



STEM Teacher Open House - Agenda of Activities

Friday, October 18th, 8:30 am – 3:30 pm

Sign up for a **teacher membership** (\$10 off today!) that allows you access to the Science Center and Planetarium all year! Please see the Palm Beach Zoo’s booth in the exhibit area to sign up for a **Zoo teacher membership**.

Schedule at a Glance

8:30 am - 9:00 am - Sign-in at the South Florida Science Center

9:00 am - 2:30 pm - STEM Exhibition Area - South Florida Science Center - Visit our many STEM partners from the Palm Beach area and be sure to visit the Mobile Marine Lab out front, which offers a unique on-site Marine Science experience.

10:00 am - 3:00 pm - Code.Org Computer Science Fundamentals (Grades K - 5) *By Pre-Registration ONLY* - Full Day Training - Stiles-Nicholson STEM Tech Lab - Sue Baillie, John Long, & Julia Mate - The Computer Science Fundamentals elementary school curriculum is designed to provide students the opportunity to explore the limitless world of computing. The courses blend online, self-guided, and self-paced tutorials with “unplugged” activities that require no computer at all.

11:45 am - 12:30 pm - Lunch - Picnic lunch by WT Cafe (Science Trail Porch). You can take your lunch to your next session, to the Science Trail, out to Dreher Park, or to the Palm Beach Zoo and Conservation Society.

3:30 pm - 5:00 pm - Explore the programs and exhibits at the South Florida Science Center and the Palm Beach Zoo on your own. Show your event wristband to gain complimentary admission to both facilities all day. Please note that complimentary admission is for teachers only.

Science Leadership Academy (Grades K - 5) *For Pre-Registered Lead Teachers Only* Half Day Trainings - Palm Beach Zoo Classroom - This is the first session of three that will be taking place within PBCSD Professional Development Days (PDD) throughout the course of the school year. This training focuses on the 5E Model of Science Instruction, effective STEMscopes resource integration, and the science standards targeted within each trimester of instruction. The goal of the SLA is to train teachers to be science instructional leaders at their school and assist school leadership with the implementation of effective pedagogy within K-5 classrooms.

8:30-11:30 am – Grades K-2 Lead Teachers - Palm Beach Zoo Classroom

12:30-3:30 pm – Grades 3-5 Lead Teachers - Palm Beach Zoo Classroom

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| 8:30 am | Sign-in at the South Florida Science Center (please see map). |
| 8:40 am | Early-Bird Animal Hospital Tour (Grades Pre-K - 12) {30 min} - Zoo Animal Care Complex - Cassie Klein & Erin Stimer - Get a sneak peek at this behind-the-scenes area, with visits to our treatment room, radiology, and laboratory. |
| 9:15 am | <p>Keynote Speaker - <i>Dekelbom Science Theater</i>, Robert Corbin Ph.D., Director of Global Initiatives for Discovery Education - STEM Dispositions (Welcome by Kate Arrizza, CEO, SFSCA and Kristen Cytacki, Director of Education, Palm Beach Zoo). Please arrive early; seating is limited.</p> <p>STEM Education with Loggerhead Marinelifelife Center (Grades K - 12) - <i>Zoo Animal Care Complex, Baum Conference Room</i> - Lindsay French - Learn how to connect students with the underwater world of marine science through Loggerhead Marinelifelife Center’s STEM Education Program: programs and resources available (field and classroom opportunities) and how to join this school year’s Partnership in Education.</p> |

Planetarium Sneak Peeks (Grades K - 12) - *Dekelboun Planetarium* - Chris Pait - Check out our digital planetarium as you learn about constellations in the October night sky and our many planetarium shows the Science Center has to offer.

Rise into STEM with FIRST (Grades K - 8) - *Stiles-Nicholson STEM Room 2* - Amy Erickson - Join Green Mouse Academy to learn how to start a FIRST LEGO League and FIRST LEGO League Jr. Robotics program at your school.

Middle School Mathematics Resources (Grades 6 - 8) - *Learning Lab* - Ken Caplin - Explore resources available to enhance the middle school curriculum including Pearson eVision materials as well as Palm Beach County district-created resources.

Fabrication Station (Grades 6 - 12) - *Discovery Room 3* - Adam Newton & Chris Ortiz - Interested in bringing the Maker movement to your students? We'll discuss the pros and cons of laser cutters, 3D printers, and other CNC devices as well as examples of simple ways to introduce younger students to computer-aided design (CAD).

10:00 am

STEMscopes Essentials - Elementary Science (Grades K - 5) - *Dekelboun Science Theater* - Amanda Weeks-Hughes - This is an essential STEMscopes training for teachers new to science or new to utilizing the STEMscopes platform for instruction. Come learn the basics of navigating through the platform, 5Es, Assigning to Students, and Teacher Toolbox.

Teaching Students about Conservation (Grades 3 - 12) - *Zoo Animal Care Complex, Baum Conference Room* - Leneita Fix - How can you teach ocean conservation to your students on a practical level beyond plastic straws? Come to this session with The Reef Institute and find ways you can help your students save the sea.

A Tour of the Brain (Grades Pre-K - 12) - *Brain Exhibit, South Florida Science Center* - Palm Beach State College Science Club - Hold a sheep's brain in the palm of your hand and take a tour of the Brain Exhibit as you learn about the structure and function of this amazing organ.

To Get to the Other Side: Wildlife Crossing Design Challenge (Grades 3 - 12) {DOUBLE SESSION} - *Stiles-Nicholson STEM Room 1* - Dr. Robert Corbin - The United Nations Sustainable Goals prompt us to integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. In this session, participants experience kinesthetic approaches to STEM and design thinking to synthesize biodiversity concepts while promoting movement and human health. Participants create prototypes of wildlife crossings which also simultaneously promote human exercise and outdoor activity. The session is drawn directly from Discovery Education's STEM Connect supplemental digital resource which teaches students to employ design thinking and applied technologies in order to inspire the next generation of global solution seekers.

Algebra 1 Smart Panel Activities (Grades 8 - 12) - *Stiles-Nicholson STEM Room 2* - Ken Caplin - Explore new Smart Panel lessons designed to enhance your classroom and student understanding of difficult lessons in Algebra 1. No Smart Panel required!

Traveling Turtles: Using Real Sea Turtle Research to Integrate Hands-on STEM Lessons (Grades 3 - 8) - *Learning Lab* - Rebecca Mott - Looking for ways to provide hands-on, engaging lessons for your students that integrate STEM subjects? Come to our session and learn how local science-based organizations have partnered to provide classrooms free experiential programs that will not only teach standards but also important conservation initiatives. You'll get first-hand experience doing what sea turtle biologists do on a daily basis while learning all about the amazing world of sea turtles through our traveling trunk program.

Break Out of the Box: Plan an Escape Route from the Norm (Grades 6 - 12) - *Discovery Room 3* - Kaylin Markman & John Shoemaker - Looking to engage and motivate the students in your classroom? Love puzzles, riddles, or challenges? Want something different? Come join us to explore BreakoutEDU, an open-source educational platform for immersive learning games for people of all ages. You'll learn how to use content-area games to foster critical thinking, complex problem-solving, and teamwork in your classroom. Game on!

11:00 am

Planetarium Town Hall (Grades 3 - 12) - *Dekelboun Planetarium* - Chris Pait & Marc Wiskoff - The SFSCA planetarium offers a unique educational experience for your students. We are working on new educator-led classes to cover NGSSS specifically related to space sciences. Come share your suggestions on what you would like to see covered in our planetarium programs.

Marine Science Excursions with Florida Fishing Academy (Grades Pre-K - 12) - *Zoo Animal Care Complex, Baum Conference Room* - Shannon Lalime, Emily Howard, Andrew Grossmann, & Richard Brochu - Come learn about the various on-site and off-site programs we offer in Pre-K to 12th grade. Be sure to check out our Mobile Marine Lab which offers a unique on-site Marine Science Experience.

Animal Hospital Tour (Grades K - 12) - *Zoo Animal Care Complex* - Cassie Klein & Kelly Miller - Get a sneak peek at this behind-the-scenes area, with visits to our treatment room, radiology, and laboratory.

To Get to the Other Side: Wildlife Crossing Design Challenge (Grades 3 - 12) {DOUBLE SESSION CONTINUED} - *Stiles-Nicholson STEM Room 1* - Dr. Robert Corbin - The United Nations Sustainable Goals prompt us to integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. In this session, participants experience kinesthetic approaches to STEM and design thinking to synthesize biodiversity concepts while promoting movement and human health. Participants create prototypes of wildlife crossings which also simultaneously promote human exercise and outdoor activity. The session is drawn directly from Discovery Education's STEM Connect supplemental digital resource which teaches students to employ design thinking and applied technologies in order to inspire the next generation of global solution seekers.

Geometry Smart Panel Activities (Grades 8 - 12) - *Stiles-Nicholson STEM Room 2* - Ken Caplin - Explore new Smart Panel lessons designed to enhance your classroom and student understanding of difficult lessons in Geometry. No Smart Panel required!

Traveling Turtles: Using Real Sea Turtle Research to Integrate Hands-on STEM Lessons (Grades 3 - 8) - *Learning Lab* - Rebecca Mott - Looking for ways to provide hands-on, engaging lessons for your students that integrate STEM subjects? Come to our session and learn how local science-based organizations have partnered to provide classrooms free experiential programs that will not only teach standards but also important conservation initiatives. You'll get first-hand experience doing what sea turtle biologists do on a daily basis while learning all about the amazing world of sea turtles through our traveling trunk program.

NoS in K-12 Science (Grades K - 12) - *Discovery Room 3* - Jessica Zunker - Science is not solely a rigid multi-step procedure; it is a process of discovery that allows students to link facts into coherent & comprehensive understandings of the natural world. This session is designed to work through classroom scenarios and to explore tips and tricks for integrating NoS concepts throughout the year.

11:45 AM - 12:30 PM LUNCH

Picnic lunch by WT Cafe (Science Trail Porch). You can take your lunch to your next session, to the Science Trail, out to Dreher Park, or to the Palm Beach Zoo and Conservation Society.

12:30 pm

STEMscopes Essentials - M/J Science & Chemistry (Grades 6 - 12) - *Dekelboum Science Theater* - Amanda Weeks-Hughes - This is an essential STEMscopes training for teachers new to science or new to utilizing the STEMscopes platform for instruction. Come learn the basics of navigating through the platform, 5Es, Assigning to Students, and Teacher Toolbox.

Teaching Students Why Climate Change is Changing Everything (Grades 3 - 12) - *Zoo Animal Care Complex, Baum Conference Room* - Leneita Fix - Join The Reef Institute to take home practical ideas on how to implement the topic of climate change into your classroom and learn how you can carry out a quick, fun experiment with your students.

A Tour of the Brain (Grades Pre-K - 12) - *Brain Exhibit, South Florida Science Center* - Palm Beach State College Science Club - Hold a sheep's brain in the palm of your hand and take a tour of the Brain Exhibit as you learn about the structure and function of this amazing organ.

Repurposing Plastics (Grades 5 - 12) {DOUBLE SESSION} - *Stiles-Nicholson STEM Room 1* - Dr. Robert Corbin - The United Nations Sustainable Goals prompt us to integrate responsible consumption and production of materials. In this session, participants experience kinesthetic approaches to STEM and design thinking to synthesize a product that not only meets a need but reduces plastic waste that could potentially impact our local ecosystems. This session is drawn directly from Discovery Education's STEM Connect supplemental digital resource which teaches students to employ design thinking and applied technologies in order to inspire the next generation of global solution seekers.

Digital Tools in Biology Classrooms (Grades 6 - 12) - *Stiles-Nicholson STEM Room 2* - Dr. Vetaley Stashenko - Increase grades and excitement in your biology classroom by utilizing the latest technology in digital machines.

ACE's, Trauma, and Toxic Stress (Grades 6 - 12) - *Discovery Room 3* - Jane Robinson & Dominika Nolan - This workshop will review the original ACE Study, the effects of childhood adversity on brain development, and long-term consequences of untreated childhood trauma. This workshop will provide an overview, hands-on interactive learning, and strategies on becoming trauma-informed.

1:30 pm

STEMscopes Advanced - K-8 Science & Chemistry (Grades K - 12) - *Dekelboum Science Theater* - Amanda Weeks-Hughes - (This is for teachers that have already attended the essentials training or are experienced in the platform.) STEMscopes can make your planning time so much easier. Come learn how to create plans to save for years, cool tricks when assigning, reviewing and returning student work, Teacher Toolbox, and STEMcoach in Action.

How to Upcycle & Use STEAM in the Classroom (Grades K - 12) - *Zoo Animal Care Complex, Baum Conference Room* - Chelsea Odum - Join Resource Depot to learn some easy ways you can add some upcycled STEAM activities into your classroom and some green tips for your school!

Zoo Labs Demonstration (Grades 6 - 12) - *Zoo Animal Care Complex, Laboratory* - Amber Prinkey - Veterinary careers include science, math, engineering...and plenty of detective work! Meet us in the animal hospital lab to examine the evidence, make a diagnosis, and find out how this unique program can add hands-on science to your zoo field trip.

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| | <p>Planetarium Sneak Peeks (Grades K - 12) - <i>Dekelboun Planetarium</i> - Chris Ortiz - Check out our brand new digital planetarium as you learn about constellations in the October night sky and our many planetarium shows the Science Center has to offer.</p> <p>Repurposing Plastics (Grades 5 - 12) {DOUBLE SESSION CONTINUED} - <i>Stiles-Nicholson STEM Room 1</i> - Dr. Robert Corbin - The United Nations Sustainable Goals prompt us to integrate responsible consumption and production of materials. In this session, participants experience kinesthetic approaches to STEM and design thinking to synthesize a product that not only meets a need but reduces plastic waste that could potentially impact our local ecosystems. This session is drawn directly from Discovery Education's STEM Connect supplemental digital resource which teaches students to employ design thinking and applied technologies in order to inspire the next generation of global solution seekers.</p> <p>Managing a Hands-on Lab in the Classroom (Grades 6 - 12) - <i>Learning Lab</i> - Norman Riemer - Discover practical tips and methods to run an effective lab experience in the classroom from choosing the right lab to managing equipment.</p> <p>Middle School Mathematics Resources (Grades 6 - 8) - <i>Discovery Room 3</i> - Ken Caplin - Explore resources available to enhance the middle school curriculum including Pearson eVision materials as well as Palm Beach County district-created resources.</p> |
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| 2:30 pm | <p>Animal Hospital Tour (Grades Pre-K - 12) {30 min} - <i>Zoo Animal Care Complex</i> - Cassie Klein - Get a sneak peek at this behind-the-scenes area, with visits to our treatment room, radiology, and laboratory.</p> <p>EnergyWhiz (Grades 3 - 12) - <i>Zoo Animal Care Complex, Baum Conference Room</i> - Gregory Goebel - EnergyWhiz is all about clean energy and creative kids. Learn how to get your students involved with designing, creating, building, and operating solar-powered cars and ovens through project-based learning. Get your students ready for the 2nd annual South Florida EnergyWhiz Expo at Boca Raton Community High School on February 15, 2020!</p> <p>Trailblazers Roundtable (Grades 6 - 12) - <i>Stiles-Nicholson STEM Room 2</i> - Jennifer Davis - Roundtable session for all Trailblazers (Math and Science!) to facilitate collaborative discussions and share ideas, successes, and get help!</p> <p>Makey Makey in the Classroom (Grades 3 - 12) - <i>Learning Lab</i> - Chris Pait & Adam Newton - Bring the newest technology right into the classroom by making a working piano using nothing more than a Makey Makey controller, tin foil, and playdough.</p> <p>Engineering Education and Engineering Careers in Palm Beach County (Grades 9 - 12) - <i>Discovery Room 3</i> - Oleg Andric - An overview of the engineering industry in Palm Beach County including engineering sectors, career opportunities for high school students and the educational pathways to get them there.</p> |
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Please note that today's complimentary admission to the South Florida Science Center and the Palm Beach Zoo is for teachers only. Children are not permitted to participate in STEM Teacher Open House activities.

Teachers who complete all requirements can receive in-service points from the School District of Palm Beach County. Points must be requested through the E-Learning portal using electronic form 2401.