F. Musical Extrapolations -- Mansa Gory
(Level: Grades 6-12) This workshop will feature a series of musical mini lessons designed for the modern classroom: *Music and Science, *Psychology of Music, *Music Perception, *String Theory and Time Travel, *Music-the Sound of Math, *Music Business Incubator, and *Baba Brinkman and Friends: Master Poet!

STEAM Workshops Advancing Meaningful Integration – Toni Gamils (Level: Grades K-5) *How do we encourage teaching that creates stimulating and inspiring classrooms, where students engage in problem solving and use their creativity and imagination to address interesting and important subjects, and where teachers push students to continue learning long after the exam is over? (Boykin & Noguera, 2011, p. 175)* Every year educators stress over the limited time available to teach the many skills and ideas necessary. Unfortunately, it often feels as if little time is available to create, invent, and learn together. The goal of these sessions is to learn how STEAM can become a part of the already existing classroom environment. Educators will have an opportunity to identify curriculum connections to STEAM activities. Time will be spent working collaboratively on creating exciting challenges that inspire learning.

G. Building a STEAM Classroom This session will focus on building a community of problem solvers that encourages students to try new things and overcome personal challenges. Participants will participate in STEAM projects learning how to initiate a no stress STEAM classroom that highlights specific skills and gives students a chance to pursue their interests.

THE ABOVE WORKSHOP IS HELD IN THE MORNING ONLY

H. Adding STEAM to Social Studies This session will focus on connecting STEAM activities with the New York State Social Studies Framework. Key ideas and skills from the curriculum will be used to design engaging STEAM projects and activities. Participants will leave the session with ideas and materials to incorporate STEAM into their classrooms.

THE ABOVE WORKSHOP IS HELD IN THE AFTERNOON ONLY

I. Robotics and STEAM Project Planning – Liz Gallo, Founder, WhyMaker (Level: Grades 4-10) In this workshop, participants will use simple Edison Robots and the ultimate 6-step STEAM project planner to create real world projects for your students. This 6-step process will help you create the best STEAM projects that can make your classroom seem like the real world. Learn how to connect the content that you are teaching to any technology, tool or medium you use. To demonstrate how to create STEAM project plans, we will explore Edison Robots. These versatile and affordable robots are quick and easy to use. Students love them and can be coding in minutes! Teachers of every content area, grade and ability level, from very basic to very advanced, are encouraged to attend.

J. DIY Circuits with STEAM Author Kathy Ceceri (Level: Grades 2-8)
Find out how to teach your students about circuits and electronics using inexpensive crafts and household materials! Author Kathy Ceceri will demonstrate projects ranging from simple switches to fully programmable cardboard or fabric robots. You'll also make your own quick and easy circuit to take with you. Kathy's latest book, *Bots! Robotics Engineering with Makerspace Activities*, is coming this fall.

*** WORKSHOP HELD IN THE AFTERNOON ONLY***

Exhibitors and Vendors

Crafts for Learning
518.587.7801 www.craftsforlearning.com

Dazzling Discoveries
917.288.9975 www.dazzlinks.com

Discovery Museum, Bridgeport, CT
203.372.3521 www.discoverymuseum.org

WhyMaker
347.915.3867 www.whymaker.co

More to come!

STEAM Conference

(Science, Technology, Engineering, the Arts and Mathematics)

for Grades K-12 Educators

Thursday, March 14, 2019

8:00 a.m. – 3:00 p.m.

Reid Castle, Manhattanville College
2900 Purchase St., Purchase, NY

Program

Register Here:
STEAM Conference for K-12 Educators

Planned by this Teacher Center's STEAM Advisory Committee:
Mary Beth Anderson, Pat Duggan, Toni Gamils, Steven Giglio, Anne Marie Kiernan, Michael Jernegons, Janet Matthews, Ariana Moses, Gregoriann Rollins

Schedule for the Day

8:00 a.m. **Registration and Exhibitor/Vendor Visits**

8:50 **Welcome Remarks**

9:00 **Keynote Presentation:**
Citizen Science for Every Classroom
Yehosheva Markovitz, Education Content Producer, Kids' Media and Education, Thirteen/WNET
Sandy Goldberg, Education Director, Kids' Media and Education, Thirteen/WNET

In this keynote presentation, WNET will share strategies for incorporating concepts from citizen science to emphasize hands-on learning and equity in all classrooms. Citizen science is a natural springboard for engaging students with project-based learning and gives students a voice in real-world scientific research. It is also a key component of the activities surrounding *American Spring LIVE*, an upcoming 3-night special on PBS that reveals the amazing burst of activity the new season brings. The presenters will share information about the broadcast and the associated resources, activities and events, including a collection of free citizen science resources for K-12 classrooms available on PBS Learning Media, contributed by organizations like the Cornell Lab of Ornithology and the USA National Phenology Network.

9:50 **Short Break to gather panel**

10:00 **Q&A STEAM Panel**
This panel of teachers will answer previously submitted questions as well as in-person questions from conference participants.

10:50 **Break and Exhibitor/Vendor Visits**

11:00 **Concurrent Workshops on Integrating STEAM into Your Classroom**

12:15 p.m. **Lunch and Exhibitor/Vendor Visits**

1:00 **Repeat of Concurrent Workshops (Note those workshops that are held just once.)**

2:15 **Evaluations Completed and Collected; Announcements**

2:25 **Raffle (must be present to win)**

2:40 **Closing Remarks**

Q & A STEAM Panel

Moderator: Steven Giglio, STEAM Educator
Blind Brook-Rye UFSD

Toni Gamils, NASA Distinguished STEM Educator
4th Grade Teacher/STEAM Educator, Eastchester UFSD

Lisa Yokana, STEAM Coordinator, Scarsdale UFSD
Director, Design Lab, Scarsdale High School

Concurrent Workshops

Choose one for the morning and one for the afternoon.

A. Incorporating Video Games, Comic Books and STEAM Activities in Your K-8 Classroom -- Michael Jernegons (Level: Grades K-8)
In this interactive workshop, you will learn about and leave with an arsenal of audiovisual resources and ideas to incorporate Video Games, Comic Books and STEAM activities in your classroom. These projects will encourage students to be creative and critically think about how to solve design problems. Learn how to integrate these STEAM projects seamlessly into your curriculum making these projects an exciting part of your teaching.

B. Add Rube Goldberg-Style Contraptions to Your STEAM Program – Paula Frisch, Asst. Dir., Dazzling Discoveries (Level: Grades 4-12)
Teach creative thinking, problem solving skills and a "maker" mindset (and many physics concepts) through Rube Goldberg-style contraptions. This workshop will use cardboard and other easily accessible materials to explore the best methods for implementing contraption building activities in your classroom. A contraption, as characterized by Rube Goldberg's cartoons, is a complicated system of actions set up to perform a simple task. Join us for this fun-filled session full of activities that you will be able to use immediately with your students.

Arts Integration Exploration– Ariana Moses, White Plains Performing Arts Center The Kennedy Center for the Arts' definition of Arts Integration, in part, reads: *Arts Integration is an approach to teaching in which students construct and demonstrate understanding through an art form.*
C. Teaching Disease Transmission and Effects Through Drama – (Level: Grades 7-12) In this exploration, participants will play the role of students while they participate in a sample lesson on Disease Transmission that melds drama concepts and standards with science principles and standards. Once the lesson is complete, participants will be walked through how it was constructed so that arts integration concepts can be taken back to their own classroom. No drama experience required!
THE ABOVE WORKSHOP IS HELD IN MORNING ONLY
D. Teaching Thermal Energy Through Dance – (Level: Grades 3-6) In this exploration, participants will play the role of students while they take part in a sample lesson on thermal energy that melds dance concepts and standards with science principles and standards. Once the lesson is complete participants will be walked through how it was constructed so that arts integration concepts can be taken back to their own classroom. No dance experience required!
THE ABOVE WORKSHOP IS HELD IN AFTERNOON ONLY

E. Makerspace Tools and Application to Support Project–Based Learning – Steve Giglio (Level: Grades 4-12 for the STEAM/Makerspace novice.) We will discuss classroom use of Digital & Analog Tools such as 3D printers, XY Cutters, Robotics, Soldering Irons and various hand and power tools to support project-, problem- and placed-based enrichment. This workshop will engage all in an actual project using a tool known as XY CUTTER & Plotter. The project is TOP SECRET. We will demonstrate the Design portion, Mathematical requirements, Science links, Art links, Engineering links, and History links. We will demonstrate the actual "Cutting and Plotting" of the design, and engage in the assembly process. Concurrently we will discuss the use of other tools such as 3D printers, soldering irons, various hand and power tools, robotics and various electrical components teachers may want to provide access to for students. Hands-on projects will be showcased to stimulate STEAM curriculum ideas.