learn how to access the material, experience a bit of the content, and get ideas on how to incorporate the lessons into your classroom.

Creating Effective Science Anchor Charts

Laura Konters and Robin Musson, Volusia County 9-12 Science Resource Teachers

LEVEL: A

Participants will learn about different types of anchor charts, why they are effective tools in science, and why they should be created with students. Participants will then work with groups to plan out anchor charts to use in their classrooms.

Promoting Curiosity Using Relevant Biological Phenomena

Laura Shafer and Rosiane Lesperance, Program Officers, Teacher Development, Knowles Teacher Initiative

LEVEL: H

Engage in a task to explore ways to spark student curiosity about a biological phenomenon. You will expand your understanding of how science practices support students in building disciplinary core ideas and develop ways to increase student curiosity.

Teaching Physics in a Space Science Context

Kevin L. Simmons, Aerospace and Innovation Academy, BLUECUBE Aerospace, Wolfpack CDT

LEVEL: M, H

Join this hands-on session to engage in integrated activities for physics/astronomy teachers who want to incorporate authentic NASA data into the classroom. Participants will use resources developed by physics education researchers through the NASA Heliophysics Education Activation Team.

High Impact Strategies that Maximize Learning

Jackie Speake Dwyer, CORE and STEM Education Consulting, LLC and NSTA Press Author

LEVEL: E, M

Students are naturally curious about scientific phenomena. How do we engage student curiosity and ensure deep understanding of why or how a phenomenon occurs? This session will provide that answer! (Hint: High impact strategies, including collaboration, feedback, differentiation, and metacognition.)

Welcome to the Moon Lab: Refining, Mining, and Moving on the Moon

Amanda Walker, Elementary Science Training Specialist, Bay District Schools

LEVEL: E

Engage in a three part lesson modeling humans' relationship with the Moon from Galileo through the future Artemis Program with NASA's Moon to Mars objectives of interoperability and commonality of systems to create working, scientific systems on the Moon.

Microgreens in the Classroom - Grow Kit Activity

Julian Miranda, Legacy Greens Corp

LEVEL: A

This session will introduce participants to what microgreens are, how quick and easy they are to grow in a classroom, and the various ways they can be used to enhance existing lesson plans.

Design an Experiment for the International Space Station!

Marc Bliss, Genes in Space Program, miniPCR bio

LEVEL: M, H

Engage students in authentic research through Genes in Space, the experimental design competition that launches experiments to the International Space Station. Learn about free educational resources, including lesson plans, classroom activities, explainer videos, and biotechnology equipment loans.

Creating Curiosity with Field Site Hands-on Experiences

Louise Chapman, Environmental STEM Resource Teacher, and Amy Monahan, STEM Specialist, Volusia County Schools

LEVEL: M, H

We will use investigations to create excitement and integrate standards for high stakes exams in science. There will be great materials to take home and use in the classroom and outside the classroom.

Aquatic Species Collection Workshop

Dawn Miller-Walker, Owner/Consultant/Educator - Science Eye & ECO

LEVEL: A

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. This certification through FWC is good for 3 years.

From Content to Context: How Background Knowledge Shapes the Science of Reading in Neurodiverse Learners

Dr. Praba Soundararajan, Dyslexic Social Innovator, Boondah Learning

LEVEL: E

Children can understand text better if they have some background knowledge. Integrating literacy and content-area instruction can help improve comprehension in the elementary years.

Orion Splashdown

Mary Vaughn, Teacher Earth & Space Sciences, Hillsborough Schools, and Becky Busby, Teacher of Gifted, Liberty County, Georgia

LEVEL: A

Learn about the Orion capsule. Use the Engineering Design Process to design & test a capsule that is neutrally buoyant, watertight, & meets the requirements. Engage all students to incorporate engineering & math concepts with easily accessible materials & build teamwork.

Comparing Hominid Skulls without the Expensive Models

Bertha Vazquez, Education Director, The Teacher Institute for Evolutionary Science

LEVEL: H

This essential biology investigation requires students to compare hominid skulls, studying the morphological changes as humans evolved. Skull models cost thousands of dollars. Do this important investigation for free with our slide presentation, student instructions, 2D skulls, and online resources.

Unplugged Coding Through Standards in Small Group

Michele Wiehagen, K-5 Science Resource Teacher, and Melissa Triebwasser, Assistant Principal, Buckhorn Elementary

LEVEL: E

Using tools and unplugged tasks, participants will engage in coding activities to utilize within their science content. Participants will walk away with resources to show how coding is not just computer science but can be embedded within science.

Science Education in the World's Least Visited Country

Terence W. Cavanaugh, University of North Florida

LEVEL: A

A call came from the Department of Education in Tuvalu for assistance in improving high school science test scores. This session will share the discoveries and issues and solutions presented. Learn how you can become part of the Fulbright Specialist Program.

The Bones of STEM: Student-Centered Teaching through Forensic Anthropology

Micki Besse, Savanna Agilar, Lab Technicians, Forensic Human Identity and Trauma Analysis, Heather Walsh-Haney, Professor, Department of Justice Studies, Heather Skaza Acosta, and Jessica Marcolini, Directors, Whitaker Center for STEM Education, Florida

LEVEL: A

Session attendees will learn about an on-going forensic anthropology teacher training program at Florida Gulf Coast University, participate in a mock forensic anthropological field recovery, and brainstorm methods for implementation of these lessons in their classroom.

The 3 C's Model for Successful Science Instruction

Megan Joyner-Hull, Debra Goff, Instructors, North Fort Myers Academy for the Arts, and Dr. Jessica Marcolini, FGCU Whitaker Center for STEM Education

LEVEL: A

Learn the 3 C's for effective science instruction: curiosity, culture, and commitment. We will cover curiosity-based lesson design, how classroom culture impacts grit, and strategies to develop reflective and accountable learners. Attendees will receive a complete lesson plan!

Brevard Public Schools Make and Take

Nicole Kuiper, Shelley Swearingen, Wendy Shelden, Cheryl Hanneman, Jennifer Marcoux, Rhonda Ripperger, Melissa Woods, Thomas Englert, Brevard Public Schools Cadre

LEVEL: E, M

Join Brevard Public School Teachers for standards aligned activities for grades K - 8. Navigate through stations engaged in hands-on activities. Lesson plans for each activity will be provided on a flash drive.

Aquatic Species Collection Workshop

LEVEL: A

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.

DIY Demo Day

Jessica Odom and Sharon Holtom, Science Teachers, Baker County Middle School

LEVEL: M

Celebrate science at your school by creating a special day for your students they are sure to remember. Educators will learn to create and facilitate a Demonstration Day for students to reinforce Nature of Science concepts and increase student engagement.

Engaging Students in Science from Day 1 using Materials Household Materials

Katrina Pressley, Science Technology Teacher

LEVEL: M, H

Participants will experience what a day is like in my physics classroom during the 1st few days of school. You will have the opportunity to participate in a stations lab and construct a rover.

The Magnets and the National MagLab

Carlos Villa, Director of K-12 Education Programs, National High Magnetic Field Laboratory, FSU

LEVEL: E

The National Magnet Lab (Tallahassee) 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!

Student Engagement through Classroom Transformations

Darcy Wylie, Sunshine Educational Services, and Debra Lee, Teacher, Oasis Elementary School

LEVEL: A

Do you want to transform your classroom into an immersive learning experience for your students, but don't know where to start? Learn how to transform your room on a budget, as well as the steps for planning your transformation! Experience a classroom transformation into a hospital from the students' point of view, feeling the same excitement and curiosity. Participants will work through stations related to the hospital.

Helping Students Understand the Latest Research on Climate Science

Michael Wyssession, Professor of Geophysics, Center for Teaching and Learning, Washington University in St. Louis

LEVEL: H

Professor Michael Wyssession is the Chair of Earth and Space Science for the NRC Framework for K-12 Science Education, and will address how students can best learn the latest climate science, including impacts to Florida, using NASA satellite data and IPCC research.

Student Curiosity, Questions, and the Nature of Science

Susan Cooper and Jessica Marcolini, Whitaker Center, Florida Gulf Coast University

LEVEL: A

Participants will explore how good questions and formative assessments can capitalize on student curiosity while supporting understanding of the nature of scientific knowledge in an interesting activity that can be applied to many areas of science. Students should have experiences making decisions as scientists through thoughtfully planned activities.

The Synthesis of Photosynthesis

Cindy Davidson, and Michelle Metzler, Youth Environmental Alliance

LEVEL: A

Explore Photosynthesis first hand and literally see it working! Learn how to use this activity to teach parts of your curriculum for Grades K to 12. Participants receive a free experiment starter kit including a how-to guide!

Learning to Love Odyssey of the Mind

Amanda Howell, Education Trustee, Florida Odyssey of the Mind

LEVEL: A

The participants will be able to ask questions and build with their hands. The teachers will get a snapshot of what opportunities are available for their schools. Odyssey of the Mind allows students to take a creative journey with STEAM.

Make and Take by Brevard Schools

Nicole, Kuiper, Nicole; Swearingen, Shelley; Shelden, Wendy; Hanneman, Cheryl; Marcoux, Jennifer; Ripperger, Rhonda; Woods, Melissa; Englert, Thomas; Brevard Public Schools

LEVEL: E, M

Join Brevard Public School Teachers for standards aligned activities for grades K - 8. Navigate through stations engaged in hands-on activities. Lesson plans for each activity will be provided on a flash drive.

Using Phenomena and Actionable Norms for Effective Groupwork

Anna Monteiro, Associate Director of Senior Fellows Program, Knowles Teacher Initiative

LEVEL: H

Make groupwork a powerful learning experience by improving collaboration and increasing participation. Consider components of Complex Instruction; actionable norms, curriculum, and student status and leave with a strategy to promote positive interactions and elevate student voice during groupwork.

Stimulating Curiosity through Inquiry and Scientific Practices

Michael Padilla, Author, Savvas Learning Company

LEVEL: E, M

Curiosity is a critical prerequisite to inquiry and scientific practices which are central to the Florida NGSSS science standards. This workshop will engage participants in activities and teaching strategies that will link curiosity to scientific thinking skills.

Cultivating Curiosity Inside and Outside the Classroom using an Interdisciplinary Everglades focused STEAM Curriculum

Saldarriaga, Alyssa - Everglades Literacy Program Coordinator (Treasure Coast), Diaz, Jennifer - Vice President of Education

LEVEL: E

Learn about the Everglades Literacy Program, a place-based, interdisciplinary STEAM curriculum that navigates the Everglades watershed, including free, hands-on lessons and resources to explore water, wildlife, and habitats, by inspiring curiosity inside and outside the classroom.

Using Engineering Design Challenges to Teach Content Standards Anchored in Phenomena

Melissa Triebwasser, Assistant Principal, and Michele Wiehagen, K-5 Science District Resource Teacher, Hillsborough County Public Schools

LEVEL: E

How do engineering design challenges fit into our content standards? Participants will engage in phenomena-based engineering design challenge that align to grade level standards. Participants will walk away with lessons to implement immediately, materials, and aligned resources.

Sparking Curiosity through Elementary Science Olympiad

Shelley Modaff, State Director, Elementary Science Olympiad

LEVEL: E

Florida Elementary Science Olympiad is a great way to spark the curiosity of students through all areas of STEM. Come learn about what Science Olympiad might have for your elementary students.

Shift Your School's Environmental Stewardship Culture: Interdisciplinary Everglades Curriculum and Champion Schools Program

Alicia Torres, Alyssa Saldarriaga, Jennifer Diaz, Everglades Literacy Program

LEVEL: E, M, H

Give your students inquiry-based learning opportunities that empower them to ask questions and create meaningful change addressing environmental issues of the Everglades and their local communities. Learn strategies for incorporating student-led action into your K-12 curriculum!