

Supporting Justice-Oriented and Community-Based Environmental Action through Near-Peer Mentorship, Geospatial Technology, & Digital Media Storytelling

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Motivation

Problem

Environmental and climate change challenges disproportionately impact under-resourced communities and communities of color (environmental justice communities used hereafter)¹.

While the burden of developing and implementing solutions should not fall on those communities alone, empowering and amplifying the voices, knowledge, and experiences of members of these communities are critical to developing holistic and equitable solutions.

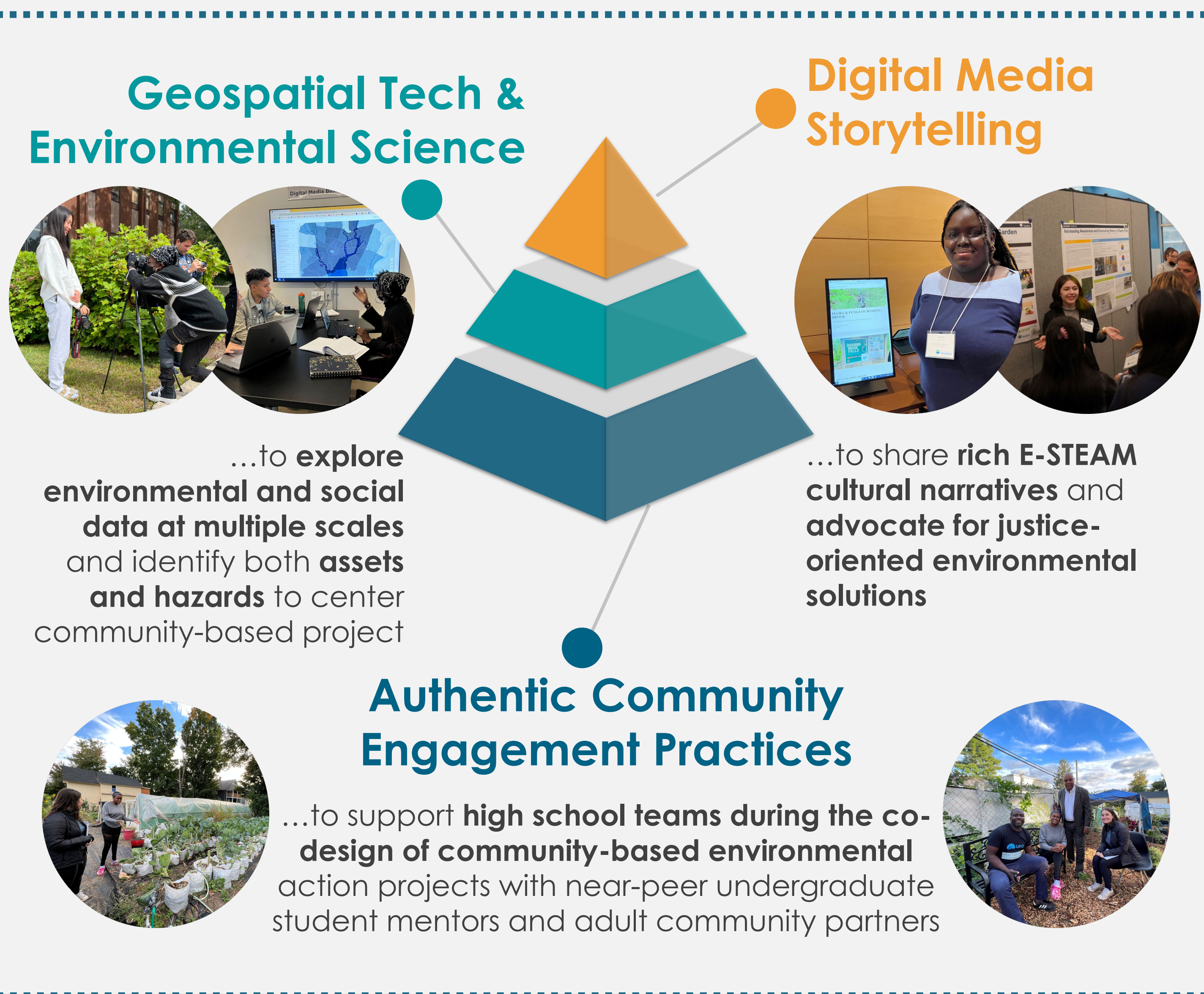
Our Project

We developed an **E-STEAM (Environmental, Science, Technology, Engineering, Arts, Mathematics) approach** to engaging high school student teams from environmental justice communities in the development of environmental solutions and science communication/advocacy with the support of near-peer mentors and community partners.

Eco-Digital Storytellers Program Model

Goal: Engage collaborative teams of lifelong learners (high school pods, community partners, multidisciplinary team of UConn undergraduate students and faculty) to create **StoryMaps²** that:

- Advocates for a possible solution or action to address a socio-environmental challenge or opportunity in their community
- Uses interactive and multimedia storytelling to envision an environmental future and engage decision makers



Eco-Digital Storytellers (EDS) Participant Projects

Greater Hartford Academy of the Arts

- Digital Media Class
- Community Partner: Riverfront Recapture
- Three Projects Overarching Focus:
 - Enhancing community-wide outdoor & health benefits of an urban asset: Charter Oak Landing Park

Improving Accessibility

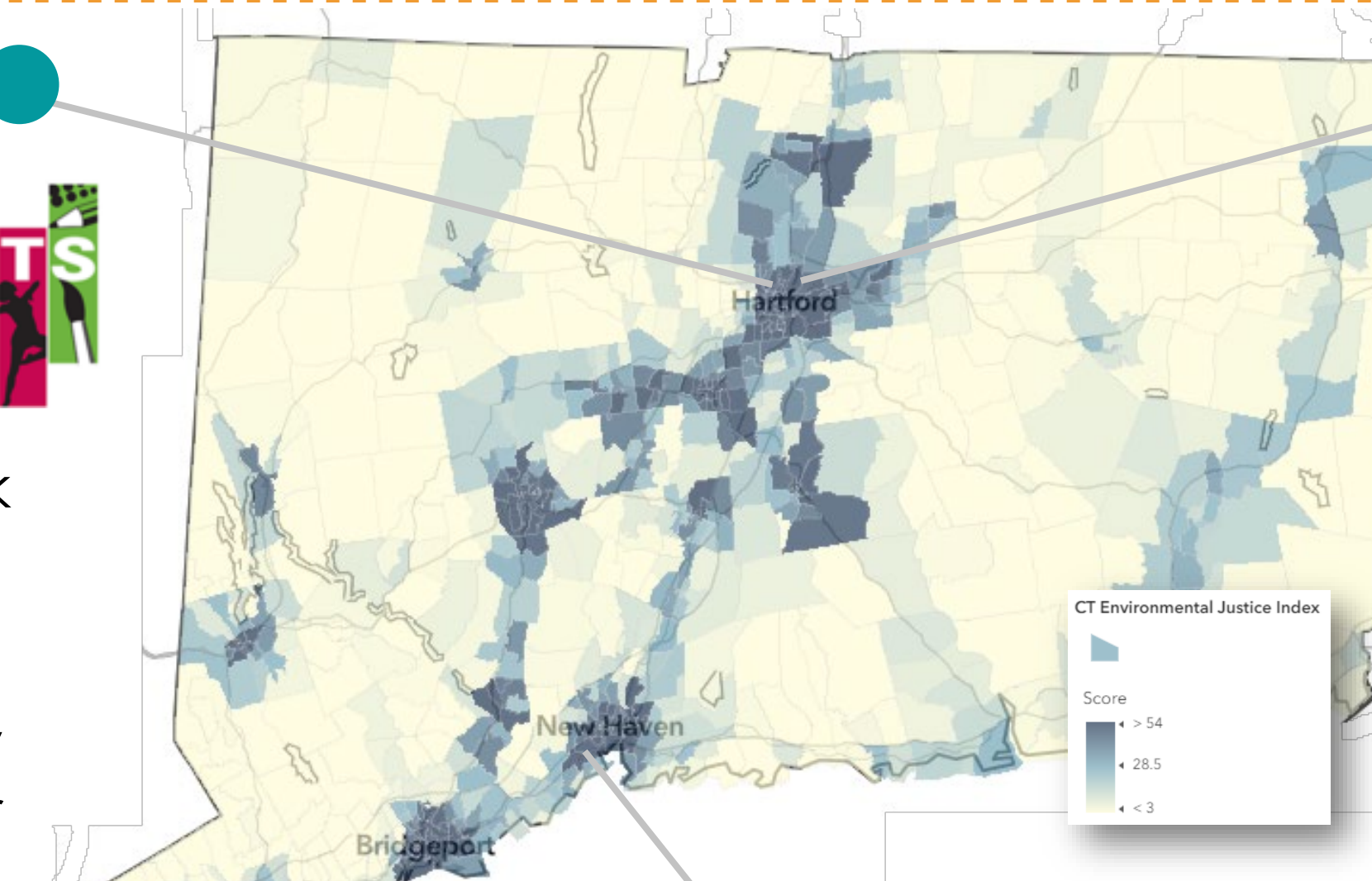
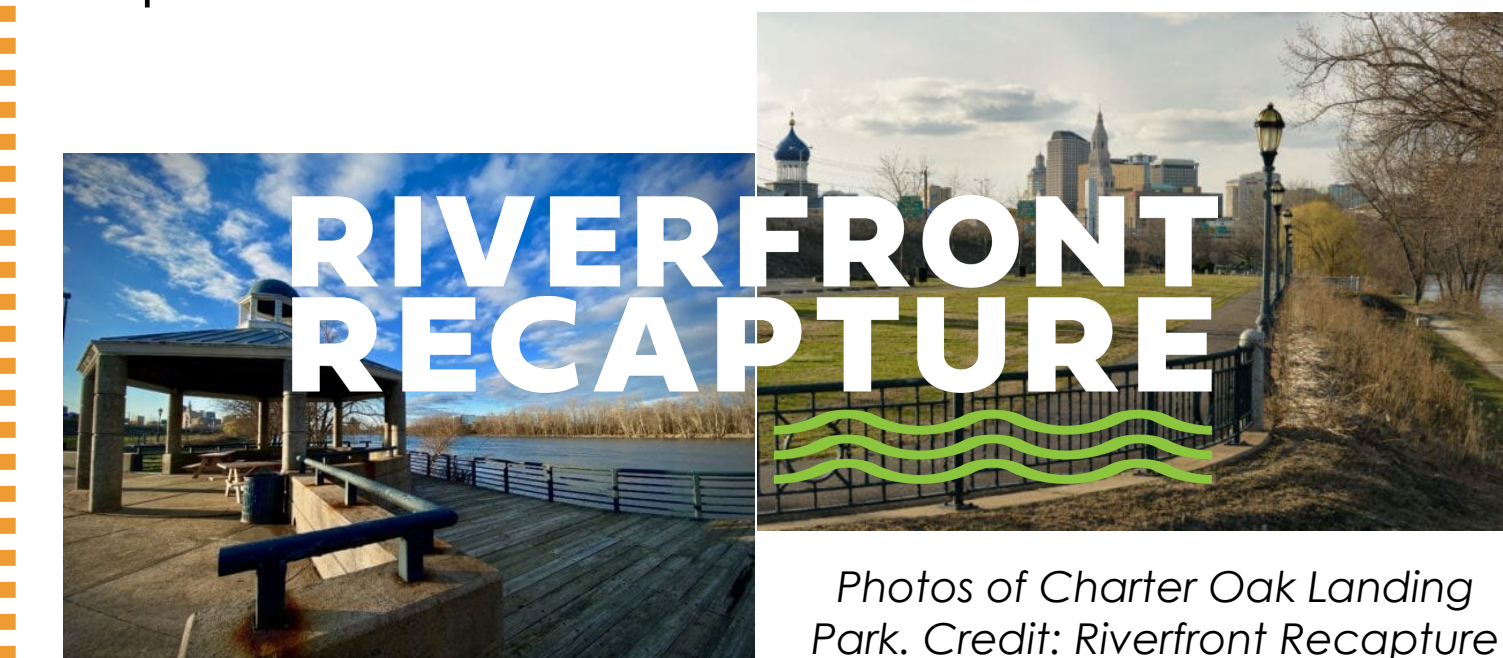
- Highway & stairs limit access to the riverside park
- Advocating for features that will increase accessibility by nearby residents, such as multi-lingual signage, ramps for wheelchairs/bikes, under highway passage

Place Making

- Promoting community-ownership via murals and art

Native Plants & Food Oasis

- Advocating for 'no mow' zones & native plantings that provide sustenance to humans & wildlife



A map showing the CT Environmental Justice Index for Connecticut communities. The index factors in indicators of four categories: Potential Pollution Sources, Potential Pollution Exposure, Socioeconomic Factors, and Health Sensitivity. Higher index values (dark blue) show most impacted communities (higher pollution and more vulnerable populations).

West Haven High School

- Digital Media Class
- Community Partners:
 - West Haven Parks & Recreation Department
 - Land Trust of West Haven



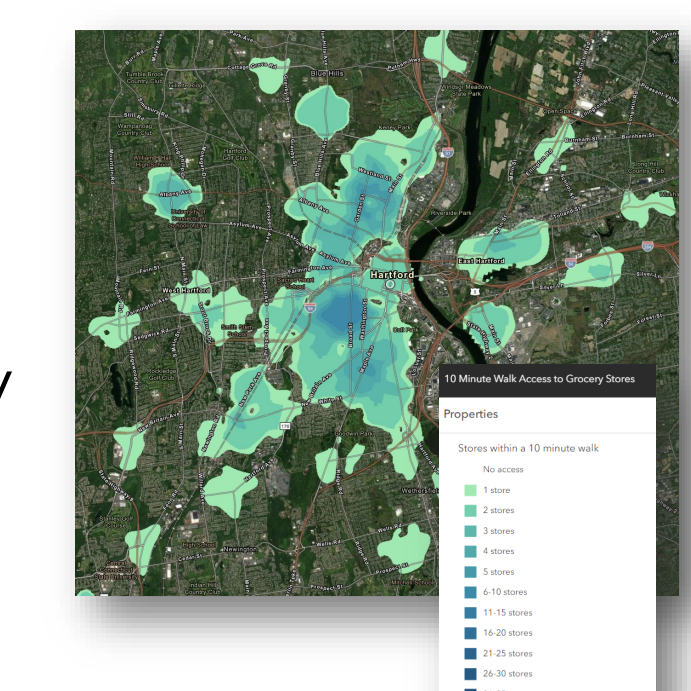
Shoreline Savors

- West Haven boardwalk resilience and eco-restoration project focuses on four pillars
 - Education
 - Accessibility
 - Engagement with nature
 - Improving green spaces



A.I. Prince Tech

- Bioscience & Environmental Tech Class
- Community Partner:
 - Knox Community Gardens
 - Hartford Land Bank



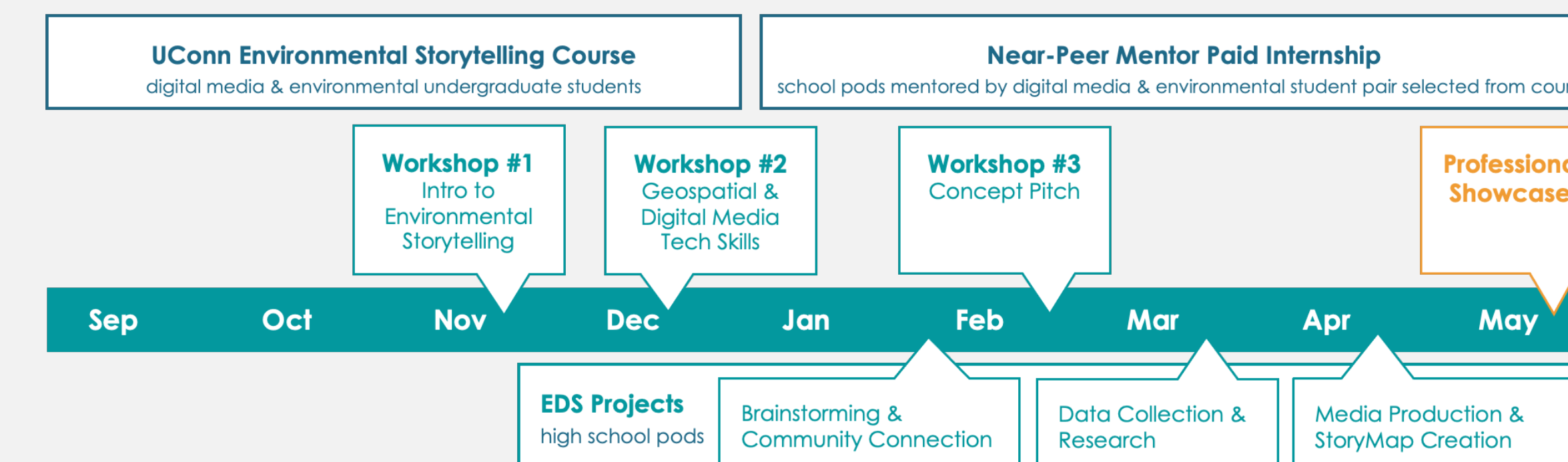
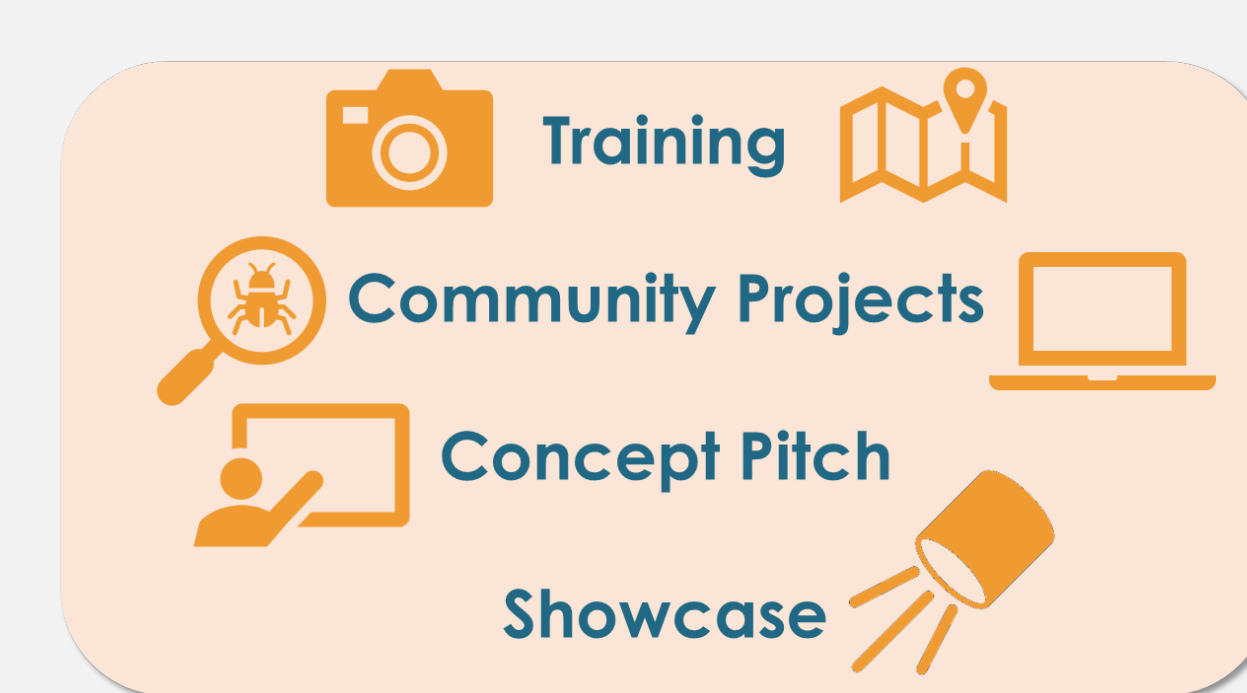
Food Access

- Examining accessibility to healthy produce in Hartford grocery stores, community gardens & farmers markets

It's Alive! The Soil Beneath Our Feet

- Soil health in urban and vacant lots
- This student "Wants the audience to see their neighborhood develop through the eyes of the soil"

EDS Program Activities & Timeline

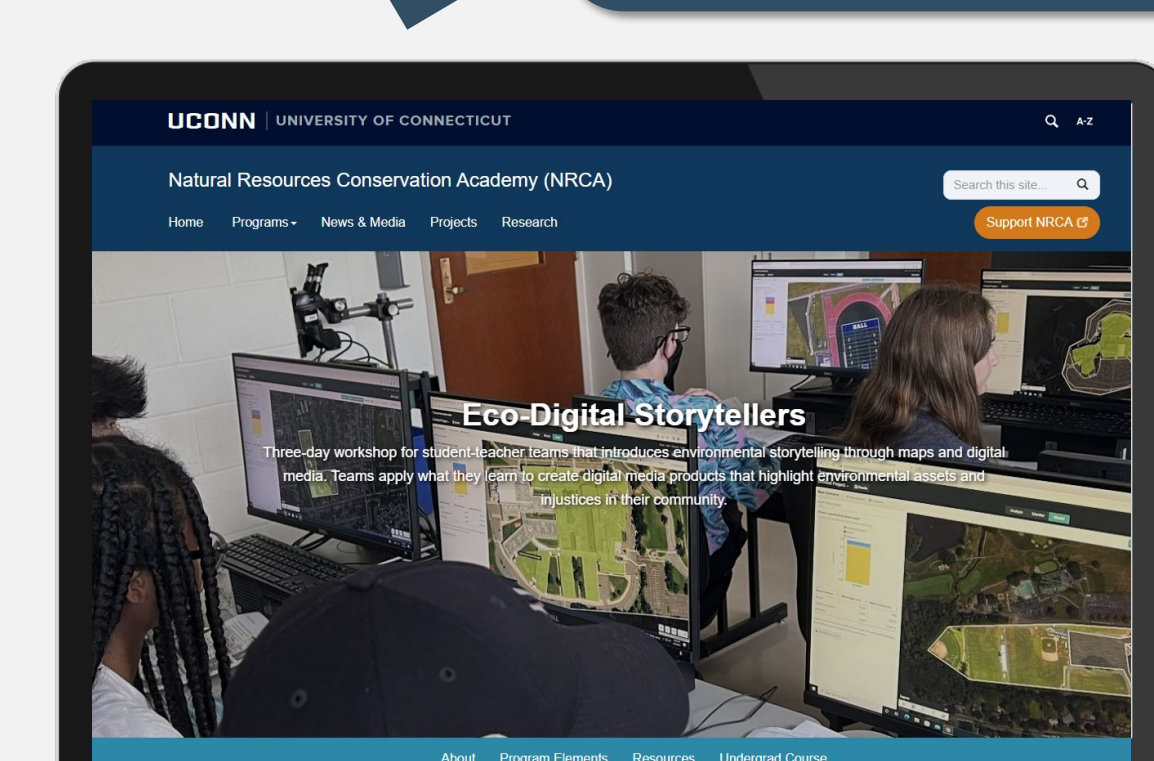


Program Supports

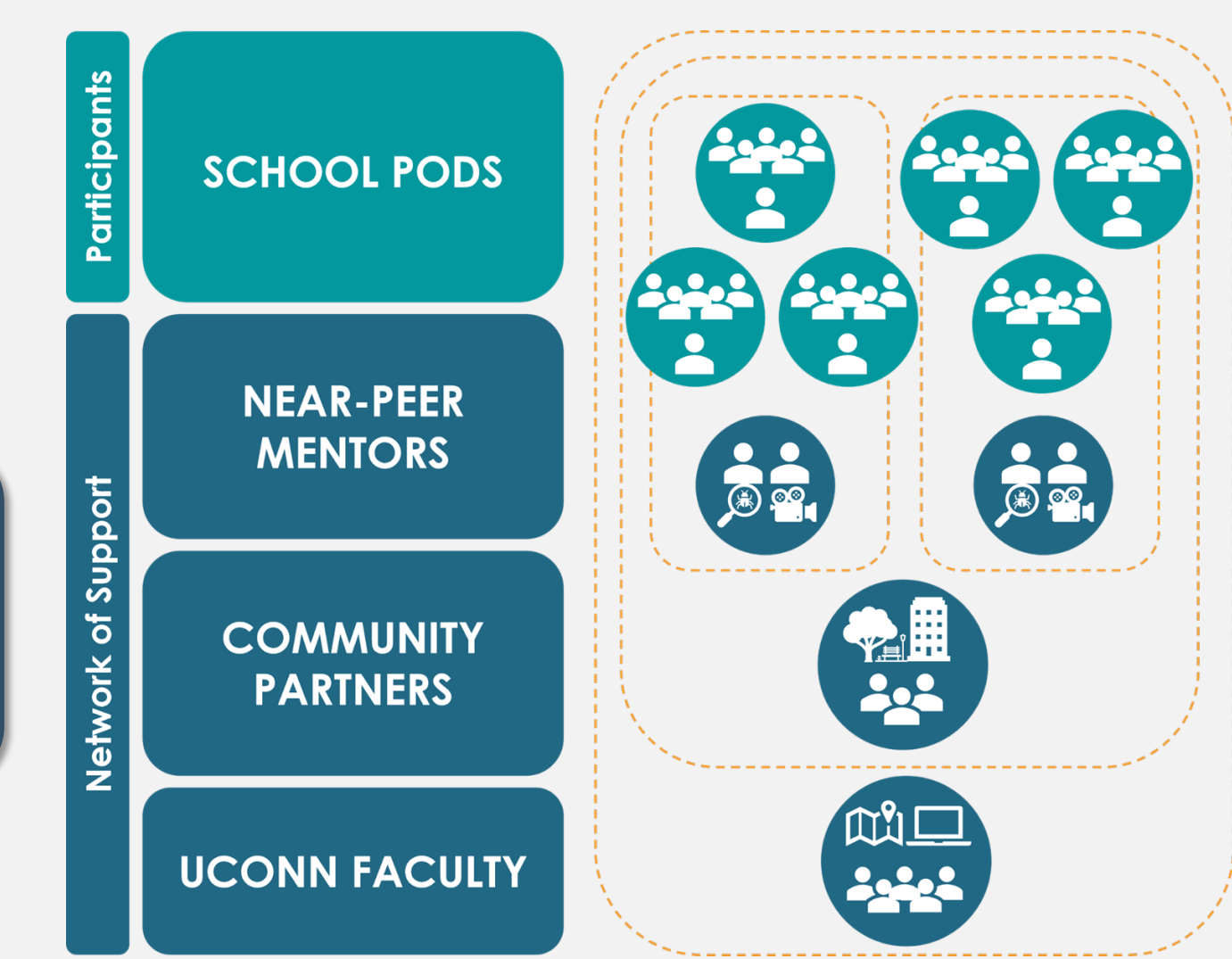
Resources & Guides

- Digital media technology
- Environmental storytelling
- Mapping and StoryMaps
- Project Guide

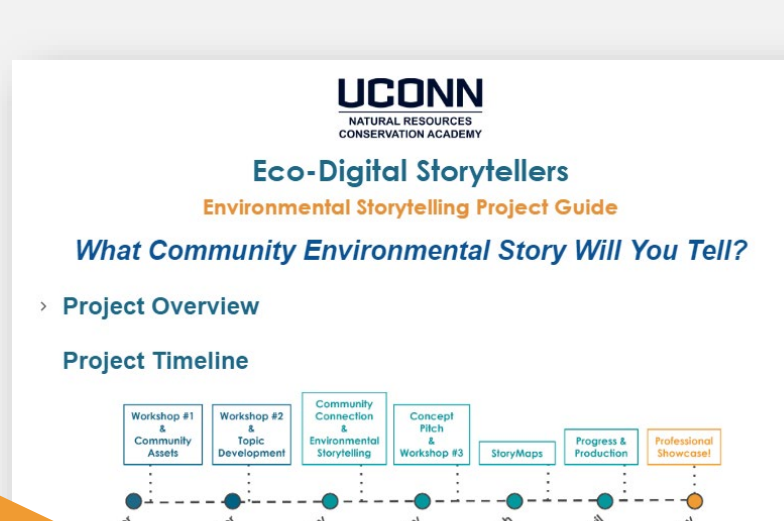
Check out the EDS website for more resources @ nrca.uconn.edu/eds



Multi-Layered Mentorship



See EDS project guide for designing EJ-centered projects @ s.uconn.edu/eds-project-guide



Research Questions

To what extent are **E-STEAM career interests** and **E-STEAM identity authoring** influenced by **digital technology/science communication**, **near-peer mentoring**, or meaningful **community environmental action pursuits**?

What are the expansive interest-driven E-STEAM identity authoring experiences of school pods — specifically:

- the **interests** of the participants;
- the **performances** in which participants engage;
- the ways in which **competencies** are communicated; and
- how **recognition** unfolds — in relation to near-peer mentoring, digital media storytelling, and geospatial technologies?

Acknowledgements & References

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1) EPA. 2021. Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts. U.S. Environmental Protection Agency, EPA 430-R-21-003. www.epa.gov/cira/social-vulnerability-report

2) What are ArcGIS StoryMaps? <https://storymaps.arcgis.com/stories/9a500acb526f4be8b0a3c66ffa8e53fa>

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