



## PHILLY SCIENTISTS SPRING 2018 PROGRAM

### Project Overview

Funded by the National Science Foundation, *Philly Scientists* is a 3-year research project designed and implemented by Drexel University, the Philadelphia Education Fund, the Academy of Natural Sciences, the Pennsylvania Statewide Afterschool/Youth Development Network, and Research for Action. Teachers, informal science educators, professional development experts, scientists, and science education researchers have collaborated to create a technology-infused science and technology curriculum unit focused on the Next Generation Science Standards (NGSS); and on its ecology and biodiversity content specifically. In this unit, fourth, fifth and sixth grade students from the Philadelphia Promise Zone use professional tracking tools, field guides, and mobile applications to gather and analyze data on neighborhood biodiversity. Teachers participate in immersive professional development (PD) activities and, with support from project staff, implement the curriculum and provide valuable feedback on the teaching and learning experience. The unit culminates with student presentations to urban planners, local scientists and community members, in which teams suggest data-driven solutions to increase Philadelphia's biodiversity. Through hands-on experiences and interaction with science professionals, the youth participants function as both knowledge-providers and knowledge-consumers while learning about biodiversity, ecosystems, research practices, digital badging, and future careers.

### Spring 2018 Program

Our Spring 2018 program is seeking two in-school classes of 4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup> grade students; and one afterschool group comprised of a similar age group. These programs must be located in the Philadelphia Promise Zone and should be involved in or excited about Next Generation Science and Technology. Students and teachers will help us test our curriculum by implementing the estimated four-week unit over the course of a possible 6-week term. There is no fee to participate in this pilot, and all curricula materials and iPad applications will be provided.

#### Benefits of participation will include:

- Students will use mobile device apps to investigate and catalogue the biodiversity (animals and plants) of their neighborhood - for which they will receive digital badges.
- Teachers will attend customized workshops on the NGSS unit, science content, and technology skills - for which they will receive stipends, PD digital badges, and Act 48 and PQAS credits (if desired).
- Students will have access to a classroom-set of iPads, and may keep their specimen collection jars.
- Teachers will receive a full set of lessons, to use as they wish.

#### Expectations of participation will include:

- One point person at each school or program, through which to communicate scheduling expectations, updates, etc.
- Completed IRB and media recording approval forms, from the instructors and students.
- Approximately 12 hours of instructional time implemented between the middle of April and the end of June, 2018. Project staff will be available and provide support during all instructional hours.
- Approximately 3 hours of professional development, to be scheduled at a mutually convenient time prior to program implementation. More than one staff person from each school or program may participate, if desired. However, staff implementing the curriculum must attend the PD sessions.
- Time to complete instructor and student pre- and post assessments.
- An instructor follow-up interview, after the program implementation.

### Additional Information

For additional information, contact Dr. Nancy Peter, Project Co-Principal Investigator and Director of the McKinney Center for STEM Education at the Philadelphia Education Fund: [npeter@philaedfund.org](mailto:npeter@philaedfund.org) or 215-665-1400 X3342.