2019 Student Presentations:

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Hosted by:

HILLWOOD ESTATE, MUSEUM & GARDENS

Smithsonian Gardens

United States Botanic Garden

U.S. NATIONAL ARBORETUM

Transforming residential landscapes

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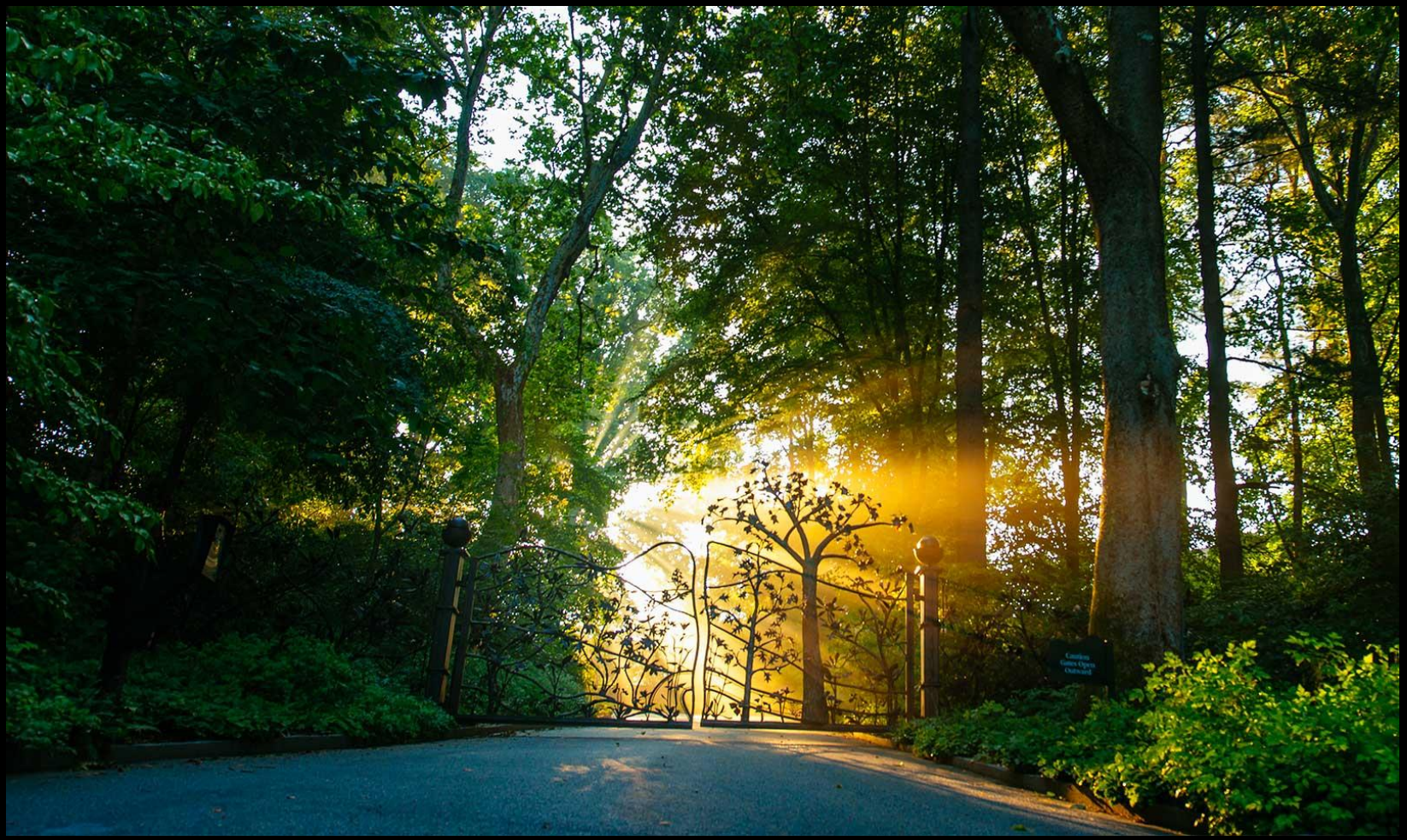
Mt. CUBA CENTER
Gardening on a higher level

PennState

Project overview



Project overview

- What are we trying to do?
  - Improve local biodiversity via changes to neighborhood landscapes
    - adding native plants

Project overview

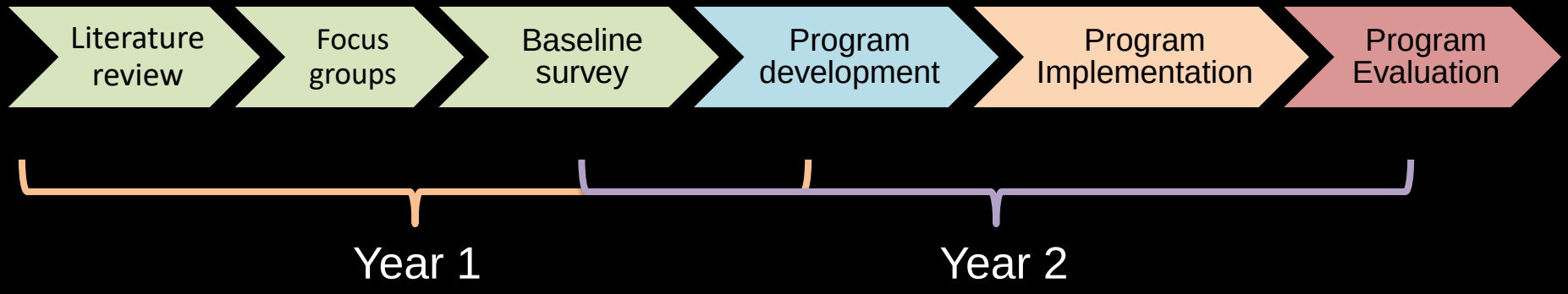
- Ecological significance
  - Biodiversity is central to healthy ecosystems
  - Increases water quality
  - Reduces flood risk
  - Increases carbon sequestration

Project overview

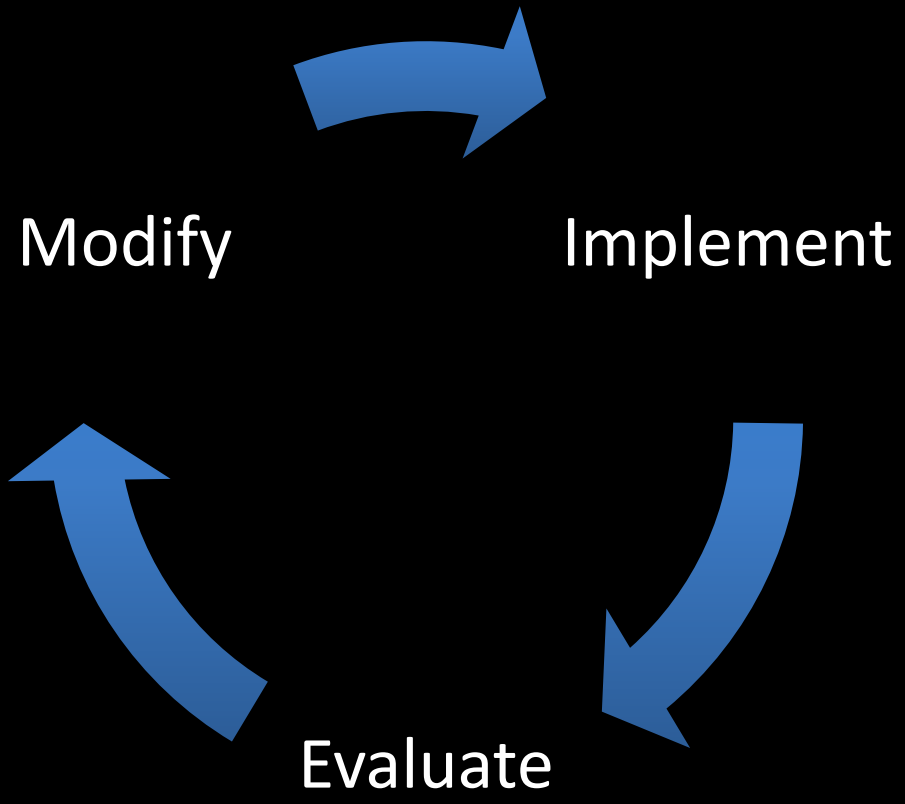
- Psychosocial significance
  - Relieves mental fatigue (Kaplan & Kaplan 1989)
  - Improves attention (Kuo, 2001)
  - Personal sense of meaning and achievement (Kaplan, 1973; Kingsley et al., 2009; Infantino, 2004)
  - Lowers stress(Wells & Evans, 2003)
  - Less negative emotion, more positive emotion, such as hope (Stuart 2005)
  - Community pride (Kuo et al., 1998; Ohmer, Meadowcroft, Freed, & Lewis, 2009)
  - Social interactions/cultivation of relationships (Draper & Freedman, 2010; Kuo et al., 1998; Kweon et al., 1998; Sullivan et al., 2004)

Project overview

- How are we doing it?
  - Community yard sustainability program called *Growing Together*
    - Two-step social diffusion process
    - Focus on important factors related to sustainable behavior



Years 3+



Part 1 — Literature review

What we learned, in short

- Many motives for landscaping behavior
- People believe native plants are attractive
- Social influence and community context matter

Moving forward

- Focus on community context
- Talk with people in target communities
- Survey large sample to understand important psychosocial processes for native plant behavior

Parts II & III— Focus Groups and Baseline Survey

Purpose

- Understand motives, barriers, and benefits of sustainable landscaping in the following groups:
  - target neighborhoods
  - MCC
  - a ‘model’ neighborhood
- Examine psychosocial influences of planting natives
- Identify change-agents
- Inform program development

Key Factors

- Psychological
  - Sustainability goals
  - Systems thinking (“getting” the ecosystem)
  - Meaningful experiences in nature
  - Positive attitudes about native plants (esp. aesthetics)
- Social
  - Change in social norms
  - Strong relationship with MCC, HOAs, neighbors, etc
  - Positive impression of MCC
  - Community cohesion

Moving Forward

- Facilitate meaningful experiences and systems thinking
- Emphasize aesthetic appeal of native plants
- Foster and maintain positive relations and impressions of MCC
- Mobilize change-agents to shift norms

Parts IV – V1

Program Development, Implementation, and Evaluation

Process

- Two groups of neighborhoods completed survey
- One group participated in the program
- Both groups complete follow-up
  - (5-6 months after program started)

Key components

- Outreach
- Education
- Inspiration
- Building community

Key components

Outreach	• Developing relationships with change-agents • Working with landscapers
Education	
Inspiration	
Building community	

Key components

Outreach	• Developing relationships with change-agents • Working with landscapers
Education	• Botanical garden existing program & new workshop • Information dissemination • Paper and online resources
Inspiration	
Building community	

Key components

Outreach	• Developing relationships with change-agents • Working with landscapers
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Inspiration	• “New Perspectives” workshop • Experiences at botanical garden
Building community	

Key components

Outreach	• Developing relationships with change-agents • Working with landscapers
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Inspiration	• “New Perspectives” workshop • Experiences at botanical garden
Building community	• Mobilizing change-agents • Group events • Empowering messages

Effects of program so far…

- Higher program engagement →
  - larger shift in behavior change
  - social closeness to MCC
  - social closeness to neighbors
  - more meaningful experiences
  - stronger belief that native plants are beautiful

What now?

- Broadening program engagement – KEEP GOING!
- Highlight the changing social norm
- Outreach activities that build positive relations with MCC and connect people
- Continue emphasizing aesthetic appeal
- Connect native plants w/ other practices

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Gardening on a higher level

End

Avenues to Access – Assessing Accessibility in Philadelphia Area Public Gardens

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2018-2019 Morris Arboretum Education Intern

Morris Arboretum
University of Pennsylvania

Philadelphia – America's Garden Capital

PEW

Disability Rate in Philadelphia Is Highest of Largest U.S. Cities

Percentage is also near the top among high-poverty cities

What is a disability?

Defined as:

"a physical or mental impairment that substantially limits one or more major life activity."

42 U.S. Code § 12102

Accessibility Policy

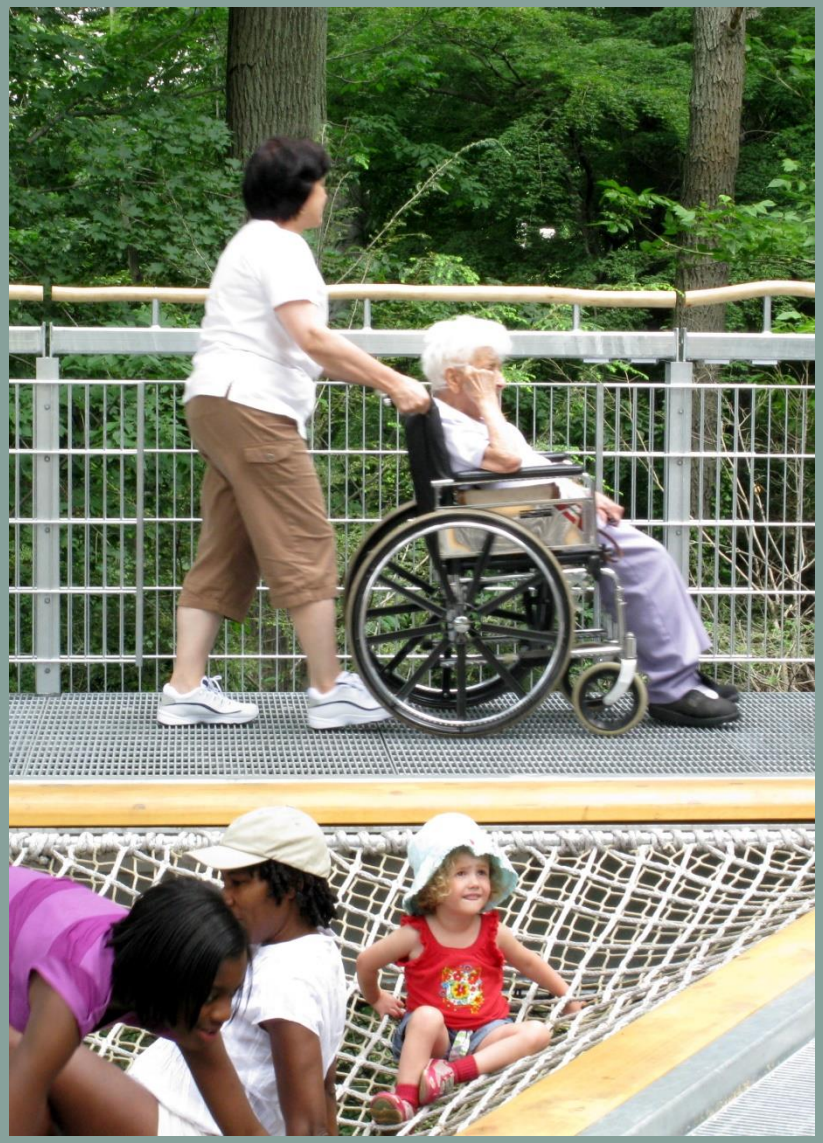
- **Legal**
- Outreach
- Moral

- **Section 504 of the Rehabilitation Act** (29 U.S.C. § 701)

- **ADA Title III** state that private entities, including museums or "other places of public display or collection" such parks, zoos or other places of public recreation must make an effort to accommodate those with recognized disabilities.

Accessibility Policy

- Legal
- **Outreach**
- Moral



Accessibility Policy

- Legal
- Outreach
- **Moral**

"As social institutions, public gardens can inspire inclusion in communities by modeling equitable and inclusive practices and policies for all of their stakeholders, both internally and externally."

-American Public Gardens Association, *Employee Development, Diversity, & Inclusion*

Public Gardens Awaken the Senses

Photos courtesy of the Morris Arboretum.

Universal Design in Horticulture

Universal Design:

"the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability."

Photos courtesy of the Scott Arboretum.

Ambulatory Challenge

ADA Section III requires "entities to make reasonable modifications" to their infrastructure to accommodate ambulatory disabilities but does not require institutions to make "fundamental alterations."

-Bowen, I. and A. One. Renewing the Commitment: An ADA Compliance Guide for Nonprofits. *The Chicago Community Trust and Affiliates.*

Photos from left to right: Chanticleer Garden, Winterthur Museum, Garden & Library.

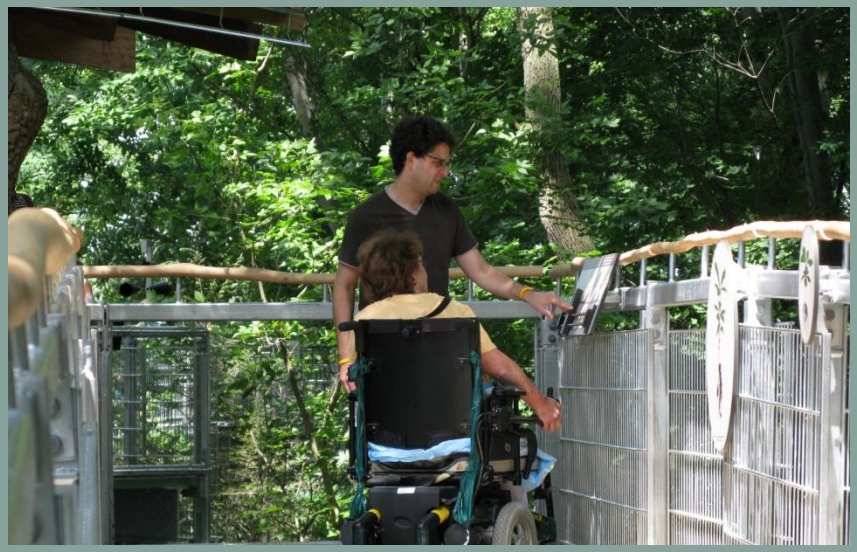
Ambulatory Challenge

Institutions are not required to make alteration when work is cost prohibitive.

-Bowen, I. and A. One. Renewing the Commitment: An ADA Compliance Guide for Nonprofits. *The Chicago Community Trust and Affiliates.*

Photos from Bartram's Garden.

Accessible Programing



Photos courtesy of the Morris Arboretum.

Questions?

Sources

Bowen, I. and A. One. Renewing the Commitment: An ADA Compliance Guide for Nonprofits. *The Chicago Community Trust and Affiliates.*1-123.

Eichel, L. and K. Martin. (2018, July). *Disability Rate in Philadelphia Is Highest of Largest U.S. Cities.* https://www.pewtrusts.org/en/research-and-analysis/articles/2018/07/17/ disability-rate-in-philadelphia-is-highest-of-largest-us-cities.

Employee Development, Diversity, & Inclusion. https://www.publicgardens.org/sustainability- index/attributes/employee-development-diversity-inclusion

Mangione, G. (2016). Making Sense of Things: Constructing Aesthetic Experience in Museum Gardens and Galleries. *Museum & Society 14* (1), 33-51.

Prohibition of discrimination by public accommodations, U.S. Code. US Law. 42 U.S. Code § 12182.

Samson, K. (2019). *Cultural Accessibility Training* [PowerPoint presentation]. Lecture attended March 5, 2019.

What is Universal Design. http://universaldesign.ie/What-is-Universal-Design/.

Morris Arboretum
University of Pennsylvania

Thank you to all the presenters!