

## Winter 2016-17 STEM Opportunities for Teachers and Students

### Important information for schools seeking STEM or STEAM Certification

- Be sure you are using the new STEM/STEAM Continuum for the certification criteria: <http://stemgeorgia.org/>
- Be sure you are using the new STEM/STEAM Continuum application to document your certification evidence: <http://stem.wpgadoe.org/wp-content/uploads/2016/10/Application-for-STEM-certification.doc>
- You must have a pre-visit from a district STEM/STEAM person or from a GaDOE STEM/STEAM person prior to applying. If your school is ready for a STEM/STEAM team visit, you will be invited to apply.

- Contact Gilda Lyon at **Jessica Booth (STEAM)**

[glyon@doe.k12.ga.us](mailto:glyon@doe.k12.ga.us) OR [jbooth@doe.k12.ga.us](mailto:jbooth@doe.k12.ga.us)

404.463.1977 (work)

470.755.9197(cell)

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**The 2016-2017 NASA STEM Educator Workshop Series continues November 12, 2016 with the following workshop at the Museum of Aviation:**

***AEROSPACE: More Than Just Flying***

**To register for the workshop, please contact :**

Clare S. Swinford

Museum of Aviation Foundation

Director

NASA Regional Educator Resource Center

478.222.7547 Office

478.737.0963 Cell

[cswinford@museumofaviation.org](mailto:cswinford@museumofaviation.org)

**You will receive a confirmation email from me.**



# **Save the Date!**

**Georgia Science...Engage!  
Georgia Science Teachers Association  
State Conference**

**Professional Learning to Support  
Student Learning**

***February 2-4, 2017, Atlanta Evergreen Marriott  
Conference Center, Stone Mountain***





# JOIN US FOR GOOGLE FIELD TRIP DAYS!

Georgia Aquarium is thrilled to work with Google to host the second annual **Google Field Trip Days November 14-18, 2016**. During this week of exploration, collaboration, and solution seeking, classes in **grades 6-8** from **Title I schools** are invited to come to the Aquarium **free of charge** to explore the theme **Diving into STEAM**. Classes will participate in programming from **10:00am-1:00pm** one day during this week and have the option to arrive early or stay later to explore the

galleries on their own.

In particular, students in grades 6-8 will have a unique opportunity to explore the variety of STEAM career pathways we have at the Aquarium to connect what they are learning in the classroom and how it directly relates to the work being done in the field. With a strong focus on

STEAM career pathways and connecting “school” with the “real world”, an experience like this might be the hook for continuing STEAM education in high school and beyond. Students will be exposed to a wide range of career paths by engaging in a variety of learning moments during their time at the Aquarium, including but not limited to:

**Lunch with the Dolphins:** Students have the opportunity eat lunch (provided on site) while getting an up close and personal look at the grace, intelligence, and athleticism of our bottlenose dolphins! Prior to the AT&T Dolphin Celebration experience, students will also view an exclusive screening of our new STEAM Forward video series that goes behind the scenes to learn about of the art, design, technology, and engineering that goes into creating our dolphin presentation. We hope that by visiting the AT&T Dolphin Tales gallery students are encouraged to make positive conservation choices so that future generations have the chance to love these animals as well.

**Aquanaut Adventure:** Students will immerse themselves in an interactive space complete with augmented reality technology, touch pools, and facilitated learning experiences. They will learn about how SCUBA and diving technology helps us to discover more about the underwater portion of our planet, engineer their own animal to survive in a marsh, calculate the amount of food and enrichment it takes to keep our animals healthy and thriving, and journey down into Peterson Preserve to observe some of the animals in our living river – and more!

**Gallery Exploration:** Georgia Aquarium educators will lead students through the main galleries and behind the scenes to highlight how our experts leverage science, technology, engineering, arts, and math in their work each and every day to care for our amazing animals.

Please click [here](#) to apply to participate in Google Field Trip Days!

*Last year’s Google Field Trip Days was a huge success! We were able to welcome some amazing students to Georgia Aquarium. Read about our visit from the students of Swain Elementary on our [blog](#).*

## Need to know information

- Schools that serve a student population of 90% or higher with free or reduced lunch status will be given priority.
- Schools are welcome to apply as a class, grade level, or school up to 180 students; programming is limited to grades 6-8.
- **Admission and lunch are included in the experience, along with transportation as outlined below:**
  - Bus companies will invoice Georgia Aquarium up to the dollar amount below and invoice the school the remaining dollar amount.
    - **Metro Atlanta schools:** Georgia Aquarium is able to cover up to \$250 per bus, four buses maximum.

- **Schools outside Metro Atlanta:** Georgia Aquarium is able to cover up to \$1,000 per bus, four buses maximum.
- Georgia Aquarium can accommodate a complimentary **1:10 chaperone policy**. Any additional adults will pay for a General Admission ticket on site for \$39.95 + tax. Chaperones will actively monitor behavior and participate in programming with their students.
- If you have applied for or received a [Sponsored Education Admissions](#) grant, you are not eligible for Google Field Trip Days.

## **STEM Teaching and Learning Conference**

March 2 - 4, 2017

Coastal Georgia Center

Savannah, GA 31401

Call for proposals will be released by the end of August and registration for the conference will open by mid-September.

### **Georgia Southern University**

Summer STEM Experience

Eagle's In Training

<http://academics.georgiasouthern.edu/ce/programs/stemexperience/>

The i<sup>2</sup>STEM<sup>e</sup> Experience summer camp programs focus on hands-on projects that inspire campers to work collaboratively to investigate potential solutions to problems in their immediate environment. Each of our campers engages students and encourages exploration and investigation by teaching them how to evaluate programs and design potential solutions in real-world scenarios. All Eagle i<sup>2</sup>STEM<sup>e</sup> Experience programming is created by experts in their fields.

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The **eCybermission Competition** is now open:

<https://www.ecybermission.com/>

Mini-grants available for eCybermission:

[HTTP://STEM.WPGADOE.ORG/WP-CONTENT/UPLOADS/2016/08/ECYBERMISSION-MINI-GRANT-  
OPPORTUNITY.PDF](http://stem.wpgadoe.org/wp-content/uploads/2016/08/ecybermission-mini-grant-opportunity.pdf)

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## **\$1000 Grants for Teachers**

ATTInternetService.com is sponsoring a grant that is open to college professors and school teachers and asks applicants to write a 300-450 word essay or create a 1-2 minute video that explains how they or their students use internet-connected technology in the classroom.

<http://www.attinternetservice.com/tech-teacher-grant.html>

## **\$10,000 Grant**

The Lemelson-MIT **InvenTeams™ Grant** is a STEM project through which high school kids get to create an invention that solves a real-world problem.

Certification opportunity from Tufts University

<http://okee.tufts.edu/>

Online K-12 Engineering Education (OKEE) Certificate Program empowers teachers to bring hands-on engineering to their students. Over the course of 18 months, participants take four courses that help them to learn engineering content and teaching and learning practices that foster hands-on learning. Offered completely online and asynchronously, this graduate-level program provides teachers with a kit of materials to engage in open-ended design projects at their kitchen table to build their own engineering knowledge. Participants also spend time interacting with colleagues, looking at student work, and building a community and network that will extend beyond the program.

Upon completion of the program, participants have a new set of knowledge, new resources to use in their classrooms, and new approaches to empower their teaching & learning.

**The Georgia Department of Education/Career, Technical, & Agricultural Education Division invites you to register and attend one of the six (6) state economic**



**development meetings below to connect education with business and industry partners.**

<http://stem.wpgadoe.org/wp-content/uploads/2016/08/Economic-Dev-2016-Meeting-Invitation-Final-2.pdf>

**The General Aviation Manufacturers Association (GAMA) is sponsoring the GAMA/Build A Plane 2017 Aviation Design Challenge to promote Science, Technology, Engineering and Mathematics (STEM) education through aviation in high schools across the United States.**

<http://www.gama.aero/advocacy/aviation-education/stem>

Do you want to do more than just learn about climate change?

Join educators across the United States supporting climate resilience.

Apply **NOW** to join the NOAA Climate Stewards 2017 Stewardship Community.

Selected educators who meet project requirements will be eligible for:

- Up to \$2000 to support the execution of a climate stewardship action project.
- Travel reimbursements to attend select workshops and/or national conferences - following the successful completion of a climate stewardship project.
- Special professional development opportunities.

- Monetary and educational resources.

**Applications are being accepted until midnight November 20, 2016.**

<http://oceanservice.noaa.gov/education/climate-stewards/welcome.html>

## Mathematics Resources now available

The 2016-2017 Mathematics Resource **additions, enhancements, revisions, and edits** have been posted and are available at <https://www.georgiastandards.org/Georgia-Standards/Pages/Math.aspx>; word versions of resource documents are posted on the grade band wikis.

## The Verizon App Challenge Win up to \$20,000

Encourage students to collaborate and come up with an idea for an app that would make a difference in their community!

Students do not have to code the app to enter. They only need to imagine it! Entering the app challenge requires a series of short essay answers and a video summarizing the team's idea. **Deadline for entry is November 18, 2016**

<https://appchallenge.tsaweb.org/>

## The Call for Proposals is now open!



### 5th Annual Southeastern Environmental Education Alliance Conference and Research Symposium: Exploring the Richness of EE: Your Practice, Profession and Partnerships

March 3-5, 2017

Gwinnett Environmental and Heritage Center  
Buford, GA

Join educators from the eight southeastern regional member states, including Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee as we Explore the Richness of Environmental Education through your Practice, Profession and Partnerships.

**Strands will include:**

Practice - Considering Educator Identity


Profession - Defining Environmental Education

Partnerships - Developing Engagement, Capacity and Community

## Become a Certified Environmental Educator

The Advanced Training for Environmental Education in Georgia (ATEEG) is a nationally accredited, professional certification program for formal and non-formal educators based on the North American Association for Environmental Education (NAAEE) Guidelines for Excellence. This program is offered by the Environmental Education Alliance of Georgia in partnership with the Warnell School of Forestry and Natural Resources at the University of Georgia, and implemented by a Certification Advisory Board (CAB).

Register for the Fall and Winter classes!



The Friday Institute at NC State, has two exciting professional learning opportunities that may be of interest to mathematics teachers and other educators in your state. In [the Place @ the Friday Institute](#), you will find MOOCs (Massive Open Online Courses) designed for educators. The [Teaching Mathematics with Technology](#) and [Teaching Statistics Through Data Investigations](#) MOOCs are completely FREE professional learning opportunities that are designed to develop the pedagogy and content understanding for teachers in middle school, high school, and at postsecondary levels. The courses are built by expert teacher educators in their field and on research-based models of effective professional development, professional learning communities, and online communities of practice.

Registration for both courses is now open and will launch on September 26, 2016.

At the end of each course, participants can request a certificate of completion. In some states, such as North Carolina, teachers are also eligible to receive renewal credits, Continuing Education Units (CEUs). Teachers will need to contact their local state agencies to inquire about the eligibility in their states. It may also be a great opportunity for teachers to work in teams or PLCs to complete the course together.

If you think either of the MOOCs described below are a good fit for educators in your state, please share this information with them. We would be happy to provide any other materials you may need (e.g., logos, course descriptions, course objectives, etc.) in order to disseminate information about the courses as widely as possible to District/LEA and teacher networks. Let us know if you have any questions, and thank you!

Below is a brief description of each MOOC:

### **Teaching Mathematics with Technology**

Many recognize that technology can be an invaluable tool to support students' engagement in and learning of mathematics. The Teaching Mathematics with Technology MOOC is designed to equip teachers with instructional practices that leverage technology to support students' mathematical learning. Participants will learn how to use technology to enhance teaching and learning, analyze student thinking, and engage students in productive discourse. Here is a link to the course: <http://friday.institute/tmt>

A short promotional video can be viewed here: <https://www.youtube.com/watch?v=MjjSWnd5Fvo>

### ***Teaching Statistics Through Data Investigations***

The Teaching Statistics through Data Investigations MOOC is designed primarily for educators who teach statistics, in grades 6-12 and in post-secondary contexts, but is relevant for those who teach disciplines that use data-based explorations extensively to make claims and inferences. This course allows participants to learn, along with colleagues from other schools and districts, to use an investigation cycle to teach statistics and to help students explore data to make evidence-based claims. Here is a link to the MOOC: <http://friday.institute/tsdi>