



Educating for the Future: Practices - Programs - Partnerships

Monday, August 12, 2019 - Bridgewater State University - Rondileau Campus Center

AGENDA

8:30AM

Registration

9:00AM-9:30AM

Welcome, Dr. Stacey Kaminski, Executive Director, CONNECT

- **Advancing STEM Education - in and out of school**
Anvitha Addanki, Senior, Canton High School
2019 MA State Science & Engineering Fair - 1st place for "A Novel Noninvasive Biomarker for Diagnosing Major Depressive Disorder."
- **MA STEM STEM Week, Oct. 21-25, 2019**
Jim Peyser, Secretary of Education, Commonwealth of Massachusetts

9:40AM-11:20AM

Attendees participate in 2 of 6 activities offered

9:40-10:25AM and 10:35-11:20AM

- **Creating Emojis**
Emojis are all around us! People use emojis to express their emotions when words are just not enough. But what if they wanted to show someone how they were feeling, but couldn't find an emoji that expressed it? In the Emoji Design lab, participants will use the Vectr design program to create their very own emoji.
Presenter: Mary Laturneau, Sr. Director of Engagement Massachusetts, Project Lead the Way
- **Micro:bit Magic 8 Ball**
In this activity, no prior experience with Micro:bits is needed. We will use basic programming skills to turn our Micro:bit into a Magic 8 Ball. This includes if...then...else loops, using a gesture to control the Micro:bit, and displaying patterns on LEDs.
Presenter(s): Chandra Orrill and James Burke, Kaput Center for Research & Innovation in STEM Education at UMass Dartmouth
- **Engaging All Ages in Coding**
Engage in an unplugged Lego challenge coding activity. Learn about algorithms, debugging, and computational thinking. This activity involves two players - one is the instructor and one is the designer. The goal is to teach the other player how to build your design without showing them the design or what they are building. See how it can be adjusted to use with different age groups.
Presenters: Debra Garvin, Education Coordinator, and Sharon Alves, Senior Lead Educator, Robbins Children's Programs
- **Engaging STEM Learners with iPad**
In this session learn how iPad can help STEM learners connect with content, demonstrate their learning, and express their creativity. Discover new resources to personalize learning and help students of all learning styles grasp challenging STEM concepts.
Presenter: Apple Education

- **iPlan: An Exploration of Local Environmental Monitoring (LEM)**
Use a LEM device - learn how to help students make sense of big data.
Presenters: Mass Audubon, Jennifer Klein - Statewide K-12 Education Program Manager and Morgyn Ellis, Tidmarsh, Education Coordinator - Wildlife Sanctuary, Plymouth.
- **STEAM Drones**
Learn about indoor friendly drones and coding possibilities. Work in small groups to create missions that will fly a drone autonomously. Learn about professional development options and how you can move students from simple coding to more advanced programming language.
Presenters: Nebula Academy | STEAM Drones

11:25AM-12:10PM

Working Lunch

- **Attendees share how they will apply what they learned with the students and educators with whom they work.**
- **Advancing STEM Education - in and out of school**
Francesca DiMare, 2019 Brockton High School Valedictorian
2019 MA State Science & Engineering Fair - Won second place prize for her project, "A DNA Barcode Approach to Ascertain the Foraging Habits of Native Bees."

12:15PM-1:40 PM

**Attendees participate in 2 of 6 activities offered
12:15-12:55PM and 1-1:40PM**

- **Survive That Tsunami! An ESS and Tech/Eng. Investigation**
In this session, participants will use a tabletop tsunami model to test the construction of model houses they create. The session will include a discussion of unit context for classroom implementation and how this investigation illustrates using the science and engineering practices in the classroom.
Presenters: Angela Damery, Director of Education and Rosemary Rak, Education Specialist, Wade Institute for Science Education
- **Innovation Station - problem based learning**
Learn about the evolution of the Innovation Station, a makerspace environment that features problem-based learning and fosters collaboration and perseverance. Use Dot & Dash to code a robot to shoot a basket. Use Cubelets to create an object to perform a function.
Presenter: John Nieratko, Principal-Jordan/Jackson School, Mansfield Public Schools
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Presenter: Apple Education
- **Engineering Design Challenge - Wind Turbines**
As we realize the need to benefit the environment by replacing energy sources from fossil fuels, one way to do this is by using the force of the wind. Participants will design and build a wind power station - a machine that uses wind energy to accomplish a task such as turning a shaft and lifting a weight.
Presenters: Pat Monteith, Brockton Public Library (BPL)-Maker Space, Francesca DiMare and Kaia Rodrigues - BPL Maker Mentors.
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1:45PM-2:00PM

Wrap Up - Report Out

Certificates of Attendance will be distributed electronically after attendees have completed the online survey.

ACTIVITIES

	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6
9:40 -10:30 AM	Micro:bit Magic 8 Ball	Creating Emojis	Engaging STEM Learners with iPad <i>Focus on STEM</i>	Engaging All Ages in Coding	iPlan: Exploration of Local Environmental Monitoring (LEM)	STEAM Drones
10:35 -11:20 AM	Micro:bit Magic 8 Ball	Creating Emojis	Engaging STEM Learners with iPad <i>Focus on STEM</i>	Engaging All Ages in Coding	iPlan: An Exploration of Local Environmental Monitoring (LEM)	STEAM Drones
12:15 -12:55 PM	Engineering Design Challenge Wind Turbines	Innovation Station	Engaging STEM Learners with iPad <i>Focus on Health & Medicine</i>	Survive That Tsunami	iPlan: An Exploration of Local Environmental Monitoring (LEM)	STEAM Drones
1:00 -1:40 PM	Engineering Design Challenge Wind Turbines	Innovation Station	Engaging STEM Learners with iPad <i>Focus on Health & Medicine</i>	Survive That Tsunami	iPlan: An Exploration of Local Environmental Monitoring (LEM)	STEAM Drones

EXHIBITORS

Region V Science & Engineering Fair, CONNECT, See Yourself and Others in STEM-Easton Public Schools, Looking Ahead to 2020 & Beyond-AAUW, Partnerships Advancing STEM Education.

STEM EVENTS:

- **STEM Week - October 21-25, 2019**
Register for STEM Week at <https://conta.cc/2M5M9c5>
- **Partnerships Advancing STEM Education/Celebrating STEM Week**
Monday, November 18, 2019 3-6pm - Bridgewater State University
Focus on business & educator partnerships, STEM Week activities and events and a display featuring See Yourself in STEM.

PETRI DISH - SE MA STEM Network newsletter

To join the Network newsletter, go to www.connectsemass.org/stem and click on JOIN MAILING LIST.