

# Philadelphia STEM Ecosystem – May 2019



# STEM BINGO



<b>STEM</b>	<b>PEA</b>	<b>OSP</b>	<b>SDP</b>	<b>SMET</b>
<b>PHA</b>	<b>PYN</b>	<b>STEAM</b>	<b>DOE</b>	<b>CASTLE</b>
<b>DOE</b>	<b>CS</b>	<b>ISE</b>	<b>CTE</b>	<b>NSF</b>
<b>NSTA</b>	<b>STREAM</b>	<b>NGSS</b>	<b>STEAM</b>	<b>STREAM</b>
<b>ECA</b>	<b>STREAM</b>	<b>CAISE</b>	<b>ANS</b>	<b>STEAM</b>



# STEMCITYPHL UPDATES

Transition and Change

# QUICK FACTS AND NEXT STEPS

- Sunset of STEMcityPHL w/ city government on June 30th 2019
- Program and Initiative transition
  - Out of School time programs with long standing partners
  - Junior Science and Humanities Symposium (JSHS) @ Temple CST
  - STEM Asset Map @ Philly Ecosystem Website
- US2020: STEM Mentoring + Making Awards
  - Application go live on May 18<sup>th</sup>
  - Award categories and more info can be found
    - <https://us2020.org/>

# STEM + WORKFORCE = ???

- Major citywide workforce strategies
- [Fueling Philadelphia's Talent Engine](#)
- [Philadelphia's Vision for Inclusive Growth](#)
- [PHL Neighborhood Growth Project](#)
  
- Phil Brooks @ the Science Center...
  - [pbrooks@sciencecenter.org](mailto:pbrooks@sciencecenter.org)

# National STEM Ecosystems



- **Began in 2015, and based on a collective impact model.**
- **Currently 84 national STEM Ecosystems, supported by the STEM Funders Network.**

# National STEM Ecosystems

- **SFN provides conferences, programs, and support.**
- **Pennsylvania has 7 Ecosystems.**
- **Each Ecosystem is structured, and funded differently.**
- **Recently created a national Ecosystem Advisory Committee.**

# Philadelphia Ecosystem Goals

***Increase collaboration within, reduce duplication of, identify gaps in, and promote access to STEM education***



# Philadelphia STEM Ecosystem Structure

## Backbone Organization (1)

- Philadelphia Education Fund

## Steering Committee (10 members)

- PEF Chairperson
- 6 Workgroup Co-Chairs
- 3 at-large members

# Philadelphia STEM Ecosystem Structure

## Members (250)

- Colleges & universities
- Schools/school districts
- Nonprofits (NGOS & CBOs)
- Businesses & corporations
- Government agencies
- Individuals

## General Updates

# Philadelphia STEM Ecosystem Structure

## Workgroups (6)

- Computer Science
- Education for Sustainability
- Professional Development
- Social Justice
- STEM Through Sport
- Workforce Development

# PHILADELPHIA STEM ECOSYSTEM CS WORKGROUP MAY 2019

**Co-chairs:**

Jeffrey L. Popyack, Drexel University

Jamie Payton, Temple University



# RECENT EVENTS: DECEMBER 2018

## National Computer Science Education Week (Dec. 3-9)

### **CS4Philly** sponsored events:

- The Student CS Experience Program @ Kimmel Center
  - Comcast, Mayor Kenney, 11 High Schools, >100 students
- Community Leaders and Parents Forum
  - Speakers from PA Legislative Black Caucus, the PA Department of Education, School District of Philadelphia, and the City of Philadelphia
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# RECENT EVENTS: FEBRUARY 2019/MAY 2019

**School District of Philadelphia** awarded **PAsmart** grant (\$500K).

- Computing in middle schools and high schools
- Professional development:
  - For teaching CS Principles (Delaware County Intermediate Unit)
  - For teaching Computer Programming (Drexel graduate course)
- Increase schools participating in FIRST Lego Leagues and FIRST Tech Competitions

**Philadelphia Science Festival, April 26 - May 4** (Franklin Inst.)

Science Carnival on the Parkway (May 4)

<https://www.fi.edu/psf>

**Philadelphia Tech Week, May 3-11** (Technical.ly Philly)

Kensington Derby and Arts Festival (May 11) Phila Fed Credit Union

<https://www.kensingtonkineticarts.org/>

**Student Technology Product Showcase, May 6** (SDP)

<https://sites.google.com/philasd.org/tec>



# NOTABLE:

- Northeast High School: will begin offering CS Principles in the Fall.
- Swenson High School (Bruce Karpe):
  - received AP CSP Female Diversity Award from College Board
  - for attaining female student representation in AP Computer Science Principles for 2018.

“Among the more than 18,000 secondary schools worldwide that offer AP courses, yours is one of only 685 that have achieved this important result.”





## EDUCATION FOR SUSTAINABILITY WORKING GROUP

- Grew out of 1 year NSF grant 2017-18
- Develop a model for place-based STEM teacher leadership development in EfS that supports the **School District's GreenFutures** sustainability plan
- Strengthen and expand an EfS-themed STEM Ecosystem





# LINKING TEACHERS WITH EFS ECO-SYSTEM

- Goal: Teachers from EFS-Philly Leadership program develop a school – community event around Sustainability
- December 2018 Energy Action Community Day Planning event:
  - Clean Air Council – Russell Zerbo
  - Schuylkill Center – Aaliyah Ross-Green
  - Energy Co-op – Morgan Pitts
  - Tree Philly – Jack Braunstein
  - Energy Coordinating Agency -Catherine Santos
  - New Kensington CDC – Joe Filipski
  - Penn Environment – Alex Lola
  - Philly Green Man - Ogbonna Hagins
  - EPA -Energy Star Program – Andrew Kreider



# OUTCOMES

- Community Energy Action Day @ Mastbaum HS, Jan 2019 w. Sridevi Somireddy
  - “Find your Power”, Solar States, Michah Gold – Markel
  - “Energy Conservation”, Energy Coordinating Agency – Steve Luxton – Catherine Santos
- Community-Based Sustainable (Sports) Supersite @ Abraham Lincoln HS, w. Paula Miller
  - Solar States
  - PEEP/NEED Program
  - Speaker Bureau Connection
    - Need in Deed, Clean Water Action and FACTS Charter School
  - Hill-Friedman Energy Action w. Donovan Hayes – Spring 2019
    - Tookany, Tacony and Frankford Watershed and Clean Air Council Collaboration
- Greenworks Review – Mayor’s Office of Sustainability highlights EfS-Philly Teacher – Dr. Cheryl Henry
  - [https://www.phila.gov/media/20190122101646/sustainability-greenworks\\_mag-2019.pdf](https://www.phila.gov/media/20190122101646/sustainability-greenworks_mag-2019.pdf)



## Related Activities Past, Present and Future

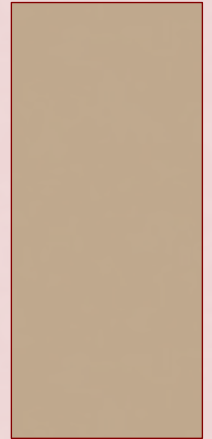
- June 2018 - EfS-Philly/GreenFutures Symposium: 12 Eco-System partners shared resources with teachers at Expo.
- February 2019 - Penn teacher institute
- March 2019 - PAEE conference presentation
- May 2019 PHENND Conference EFS
- October 2019 Conference series for teachers Kick Off  
Co-Chairs: Victor Donnay and Paul Morgan  
vdonnay@brynmawr.edu  
pmorgan@wcupa.edu  
[prnp.org/efs-philly-education-for-sustainability](http://prnp.org/efs-philly-education-for-sustainability)  
<https://www.philastemeco.org/copy-of-computer-science>



**PHILADELPHIA STEM ECOSYSTEM  
PROFESSIONAL DEVELOPMENT  
WORKGROUP**

MAY 7, 2019

BONNIE HALLAM AND DARA RUIZ-WHALEN, CO-CHAIRS



# 2018-19 ACTIVITIES

- **Monthly Advisory Meetings**
  - September 20, 2018
  - November 8, 2018
  - February 21, 2019
  - March 26, 2019
  - April 30, 2019
- **STEM PD Provider Directory**
  - Will continue to add providers as they come in
  - Goal to put database on website by spring 2019
- **STEM PD Provider Convening**
  - **2 Convenings held in 2018-19**
    - January 31, 2019 – Aligning PD to SDP Teacher Goals and Needs
    - Upcoming - May 23, 2019 – Integrating Math and Science

# IDEAS FOR THE FUTURE

- Coordinate Professional Development events for teachers in conjunction with District and teacher needs, e.g. work with Acceleration Network and Math and Science District Curriculum Specialists
- Coordinate a PD Provider expo to highlight the various professional development opportunities for teachers to be held in conjunction with the School District of Phila. Fall or Spring Teacher Symposium



# Social Justice in STEM

WORKGROUP UPDATE

MAY 7, 2019

# Challenge statement

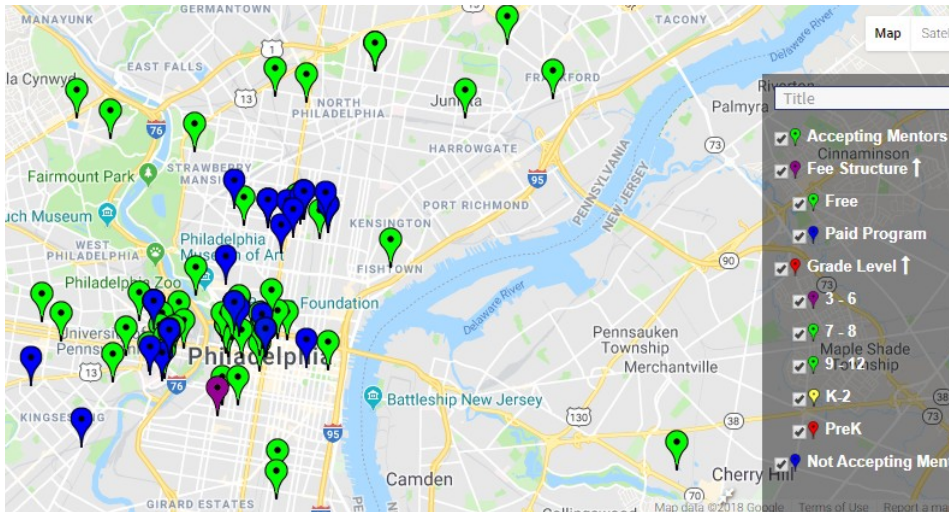
Our young Philadelphians do not have **equitable access** to meaningful STEM learning opportunities.

Barrier to access we are tackling: **Lack of awareness of programming**



# PROJECT

STEMCityPHL Asset Map  
[directory.stemcityphl.org](http://directory.stemcityphl.org)



1. Get the word out: families, students, schools
2. Navigation how-to video: search functions, analysis

## ***Next Steps:***

- 1. Approve script for video***
- 2. Logistics for creating and editing video***
- 3. Strategies for increasing reach of the tool***

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# **Status Report: STEM thru Sport workgroup**

Salvatore J. Sandone Ed.D. Co-chair

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# Overview

## **Workgroup meets monthly**

Every 2nd Tuesday of each month

## **Upcoming Meeting**

- Date: May 14th
- Time: 11 am - 12:30pm

## **Topics**

- Governance
  - Committee structure
  - Scope of work
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## Details - May 14th 2019 Meeting

- Conference Call  
Dial-in # 712-770-5505  
Access code 835612
  - Workgroup Cochairs:  
Salvatore J Sandone Ed.D.  
[ssandone@zhangsah.org](mailto:ssandone@zhangsah.org)  
215-923-6676 X 12
  - Jude Henzy  
Legacy Tennis and Youth  
Education  
[jhenzy@legacyyte.org](mailto:jhenzy@legacyyte.org)  
215-487-3477 X 144
-

# Workforce Development



Workgroup Update: Quarterly Meeting May 2019

## Mission

*We aim to collect information from technical employers of all industries, as well as educators of our youth, and the youth themselves. We will share our findings with all stakeholders in an effort to be additive to the many existing workforce programs and initiatives. Together, we will optimize the pipeline of potential skilled workers, while providing resources for networking between groups and resources in our ecosystem.*

# Next Meeting!

- Monday May 20th 4pm. PLEASE RESPOND TO CALENDAR INVITE, EXISTING MEMBERS!!
- At NextFab South Philadelphia
- Please email me if you would like to attend or be added to our workgroup email list:  
[lisa.dellaporta@nextfab.com](mailto:lisa.dellaporta@nextfab.com)

## Working on Workgroups





# Networking

