JOHN HEINZ NATIONAL WILDLIFE REFUGE AT TINICUM
AMERICA’S FIRST URBAN REFUGE
EDUCATE – ENGAGE – CONNECT

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ABOUT THE REFUGE

• 1,000 acre greenspace in both Philadelphia and Delaware Counties
• Pennsylvania’s largest remaining freshwater tidal marsh
  • Located in Delaware River Watershed
• 300 bird species recorded, 80 nesting species
• Over 250,000 visitors annually
• Created through community action to:
  • Preserve and restore Tinicum Marsh
  • Promote environmental education
  • Afford visitors the opportunity to view wildlife in its natural habitat
REFUGE GOALS

- **Educate** youth through outdoor exploration and jobs
- **Engage** people to promote sustainable communities
- **Connect** residents to safe & accessible greenspaces
CURRENT CLIMATE

- over 80% of Americans live in urban areas*
- Americans are spending less time outdoors than in the past*
- Additionally 40% of younger American think the outdoors is unsafe**

*USFWS Urban Standards of Excellence  
STATE OF THE SYSTEM

• The way people interact with the outdoors is **varied and changing** and conservation professionals must **adapt**

• Recognize the **barriers and lived experiences** of our audiences

• Research suggests that programs offer **more ways to engage with nature** than only acquiring formal knowledge

*The Nature of Americans Study Findings (2018) DJ Case & Associates*
ACKNOWLEDGING BARRIERS

**Physical Barriers**
- Perceived Cost
- Transportation & Access
- Dangerous Animals
- Lack of Appropriate Gear

**Cultural/Emotional Barriers**
- Representation
- Law Enforcement (+/-)
- Community Perceptions
- Fear of Adverse Interactions
OVERCOMING BARRIERS

Stepping Stones of Engagement

EDUCATE – ENGAGE – CONNECT
CONNECT

COMMUNITY ENGAGEMENT
OUR STRATEGIES

• Refuge from the community up
• Focus on a target community
• LISTEN FIRST
  • Avoid making promises we can’t keep.
• Ask what partners need first
• Align joint needs and goals
  • Provide resources
• Build trust by showing up
• Beware of First Impressions
GETTING OFF REFUGE

- Programming at Local Greenspaces
  - Community litter clean-ups
  - Guided Walks & BioBlitz
  - Archery
- Work with trusted partners
  - Libraries, rec centers, churches
- Classroom Programs
- Choose tabling events wisely
  - Stick to target community
Connecting local green spaces
  • Pollinator Corridor

Transportation
  • Community Shuttle
  • Improving walking and biking paths

Nearby Nature
  • Pocket Parks

Free & Convenient
  • Programs are free and held at convenient times
BARRIER BUSTING WITH PARTNERS!:
TRANSPORTATION, SIGNAGE, AND ACCESS
ENGAGE:
HIGH SCHOOL YOUTH CREWS
MOBILIZE GREEN – HIGH SCHOOL YOUTH CREWS
PROGRAM OVERVIEW

- Ages 15+
- Paid to work on meaningful projects in **their community**
- **Recruited** locally
  - Targeted schools
  - Alumni engagement
- Spring, Summer, Fall Crews
- Hours are 8:00am – 4:00pm
- **Transportation provided**
  - During covid, transportation stipends have been provided in lieu of transportation
MOBILIZE GREEN
PROGRAM HIGHLIGHTS

• Career Development
  • Career Readiness Skills
  • Team Building & Leadership
• Environmental Education Opportunities
• Connecting to nature and building a conservation mindset
EDUCATE:
ENVIRONMENTAL EDUCATION PROGRAM
Philly Nature Kids

Philly Nature Kids will foster lifelong stewardship of the environment by engaging students through inquiry-based learning to promote investigation & discovery of their National Wildlife Refuge and outdoor community.
PHILLY NATURE KIDS
CLASSROOM MODEL

• **10** classroom visits
• Meeting students **where they are**
• Encourage students to **push their boundaries while still providing autonomy**
• Strong focus on **inquiry**
PHILLY NATURE KIDS
REFUGE VISITS

- 9 year-round visits
- Observe & record phenology
- Maintain a nature journal
- Build naturalist skills
- Learn from representative Model Naturalists
PHILLY NATURE KIDS
YOUTH OUTDOOR SKILLS

• June Celebration Days
  • Presentations
  • Explore hiking, fishing, and archery
  • Pizza Party from the Friends of Heinz

• Junior Ranger Camp
  • 1 week long, transportation provided
  • Kayaking, archery, fishing, wildlife photography
TESTING OUTCOMES

PSSA/Keystone Performance Overview

Note: Due to data usefulness introduced for NWEA-20 proficiency and advanced data, percentages may differ from the data published by the state and/or county or district participation in exams. Refer to the "2014-2015 Data" sheet for analysis participation data.

**ELA Proficient or Advanced (PSSA)**
2012-2013 Peerless School: 38 Students.

28.3% +5.3%

**Math Proficient or Advanced (PSSA)**
2012-2013 Peerless School: 38 Students.

10.0% -3.5%

**Science Proficient or Advanced (PSSA)**
2012-2013 Peerless School: 68 Students.

26.7% +9.8%

*Demographic Data for the 2014-2015 SY was obtained from a different source for Charter Schools.*
On average, teachers reported that participating in PNK increased students’ *interest* and *comfort* in nature, as well as their *awareness* of and *interest* in the Refuge.

<table>
<thead>
<tr>
<th>Category</th>
<th>Before PNK</th>
<th>After PNK</th>
</tr>
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<tbody>
<tr>
<td>Interest in nature</td>
<td>2.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Comfort in nature</td>
<td>2.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Awareness of the Refuge</td>
<td>1.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Interest in the Refuge</td>
<td>2.0</td>
<td>4.5</td>
</tr>
</tbody>
</table>

100% of teachers reported that PNK increased students' scientific inquiry skills.

83% of teachers reported that PNK increased students' understanding of science content.

83% of teachers reported that PNK increased students' retention of science content.
“My class gets to learn about the environment by going out and seeing it first hand. I know because of the program my students have learned more than I alone could have ever taught them.

They have a better appreciation for the environment & greater knowledge about science.”
– Joe Kilman, Patterson Elem. 4th grade Teacher

“Thank you for teaching us about environments and how to save them so now I know how to save environments. PS. My yard is full of milkweed!!!!”
– Patterson Elementary Student
CULTURALLY RELEVANT INSTRUCTIONAL PRACTICES

- **Asset Based Mindset**: Focusing on strengths and positive traits
- **Place Based Learning**: Focusing on Nearby Nature and places close to home
- **Inquiry Based Learning**: Students build scientific mindsets through exploration
- **Student & Nature Centered**: Instructors act as guides on the side, centering the student experience & using nature as a teacher
- **Trauma Informed Techniques**: Helps build trust and relationships with students
- **Representation**: Using model naturalists that reflect the community you serve
- **Cultural Awareness**: Know yourself and your community
CULTURAL AWARENESS
WE ALL HAVE WORK TO DO!

• Know yourself
• Understand your own cultural lens
• Beware of First Impressions
• Watch your language
• Assumptions can be dangerous
• Talk to your community
• Get to know the stakeholders and their motivations
• Listen first!
• Align joint needs and goals
• Check your bias at the door! ...or Trailhead
• Be aware of your internal biases
• Get Woke! & Acknowledge pop culture
KEY POINTS

Relevant Programming!

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