

Why integrate Certification Programs into Museums?

- Museums are stewards of authentic objects and scientific information. Certification programs help fulfill our educational mandate by
- making those objects and data more available to the public, especially the underserved, through loanable objects and associated lessons.
 - extending the Museum's reach beyond the physical walls.

Sowing SEEDS

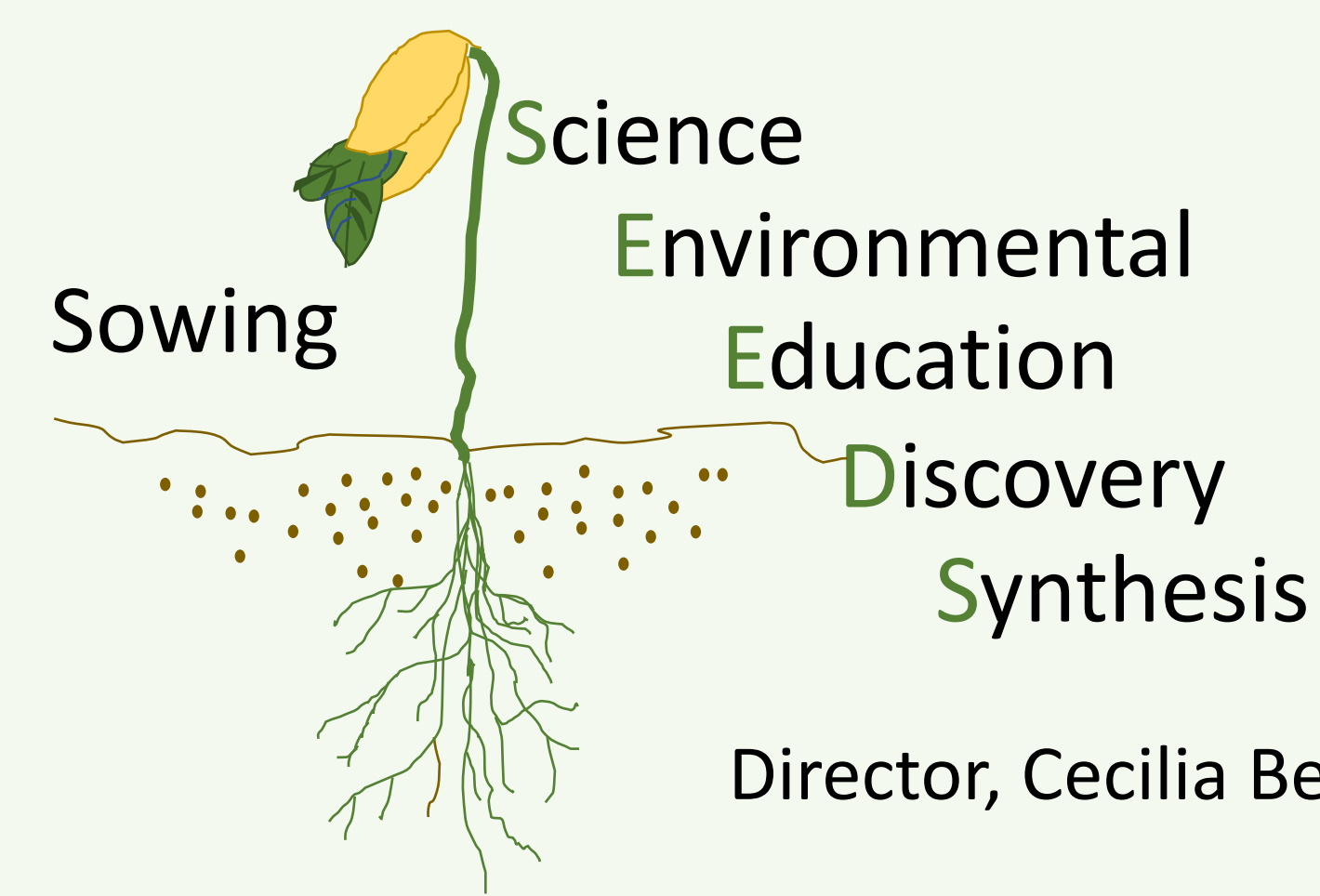
- Sowing SEEDS** is a dynamic, comprehensive certification program developed by The Hefner Museum of Natural History and the Cecilia Berg Center for Environmental Education. This certification model:
- provides unique instruction tailored to the needs of early and middle childhood educators.
 - provides emerging educators with the knowledge, pedagogy, and access to object-based museum resources needed to lead student investigations of the natural world.
 - demonstrates that inquiry-based learning enriches all subjects.

How Sowing SEEDS Works

- Sowing SEEDS** certification programming provides models upon which students develop and pilot customized outreach activities. It also provides immersive teaching, lesson development and field experiences. As a capstone, undergraduates develop new inquiry activities for use in the Museum outreach programs.

Outreach to Community: Discovery Trunks

- Museum outreach programs take many forms. Created by undergraduates, the Discovery Trunks are science kits used by educators and the public which provide:
- authentic and reproduction specimens.
 - teacher guides with stand-alone, standards-based lessons that can supplement or form the foundation of core curriculum instruction.
 - inquiry activities that connect learners to the Museum's mission.



Sowing SEEDS

A model for museum-based teacher certification and environmental outreach programs

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HEFNER MUSEUM
of
NATURAL HISTORY

Guidelines to Integrate a Teacher Certification and Educational Outreach Program

- 1. Set program goals.**
 - What does certification embody?
 - Ensure subject area competency.
 - Apply pedagogical theory to practice.
 - Design activities to foster critical thinking skills.

- 2. Capitalize on museum expertise and infrastructure to establish your museum as a leading authority in discipline content and educational standards.**
 - How will you deliver programs?
 - Options range from an evening workshop to semester long courses, online, or hybrid.
 - Set criteria participants must attain for certification.
 - Determine the audience from which you can best recruit.

- 3. Advocate educational outreach as central to the museum's mission.**
 - How will you connect your mission to your education outreach?
 - Determine what community your students will be teaching.
 - Determine what theories, practices and products are necessary for which students need to be skilled.
 - Incorporate principles of museological theory, as well as ethics.
 - Periodically revise to ensure application of current standards and best practices.

- 4. Develop a network of potential and active program participants.**
 - Advocate for the value of your certificate.
 - Maintain communication with previous participants and community members.
 - Offer refresher courses and teacher professional development.

The mission of the Hefner Museum of Natural History is to inspire global stewardship by exploring the connections between people, the nature of their neighborhood, and the world.



Undergraduate piloting outreach activities

Goals of Sowing SEEDS

- Equip Miami University prospective teachers early in their careers with the science knowledge and methodologies necessary to teach children about the natural world.
- Reach children early in their schooling to encourage an appreciation for nature that will last for years to come.
- Develop effective educational outreach materials to connect people to nature.



Capstone project: Pond Life Discovery Trunk

Sowing SEEDS — Educating Future Environmental Educators

Offered as a semester-long course, museum educators instruct students in pedagogy and implementation. These students gain significant knowledge through in-class activities, field excursions, inquiry experiences and rigorous assignments to achieve certifications as Early Childhood or Middle Childhood Environmental Educators.



Future teachers generate activities for museum outreach.

Participants in the program learn from experts in the field about the natural world.



Sowing SEEDS Offers Support to Future and Practicing Educators



In addition to certifications, Sowing SEEDS offers workshops and provides Discovery Trunks available to the community. Such activities are key to fulfilling the mission of the museum.