

## GreenFutures and Education for Sustainability-Philly Symposium Workshop Descriptions

Session I 10:30- 11:45	Presenter	Workshop Description
<b>Room 208</b>	<b>Paula Miller and Bert Johnson</b>	<p><b>Title of Workshop: The Science of Aquaponics</b>                      This workshop will focus on the science behind aquaponics; the system of combining aquaculture (raising aquatic animals) with hydroponics (cultivating plants in water) in a symbiotic environment. Participants will be able to see how the nitrogen cycle is established within aquaponics, and will have the opportunity to participate in hands on activities focusing on the nitrogen cycle. The workshop will also examine on how to build a mini aquaponics unit within the classroom.</p>
<b>Room 212</b>	<b>Amanda Fiegel</b>	<p><b>Title: Teaching Sustainability and Altruism Through Media and Communications and Extra-Curriculars</b>                      Do you want to build a welcoming community in your school? Do you want to have your students spread the message about helping others and being more sustainable? Then, this workshop is for you. The first portion of the workshop will focus on incorporating two extra-curricular programs that focus on reducing food waste and building community with immigrant students. The second portion of the workshop will focus on how teachers can use visual arts and communications to promote sustainability. Each participant will receive resources and guides to help them implement the lessons and programs in their school.</p>
<b>Room 221</b>	<b>Jose Ramos and Diane Ofee-Powers</b>	<p><b>Title: Fairmount Waterworks Urban Watershed Education Curriculum</b>                      In this workshop we will present an overview of the Fairmount Waterworks Urban Watershed Education Curriculum with emphasis on connections between Education for Sustainability Standards and Sustainability Education Standards. Our goal is to help educators understand that we can meet educational goals and address mandated standards while also preparing students for becoming stewards of our environment. Teachers will:</p> <ul style="list-style-type: none"> <li>- make connections between types of standards: EFS,SE, Common Core, Philadelphia</li> <li>- explore elements of a watershed by doing a chalk talk.</li> <li>- design a watershed community IOT to analyze the impacts of our choices relative to others who share our communities.</li> <li>-collaboratively discuss strengths and challenges to this type of program implementation.</li> </ul>
Session II 1:00 - 2:15	Presenter	Workshop Description
<b>Room 208</b>	<b>Maggie Osman</b>	<p><b>Title: Sustaining the Urban Healthscape</b>                      Beyond efforts to implement 'greening' projects; challenge your students to address sustainability through an urban lens. Problem-based sustainability efforts promote critical thinking and empower students to 'think globally, act locally' to promote community health. Educators will walk away with a broad, humanist definition of sustainability and concrete exemplars of solutions oriented student work.</p>

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Session II 1:00 – 2:15	Presenter	Workshop Description Continued
Room 212	<b>Micah Gold-Markel</b>	<b>Title: Find Your Power: Connecting Renewable Energy Education with Students' Lives</b> We will discuss the Find Your Power Curriculum we've developed over a 5 year period teaching solar training classes at YouthBuild Charter School, Ben Franklin High School and Randolph VoTech. We will focus on an introduction to the NABCEP Associates Exam, connecting renewables energy education to students' lives, how to manage a class with a wide array of learning capabilities, and teaching students to think creatively.
Room 214	<b>Donovan Hayes</b>	<b>Title: Making the Classroom Sustainable"</b> Come hear about how one educator took the ideas of sustainability and place-based education and incorporated them into the curriculum to create a place where the students and the teacher can feel rejuvenated. By shifting the context of the classroom to be student-centric, the classroom became a place where everyone wanted to be again, if even just for a moment!
Session III 2:35 – 3:50	Presenter	Workshop Description
Room 208	<b>Somi Scridevi</b>	<b>Title: How big is your breakfast footprint?</b> Consider all of the different "things" you use in your daily life. What you eat for breakfast, the clothes you wear, the desks in the classroom, the car you drive to school—they all come from earth's resources. They're powered and transported by earth's resources, too. An environmental footprint is an annual measure of how much land and water it takes to provide the things we use and consume. How big is your breakfast footprint? How does an individual calculate a carbon footprint? Can personal decisions alter the magnitude of a carbon footprint? How much does one person's carbon footprint really matter? In this activity Participants, will explore the size, value and significance of personal carbon emissions. Participants will estimate the carbon footprint of a breakfast meal and after comparing breakfast carbon emissions values with group members and the class, Participants will contextualize these results through analysis of the mathematical model, comparison with known carbon "sinks" and reflection on the meaning of the output.
Room 212	<b>Alicia Conquest</b>	<b>Title: Think Outside the Box...Heck There is no Box!</b> Have you ever wanted to just get out of your class and be free? Have you dreamed about escaping the four walls where you and your learners spend your time? This is not a reference to Summer vacation... we are talking about getting creative and using all the resources around us to learn outside the box. We will take a mini trip outside and discuss how to create exciting learning experiences linked to our content area. Let's explore
Room 214	<b>Paula Miller</b>	<b>Title: NEED and PEEP</b> This workshop will highlight the PEEP (PECO Energizing Education Program), the PEEP 2.0 Innovative Challenge and the NEED (National Energy Education Development Program) Website. This workshop will focus on one of NEED's curriculum units, Science of Energy. Here participants will have the opportunity to participate in numerous activities from energy games, icebreakers and hands on opportunities contained within the unit.