

***8th Annual Greater Houston
Area STEM Conference:
Fostering a
STEM-Driven Mindset***

March 2, 2024



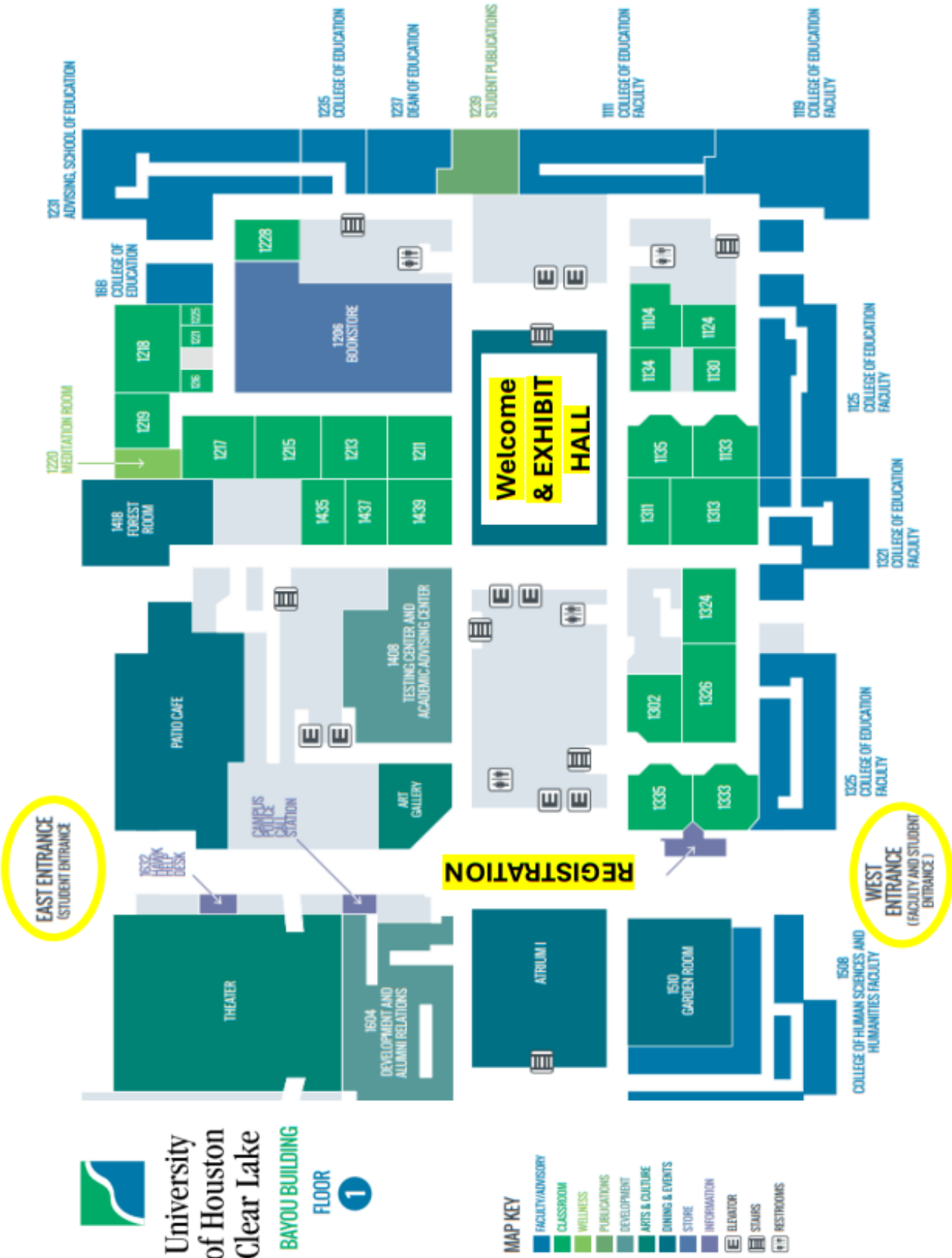
University of Houston  Clear Lake
College of Education



University of Houston
Clear Lake

BAYOU BUILDING
FLOOR 1

PARKING LOT



8th Annual Greater Houston Area STEM Conference

March 2, 2024

Program Session Schedule

Time	Event
8:30 am – 8:50 am	Welcome Remarks: UHCL Provost Dr. Christopher Maynard College of Education Dean Joan Pedro Conference Chair Dr. Carol Waters
9:00 am – 9:50 am	1st Session
9:50 am – 10:10 am	Coffee Break/Exhibits
10:15 am – 11:05 am	2nd Session
11:15 am – 12:05 pm	3rd Session
12:10 pm – 1:00 pm	Lunch/Exhibits
1:10 pm – 2:00 pm	4th Session
2:10 pm – 3:00 pm	5th Session
3:00 pm	Adjourn/Certificate Pick-Up

DONORS

On behalf of the University of Houston-Clear Lake's College of Education, we would like to extend a special THANKS to our donors who supported this year's STEM Conference.

PLATINUM LEVEL

Axiom Space, Inc.

EduSmart

Gulf Coast Educators Federal Credit Union

GOLD LEVEL

RPA TREKs

BRONZE LEVEL

Limitless Space

Harris County Soil and Water Conservation

Conference Exhibitors

Armand Bayou Nature Center

Artist Boat

Axiom Space, Inc.

BEST Robotics Inc.

Coach Clydon LLC

EduSmart

Energy Education Foundation

ePlanetarium - Home of the Discovery Dome

Expand Learning Consultants

Galveston Bay Foundation

Girlstart

Gulf Coast Educators Federal Credit Union

JASON Learning

Limitless Space Institute

MindWorks Resources

National Energy Education Development (NEED) Project

OpenStax, Rice University

Rice University Office of STEM Engagement (R-STEM)

RPA TREKs

SiSTEM Tutoring Agency

Space Center Houston

Take Care of Texas

Texas Girls Collaborative Project

TinkRworks

UHCL COE - EXCITE

UHCL Educational Management

UHCL Pathways to STEM Careers

Westbrook Intermediate Robotics Team (WIRED)

Saturday, March 2, 2024

Welcome Remarks

8:30 am – 8:50 am

Dr. Christopher Maynard – Senior VP for Academic Affairs and Provost

Dr. Joan Pedro – Dean of the College of Education

Dr. Carol Waters – Conference Chair

Session 1

9:00 am – 9:50 am

Microplastics Relation to Tourist Traffic: Galveston Island Beaches

Atrium II

Melissa Benningfield - UHCLTeach, University of Houston-Clear Lake

Inquiry project looking for a relationship between increased human presence and mass of microplastics present in Galveston beaches. Multi-beach survey compared random samples from beaches on Galveston Island to determine whether a significant correlation exists. Possible application in secondary science classrooms as project-based learning.

Fostering a STEM-Driven Mindset Art Competition

Atrium II

David Moya - UHCL ART Department

UHCL students were encouraged to create works of art with the prompt of "Having a STEM Mindset". A person with a STEM mindset finds value and relevance within the worlds they live in through science, technology, engineering, and mathematics. Work was created in 2D media at the choice of the artist to offer a broad range of freedom.

Busy Hands

1213

Joy Lynn Sloan & Doris Tomas - Energy Education Foundation

Keeping students engaged in the learning process takes imagination and careful planning. Our make and take workshop will provide STEM strategies that can be used to help teachers differentiate the learning experience to match student's individual learning needs based on the three main learning styles. These strategies will enhance and promote the Four C's of STEM: collaboration, communication, creativity, and critical thinking to train the brain to create organized thoughts and ways to retrieve information.

Curriculum-Connected MakerSpace: STEM for the Whole School

1215

Joey Segura & Tania Castillo - Brookside Intermediate, Clear Creek ISD

Why should STEM stay stuck in the Science and Math classes? In our session, come learn how to break barriers and weave the wonders of STEM and MakerSpace into core classes and beyond! Attendees will make and take valuable resources to bring STEM to All!

Innovative Sparks! Strategies for Dynamic Brainstorming in Project-Based Learning 1133

Mariana Quinn & Isaias Cerda – Rice University, Office of STEM Engagement

Join our interactive session as we explore dynamic imagination, collaboration, and creative approaches. From fostering team dynamics to navigating the challenges of getting started, discover innovative techniques to fuel your student's projects while unlocking a world of possibilities for an engaging and impactful experience.

Light a Concert Stage with Engineering 1217

Michelle Brown & Anne Mangas Smith - Expand Learning Consultants

Participants will experience a hands-on, student-centered engineering lesson. The task will be to build a prototype for lighting a concert stage that uses reflection and refraction with everyday materials. Participants will walk away with an engineering lesson plan including a student budget sheet for immediate classroom use.

To Infinity and Beyond: Applying Digital Innovation to Empower Future-Ready Learners 1135

Katie Alaniz - Houston Christian University

The "Six C's of Learning in the Digital Age" (creativity, communication, collaboration, critical thinking, character, and citizenship) transcend the test of time. This session will provide applicable strategies for empowering students to leverage these skills as innovators across the curriculum - into infinity and beyond!

Supporting the Success of Students with IEPs in Inclusive STEM Learning Experiences 1333

Elizabeth Beavers & Randy Seevers – University of Houston-Clear Lake

This session will focus on practitioners in the field and pre-service teachers' mindset toward inclusive education as well as exploring the Systematic Supports Planning Process (SSPP) framework. Through dialogue, participants will brainstorm their thoughts on engaging students with IEPs in STEM based learning experiences.

Birds of Texas 1335

Emily Billin - Galveston Bay Foundation

Galveston Bay Foundation will present free, TEKS aligned resources for students to learn about birds of Texas. The primary focus will be on 4-7th grade, but there will be content for all grades.

Boosting Engineering, Science, and Technology: An Overview 1218

Les Quioco - NASA Johnson Space Center

Jenn Gutierrez, North Houston BEST

The mission of the BEST Robotics Inc. is to engage, excite, and inspire middle and high school students to pursue careers in STEM fields through participation in a sports-like science and engineering-based robotics competition. This presentation will cover the various aspects of the BEST Robotics.

The Impact of a Dedicated Education Unit on First Year Associate's Degree Nursing Students' Scores on the Nursing Student Self-Efficacy Scale 1211

Tyra Valerie Rideaux & Danita Broussard - San Jacinto College North

This presentation explores the influence of a dedicated education unit on first year Associate's degree Nursing students' scores in the Nursing Student Self-Efficacy Scale. Emphasizing the pivotal role of the local hospital affiliate partnership with the community college nursing program, it highlights the significance of collaborative efforts in enhancing student self-efficacy within the nursing education framework.

Awkward? No Just Hawkward! 1219

Heather Millar, Rebekah Gano, Julie Brandt, Clare Hansen; Sydni Spencer, Chris Vazquez, & Skyler the Hawk - Armand Bayou Nature Center

Experience hands-on learning with Armand Bayou Nature Center education department. Meet Skyler, our red-tailed hawk ambassador. Engage your senses as you discover the joy of education in the outdoors. Connect young children with nature through STEM activities, storytelling, crafts, and more.

Canva Cultivates a Creative Classroom 1430

Heather Mitchell – University of Houston-Clear Lake

Technology engages educators. Canva allows ease for most educators to aid in making instruction easier. Most schools allow students to use their devices for instructional purposes. Canva has a lot of excellent tools within the platform that will also help manage activities created for student use. All educators even get a free educator's account.

M in STEM: Math Maker-STEM Lab and the Need of Tactile Math in Elementary to Support Intervention 1430

Arianna Moody - Moody's Learning Lab

M in STEM: Math Maker-STEM Lab and the Need of Tactile Math in Elementary to Support Intervention focuses on integration of Makerspace and STEM in the math lab to support math intervention of low performing standards. The proposal reflects on why math is a component in STEM, implementing math in STEM, integration of Makerspace and STEM in a math lab, activities, and data analysis: is a Math Maker-STEM lab proven to increase student learning growth?

Session 2

10:15 am – 11:05 am

STEM Challenges & More 1213

Doris Tomas & Joy Sloan - Energy Education Foundation

The STEM challenges that will be presented are uncomplicated activities that teachers can use with small groups in a classroom or in an after-school program. These challenges will not break your budget. They are cheap and quick to set up. Come join the fun!

- Exploring Micro:bits in STEM Education** **1215**
Brittany Templeton - Rice University, Office of STEM Engagement
 Explore Micro:bits with us and see how you can embed them into STEM Education. These pocket-sized programmable devices engage students in interactive, hands-on learning, fostering computational thinking. From coding experiments to real-world applications, micro:bits empower educators to cultivate a dynamic and innovative STEM learning environment.
- Implementing Design and Pitch Community Challenges in STEM** **1133**
Lewis Moore - JASON Learning
 Design and Pitch Challenges in STEM asks students to examine significant problems in real-world circumstances and consider how they can create solutions. It is their task to come up with an innovative solution to a Challenge and create a short, engaging pitch to convince a panel of investors that it's worth funding.
- Ecorise: Mobilizing the Next Generation of Green Leaders** **1135**
Kelly Knight – Katy ISD
 EcoRise mobilizes a new generation of leaders to design healthy, just, and thriving communities; this begins in the classroom. In this session, participants will explore EcoRise's Sustainable Intelligence resources, with embedded opportunities to model and implement these free PBL lessons from the EcoRise curriculum.
- Colossal Collisions: Teaching Force and Space through Project Based Learning** **1333**
Katie Reche & Gabriela Flores - Park View Intermediate, Pasadena ISD
 In this STEM project, students will delve into the realms of space and physics. They will acquire knowledge about components of the solar system, gravity, inertia, speed, and motion to develop a plan aimed at averting a potential catastrophe caused by an incoming asteroid.
- Minds in Motion: Navigating Student Engineering Design Challenges** **1335**
Lisa Deslaurier – EduSmart
 Discover the power of hands-on engineering design with the research-based GRASPS model. Use practical strategies and easy-to-obtain materials to bring project-based learning to life in your classroom. Explore student-driven, real-world problem-solving and leave with a fresh perspective on experiential education.
- Fostering 3D Instructions, STEM Way of Thinking, and Computational Thinking Skills through a Scalable Electric Circuit Activity Curriculum Aligned with NGSS Standards and EQUIP Rubric** **1217**
Festus Fajuyigbe – San Jacinto College
 The presentation demonstrates how to integrate scalable electric circuit activities into STEM education, aligning with NGSS standards and assessed using the EQUIP rubric. This approach promotes 3D instruction, STEM thinking, and computational thinking skills in K-12 and college classrooms, preparing students for a technologically advanced world. It emphasizes hands-on learning, critical thinking, problem-solving, and real-world application of knowledge.

Excellent Energy Engineering 1218

Nina Corley & Kimberly Swan – The NEED Project

Learn how to seamlessly incorporate engineering and design into your science content lessons with exciting hands-on activities that take only a class period and with easy to source supplies.

Empowering Excellence: Overcoming Historic Biases for BIPOC Girls in STEM Moving Beyond the Wow! Factor 1219

Shane Woods, Tejuana L. Edmond, & Saki Milton - Girlstart

Join us as we delve into confronting low expectations imposed on high-achieving BIPOC girls in math and science. Explore strategies to foster their excellence and ensure equitable opportunities in STEM.

Artist Boat Island STYLE - Systemic Training for Youth Leadership in the Environment 1133

Sarah Frantz & Kristen Keane - Artist Boat

Through a NOAA BWET grant Artist Boat is guiding Galveston ISD sixth graders through a Meaningful Watershed Educational Experience (MWEE), a learner centered framework that focuses on investigations into local environmental issues and leads to informed actions through embedded core curricular lessons and community investigations.

Storybook STEAM in the Library 1430

Lupe Palacios – Frazier Elementary, Pasadena ISD

The library is no longer a quiet place but an active space for children, educators, and parents. Our goals have progressed from primarily reading activities with children to facilitating Makerspace and STEAM projects with a large group. Join Lupe Palacios as she discusses how to organize an hour-long Storybook STEAM activity in your library or classroom.

Exploring the Intersection and Perceptions of Early Electronic Device Exposure on Child Development 1430

Elizabeth Garza – University of Houston-Clear Lake

In contemporary society, the pervasive presence of technology raises a critical question: At what age is it appropriate for children to engage with electronic devices? Through collaborative exercises, we seek to contribute valuable perspectives to the ongoing discourse on children's exposure to electronic devices.

Session 3

11:15 am – 12:05 am

Breaking Down Barriers for Minorities in Higher Education 1133

Luis Gracia – Pearland ISD

According to the latest statistics reported by the National Science Board, which reports data collected on the U.S. labor force, minorities continue to be underrepresented in higher education institutions. This is a unique scenario in STEM-related careers which seek to expand on the benefits that are derived from a diverse workforce.

- Science, Technology, and Society: Apply STEM When Teaching Texas History** 1213
Mary Curtis & Sandy Curtis – University of Houston-Clear Lake
 Exposing students to authentic learning experiences that apply cross-disciplinary concepts and skills is critical to shaping 21st century learners. This presentation demonstrates how STEM and social studies are natural partners when teaching students about the history and development of Texas.
- Obtaining an Education Doctorate in Curriculum and Instruction: STEM Emphasis: Is this the Degree for You?** 1219
Omah Duncan, Amy Cabness, & Anna Sturton - University of Houston-Clear Lake
 Potential doctoral degree applicants will learn about UHCL Education Doctorate in Curriculum and Instruction (EDCI) - STEM programmatic expectations, admissions processes, and financial obligations. Additionally, current and previous EDCI students will offer insights about juggling the program with career and personal commitments.
- STEM Camp Success: Elevating Education Through Project-Based Learning** 1215
Denise Weatherford, Leonel Rios, & Jillian Trimm - New Caney ISD
 The education landscape increasingly favors STEM education, with Project-Based Learning emerging as a key tool for student engagement and deep comprehension. In New Caney ISD, our successful two-year Summer STEM Camp serves as a model. This presentation offers educators practical tips for implementing a Summer STEM Camp, aligning with the "K-12 PBL" strand to empower teachers in creating enriching summer STEM experiences for elementary and secondary students.
- Mission Planning with NASA Scholars** 1135
Maddy Monaco, Alexandra Constantinou, & Heather Green - NASA's Texas High School Aerospace Scholars
 Learn about the NASA Texas High School Aerospace Scholars (HAS) while planning a space exploration mission to Mars. Participants will learn about the mission planning process, NASA expeditionary skills, and the integration of STEM concepts.
- Merging Technology and Mathematics for Deep Conceptualization and Application of Mathematical Concepts** 1333
Karista Williams – Houston ISD
 Often deemed dull and limited to pencils and repetition, mathematics can be engaging. Through discussions and Math Talks, learners express their thoughts. This course integrates technology and math for a collaborative, student-driven learning space.
- What are we doing? Science Notebooks in Student-Centered Classrooms: Introduction and Using Science Notebooks for Sensemaking in STEM Classrooms** 1217
Jeffrey Gale & Samantha Gale – Deer Park ISD
 We will examine a variety of ways scientists use science notebooks and use a science notebook strategy to experience the critical components of sensemaking. Too often in the K-12 science classroom, the science notebook has become a place where students take notes from PowerPoints or YouTube videos.

Bay to Schools: Middle & High School 1335
Megan Sambilay - Galveston Bay Foundation

Learn how to bring the Bay to your school and receive Galveston Bay Foundation's TEKS-aligned Classroom STEM Workshops for FREE! Participants will model activities such as estuarine animal adaptations, watershed topography, environmental engineering, oyster biology, and more! Geared towards middle and high school AP/honors level teachers.

Decide and Defend: An Instructional Routine for Mathematical Reasoning 1218
Lorie Batrez – UHCLTeach, University of Houston-Clear Lake

Participants will be guided through, Decide and Defend, an instructional routine from Teaching for Thinking that builds students' mathematical reasoning and provides supports, such as think time, sentence stems, and student discourse, to create access for all learners.

Exploring STEM Apprenticeships: Enabling Students with the Tools to be Successful 1435

Janice Sullivan & LaMona Lemarr - San Jacinto College

A deep dive into our program at San Jacinto College that is designed to give students with hands-on experience with STEM industries and programs that is offered in our area. Our goal is to provide students with disabilities resources and support to take their STEM career to the next level.

Empowering STEM Pathways: Integrative Life Coaching for Aspiring Science and Tech Scholars 1437

Clydon Vista - Coach Clydon LLC

Empowering STEM Pathways" is a session for aspiring STEM students, blending academic support with personal development. It addresses STEM-specific challenges, showcasing evidence-based strategies for resilience and success in science and technology education, ideal for educators and students.

Making Science Relevant with Real-World Problem-Solving 1326
Nadia Bruner - RPA TREKS

Rescue Texas turtles. Become a materials scientist for the space program. Save your school from flooding. Engineer an amusement park. These are a few of the regional and global explorations designed to help teachers answer a very common student question, "Why is this important?" Be ready to unpack versatile lessons that seamlessly capture students' interest, appeal to science in relevant ways from personal, professional or social contexts, and apply learning to solve problems and situations!

Session 4

1:10 pm – 2:00 am

Computational Thinking in the Physics and Astronomy Classroom 1133
James Newland - UH College of Education & Bellaire High School, Houston ISD

Students can leverage computational thinking as a way to feel more engaged in learning physics and astronomy. This session will discuss the use of computational thinking in K-12 physics and

astronomy classrooms and research surrounding student self-efficacy and computational thinking in science classes.

Digging Deep with Emergent Bilingual Students through Sheltered Instruction Strategies: Integration of Science in the Reading Classroom 1135

Kelly Duff – Pearland ISD

This presentation highlights great teaching strategies to support EB students (second language learners) in the Language Arts and Science classrooms: using content and language objectives seamlessly, using vocabulary to write coherently, and scaffolding on-level texts for struggling readers.

Leading STEAM Integration through 3D Doodling 1213

Saima Peer & Katherine Counterman - Youngblood Elementary School

3D pens allow students the ability to manipulate objects and visualize concepts that would not be possible with traditional teaching methods. Attendees will discover ways to integrate the use of 3D pens in K-8 lesson planning.

Artist Boat: Inspiration and Education Through Unique Coastal Experiences 1215

Sarah Frantz & Kristen Keane - Artist Boat

Join Artist Boat in this workshop to learn about how to incorporate science and art into your classroom through workshops, adventures, residencies and curriculum. You will even create a watercolor painting just like your students would through our programming.

Energy House Challenge 1217

Nina Corley - O'Connell College Preparatory School

A fun engineering activity that incorporates learning about energy efficiency by having students insulate a cardboard house and test its efficiency. Design parameters for elementary, intermediate, and secondary levels and teachers cheat tips, as well as additional extension and enrichment opportunities provided. Come join us!

STEM for All: Trading Tools for Success 1333

Amarilys William & Jasmine Oguntuga - Spring Branch ISD **CANCELED**

The Trading STEM Tools training equips participants with the knowledge of how to implement a district wide STEM program. With resources available to all students access regardless of background. It includes creating a STEM resource catalog, check-out system, and borrowing rules. Participants gain practical advice and hands-on experience, fostering student interest in STEM.

STEM Siblings: A Revolutionary Elementary Curriculum 1335

Dhrumi Shah, Megan Wang, Joseph Zhang, Ronit Punj, Tomothy Zhang, & Chloe Luo - Clear Lake High School **CANCELED**

STEM Siblings is a club that engages and empowers elementary school students in STEM through hands-on activities and mentorships. We have spearheaded district-wide initiatives such as interactive monthly meetings and STEM Nights and hope to implement the flourishing program in further schools.

JMARS: A Planetary Science Tool for Using Data in the Classroom 1218

Heather Dalton - San Jacinto College South

Learn to use JMARS, a free GIS program containing spacecraft data from many planetary objects (planets, moons, and some dwarf planets and large asteroids) to bring data into your classroom.

STEAM Ahead with Community Partnerships 1219

Holly Yoes & Ann Hobing – Pasadena ISD

Learn how a local school district utilizes STEAM partners to enhance student learning of science content while also inspiring students to become involved in community projects and STEM careers. Participants may ask questions of the district administrator as well as a representative from one of the community partners.

Moon Shadow 2024: Science, Equipment, and Activities for The Solar Eclipse 1435

Pat Reiff – Rice University

The total eclipse of April 8, 2024, is one of nature’s greatest spectacles. Learn how to observe safely with fun activities rain or shine. Ideally take your students to experience totality but even if you can’t, you can still view the partial eclipse (<https://space.rice.edu/eclipse>).

Breaking Beliefs: Integrating Engineering into Chemistry 1430

Courtney McCleery & Cassandra Phenix – University of Houston-Clear Lake

This seminar defines engineering education within the context of the chemistry classroom, emphasizing problem-solving and innovation beyond physical constructs. It addresses challenges in teaching engineering in chemistry. Strategies for integrating engineering in the chemistry classroom will be discussed.

Got Phenomena! 1430

Asrar Maye - Katy ISD

The new science TEKS being implemented in 2024-2025 are based on the K-12 framework. Three-dimensional learning in science goes beyond teaching the standards and performing investigative labs. This presentation is designed to help you experience a chemistry lesson based on the new TEKS. Attendees will leave with an understanding of three-dimensional learning and how to create a lesson that has all the elements that are geared for student inquiry.

Session 5

2:10 pm – 3:00 pm

Engaging with NASA Science: In-Person and Online Activities 1133

Rossina Miller & Paige Graff - NASA ARES

Looking to engage learners in all learning environments with NASA science using in-person and/or online activities? In this session, learn about NASA STEM activities that will enable learners (ages 9+) to interact with astronaut photographs, resources about Moon rocks and meteorite, and more!

- Training the Future Green Infrastructure Workforce Through a High School Internship Program** 1135
Christie Taylor - AgriLife Extension, Disaster Assessment and Recovery Unit, Texas Community Watershed Partners Office
 The GIFT (Green Infrastructure for Texas) High School Student Internship program involves cohorts of 9-12 graders that complete a 12-week course that includes field trips, hands-on field-based activities, lectures, group and individual projects completed in local watersheds presented by green infrastructure professional mentors.
- Unplugged Coding in Early Childhood. You Can Do It Too!** 1213
Remi Willoughby - University of Houston-Clear Lake
 Learn to promote early childhood development through creative coding activities, leverage the interaction of play and unplugged programming, and release the potential of early childhood minds in this interactive coding session. Learn how to use coding to teach sequencing and pattern recognition in your classrooms.
- STEM Teaching Strategies** 1215
Tammy Crannie - Shepherd Intermediate School
 This session will explore the use of technology to aid in the everyday teacher stuff and creative ways to energize your lessons using technology.
- Integrating Scratch Coding into the TEKS** 1333
Laura Mackay - Expand Learning Consultants
 Bring your device and learn how to use the free Scratch coding platform to help students dive deeper into the TEKS. Experience a brief overview of Scratch and then explore various curriculum links to reading, math, science, and social studies. Explore the T in STEM!
- Medical Mystery- A Project-Based Lesson on Human Body Systems for Grade 7 Life Science** 1335
Holly Yoes – Pasadena ISD
 Participants will walk through a project-based lesson where students must infer which medical disorder may result from the irregular structure of specialized cells/organ(s) that make up a specific body system (TEKS 7.13 A&B) and then create a presentation to inform the public about the disorder.
- Empowering Student Leaders through CELF Civic Science Framework** 1219
Lisa Gianukos, Adriana Castro, & Tara Ocansey - The Children's Environmental Literacy Foundation
 CELF Civic Science Framework empowers student leaders by fostering civic engagement through education. This innovative framework equips students with the knowledge and skills needed to address societal challenges, nurturing the next generation of informed and proactive citizens.

National Weather Service Resources for Teachers 1435

Daniel Reilly – National Weather Service

A representative with the National Weather Service will discuss science resources that may be useful to teachers. This includes virtual and in person school visits/presentations, teach the teacher webinars, suggested classroom activities, lesson plans, etc.

Reimagining Learning in the Classroom with PBIS and STEM Integration 1437

Amanda Materre - Full Disclosure Co.

We will explore the powerful combination of Positive Behavior Interventions and Supports (PBIS) and STEM integration to create a transformative learning experience in the classroom by examining how integrating STEM concepts and practices into PBIS implementation can enhance student engagement, critical thinking, problem-solving, and collaboration skills.

PBS SciGirls: Strategies & Activities to Engage Girls (and All Students) in STEM 1217

Tricia Berry - Texas Girls Collaborative Project

Play in a Wetland Band. Create the Bounciest Ball and Safest Parachute. Access free Million Girls Moonshot and Texas Girls Collaborative Project resources and explore hands-on STEM and citizen science activities from Emmy-Award-winning PBS SciGirls designed for ages 8-13 (scalable to high school and beyond).

Innovative Pedagogy: Exploring Human Anatomy with Robots 1218

Cynthia Hopkins - Kaffie Middle School **CANCELED**

By providing interactive and hands-on learning experiences, students will understand how different body systems function and interact, enhancing students' scientific knowledge and promoting engagement in STEM education. In this session, we will explore using robots as tools to model how human body systems' function.

3:00 pm

Adjourn/Certificate Pick-Up

Session-at-a-Glance

Session 1

9:00 am – 10:00 am

Microplastics Relation to Tourist Traffic: Galveston Island Beaches <i>Melissa Benningfield - UHCLTeach, University of Houston-Clear Lake</i>	Atrium II
Fostering a STEM-Driven Mindset Art Competition <i>David Moya - UHCL ART Department</i>	Atrium II
Busy Hands <i>Joy Lynn Sloan & Doris Tomas - Energy Education Foundation</i>	1213
Curriculum-Connected MakerSpace: STEM for the Whole School <i>Joey Segura & Tania Castillo - Brookside Intermediate, Clear Creek ISD</i>	1215
Innovative Sparks! Strategies for Dynamic Brainstorming in Project-Based Learning <i>Mariana Quinn & Isaias Cerda – Rice University, Office of STEM Engagement</i>	1133
Light a Concert Stage with Engineering <i>Michelle Brown & Anne Mangas Smith - Expand Learning Consultants</i>	1217
To Infinity and Beyond: Applying Digital Innovation to Empower Future-Ready Learners <i>Katie Alaniz - Houston Christian University</i>	1135
Supporting the Success of Students with IEPs in Inclusive STEM Learning Experiences <i>Elizabeth Beavers & Randy Seevers – University of Houston-Clear Lake</i>	1333
Birds of Texas <i>Emily Billin - Galveston Bay Foundation</i>	1335
Boosting Engineering, Science, and Technology: An Overview <i>Les Quioco - NASA Johnson Space Center</i> <i>Jenn Gutierrez, North Houston BEST</i>	1218
The Impact of a Dedicated Education Unit on First Year Associate's Degree Nursing Students' Scores on the Nursing Student Self-Efficacy Scale <i>Tyra Valerie Rideaux & Danita Broussard - San Jacinto College North</i>	1211
Awkward? No Just Hawkward! <i>Heather Millar, Rebekah Gano, Julie Brandt, Clare Hansen; Sydni Spencer, Chris Vazquez, & Skyler the Hawk - Armand Bayou Nature Center</i>	1219

Canva Cultivates a Creative Classroom 1430
Heather Mitchell – University of Houston-Clear Lake

M in STEM: Math Maker-STEM Lab and the Need of Tactile Math in Elementary to Support Intervention 1430
Arianna Moody - Moody's Learning Lab

Session 2

10:15 am – 11:05 am

STEM Challenges & More 1213
Doris Tomas & Joy Sloan - Energy Education Foundation

Exploring Micro:bits in STEM Education 1215
Brittany Templeton - Rice University, Office of STEM Engagement

Implementing Design and Pitch Community Challenges in STEM 1133
Lewis Moore - JASON Learning

Ecorise: Mobilizing the Next Generation of Green Leaders 1135
Kelly Knight – Katy ISD

Colossal Collisions: Teaching Force and Space through Project Based Learning 1333
Katie Reche & Gabriela Flores - Park View Intermediate, Pasadena ISD

Minds in Motion: Navigating Student Engineering Design Challenges 1335
Lisa Deslaurier – EduSmart

Fostering 3D Instructions, STEM Way of Thinking, and Computational Thinking Skills through a Scalable Electric Circuit Activity Curriculum Aligned with NGSS Standards and EQuip Rubric 1217
Festus Fajuyigbe – San Jacinto College

Excellent Energy Engineering 1218
Nina Corley & Kimberly Swan – The NEED Project

Empowering Excellence: Overcoming Historic Biases for BIPOC Girls in STEM Moving Beyond the Wow! Factor 1219
Shane Woods, Tejuana L. Edmond, & Saki Milton - Girlstart

Artist Boat Island STYLE - Systemic Training for Youth Leadership in the Environment 1133
Sarah Frantz & Kristen Keane - Artist Boat

Storybook STEAM in the Library 1430
Lupe Palacios – Frazier Elementary, Pasadena ISD

Exploring the Intersection and Perceptions of Early Electronic Device Exposure on Child Development 1430
Elizabeth Garza – University of Houston-Clear Lake

Session 3

11:15 am – 12:05 am

Breaking Down Barriers for Minorities in Higher Education 1133
Luis Gracia – Pearland ISD

Science, Technology, and Society: Apply STEM When Teaching Texas History 1213
Mary Curtis & Sandy Curtis – University of Houston-Clear Lake

Obtaining an Education Doctorate in Curriculum and Instruction: STEM Emphasis: Is this the Degree for You? 1219
Omah Duncan, Amy Cabness, & Anna Sturton - University of Houston-Clear Lake

STEM Camp Success: Elevating Education Through Project-Based Learning 1215
Denise Weatherford, Leonel Rios, & Jillian Trimm - New Caney ISD

Mission Planning with NASA Scholars 1135
Maddy Monaco, Alexandra Constantinou, & Heather Green - NASA's Texas High School Aerospace Scholars

Merging Technology and Mathematics for Deep Conceptualization and Application of Mathematical Concepts 1333
Karista Williams – Houston ISD

What are we doing? Science Notebooks in Student-Centered Classrooms: Introduction and Using Science Notebooks for Sensemaking in STEM Classrooms 1217
Jeffrey Gale & Samantha Gale – Deer Park ISD

Bay to Schools: Middle & High School 1335
Megan Sambilay - Galveston Bay Foundation

Decide and Defend: An Instructional Routine for Mathematical Reasoning 1218
Lorie Batrez – UHCLTeach, University of Houston-Clear Lake

Exploring STEM Apprenticeships: Enabling Students with the Tools to be Successful 1435
Janice Sullivan & LaMona Lemarr - San Jacinto College

Empowering STEM Pathways: Integrative Life Coaching for Aspiring Science and Tech Scholars 1437
Clydon Vista - Coach Clydon LLC

Making Science Relevant with Real-World Problem-Solving 1326
Nadia Bruner - RPA TREKs

Session 4

1:10 pm – 2:00 am

Computational Thinking in the Physics and Astronomy Classroom 1133
James Newland - UH College of Education & Bellaire High School, Houston ISD

Digging Deep with Emergent Bilingual Students through Sheltered Instruction Strategies: Integration of Science in the Reading Classroom 1135
Kelly Duff – Pearland ISD

Leading STEAM Integration through 3D Doodling 1213
Saima Peer & Katherine Counterman - Youngblood Elementary School

Artist Boat: Inspiration and Education Through Unique Coastal Experiences 1215
Sarah Frantz & Kristen Keane - Artist Boat

Energy House Challenge 1217
Nina Corley - O'Connell College Preparatory School

JMARS: A Planetary Science Tool for Using Data in the Classroom 1218
Heather Dalton - San Jacinto College South

STEAM Ahead with Community Partnerships 1219
Holly Yoes & Ann Hobing – Pasadena ISD

Moon Shadow 2024: Science, Equipment, and Activities for The Solar Eclipse 1435
Pat Reiff – Rice University

Breaking Beliefs: Integrating Engineering into Chemistry 1430
Courtney McCleery & Cassandra Phenix – University of Houston-Clear Lake

Got Phenomena! 1430
Asrar Maye - Katy ISD

Session 5

2:10 pm – 3:00 pm

Engaging with NASA Science: In-Person and Online Activities 1133
Rossina Miller & Paige Graff - NASA ARES

Training the Future Green Infrastructure Workforce Through a High School Internship Program	1135
<i>Christie Taylor - AgriLife Extension, Disaster Assessment and Recovery Unit, Texas Community Watershed Partners Office</i>	
Unplugged Coding in Early Childhood. You Can Do It Too!	1213
<i>Remi Willoughby - University of Houston-Clear Lake</i>	
STEM Teaching Strategies	1215
<i>Tammy Crannie - Shepherd Intermediate School</i>	
Integrating Scratch Coding into the TEKS	1333
<i>Laura Mackay - Expand Learning Consultants</i>	
Medical Mystery- A Project-Based Lesson on Human Body Systems for Grade 7 Life Science	1335
<i>Holly Yoes – Pasadena ISD</i>	
Empowering Student Leaders through CELF Civic Science Framework	1219
<i>Lisa Gianukos, Adriana Castro, & Tara Ocansey - The Children’s Environmental Literacy Foundation</i>	
National Weather Service Resources for Teachers	1435
<i>Daniel Reilly – National Weather Service</i>	
Reimagining Learning in the Classroom with PBIS and STEM Integration	1437
<i>Amanda Materre - Full Disclosure Co.</i>	
PBS SciGirls: Strategies & Activities to Engage Girls (and All Students) in STEM	1217
<i>Tricia Berry - Texas Girls Collaborative Project</i>	

3:00 pm

Adjourn/Certificate Pick-Up