
The Many Faces of Environmental Literacy

— Building Multi-Faceted Capacity —

2024 NAAEE Conference
Friday, November 8, 2024
2:15-3:45 PM

Mixer Activity: Business Card Tag

1. **Gather 3 business cards.** If you do not have any with you, take 3 cards and write your name, school/organization/company, role, and contact information on each.
2. In the next three minutes, visit with as many people in the room as possible. Introduce yourself and state what your superpower is as it relates to your role and two areas of need or gaps in “power.”
3. When colleagues give their business cards to one another, they must record the person’s superpower on the back of the card.
4. **Goal** - to collect as many business cards as possible. The player who amasses the most business cards by the end of 3 minutes wins a prize. Be prepared to share the info about superpowers and needs with the group.

Session Agenda

- A. Mixer activity ([Jennifer Peglow](#))
- B. General overview of the session flow & individual/group intros ([Michelle Niedermeier](#))
- C. Big picture guiding outcomes: Chesapeake Bay Watershed Agreement; Environmental Literacy (ELit) goals; Mid-Atlantic network initiative ([Elise Trelegan](#))
- D. States:

- 1. VA ([Candace Lutzow-Feling](#))
- 2. DC ([Grace Manubay](#))

Discussion: VA & DC

- 1. MD ([Laura Collard](#))
- 2. DE ([David Pragoff](#))

Discussion: MD & DE

- 1. PA ([Tamara Pepper](#) - State Ed; [Kathleen Banski](#) - Funding; [Nanette Marcum-Dietrich](#) - Higher Education)
- 2. NY ([Don Haas](#))
- 3. Multi-state Organizations and Network of Networks - [Steve Mohapp](#)

- E. Discussion: PA & NY; Wrap-up, and Q&A



Enable students in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed

Outcomes:

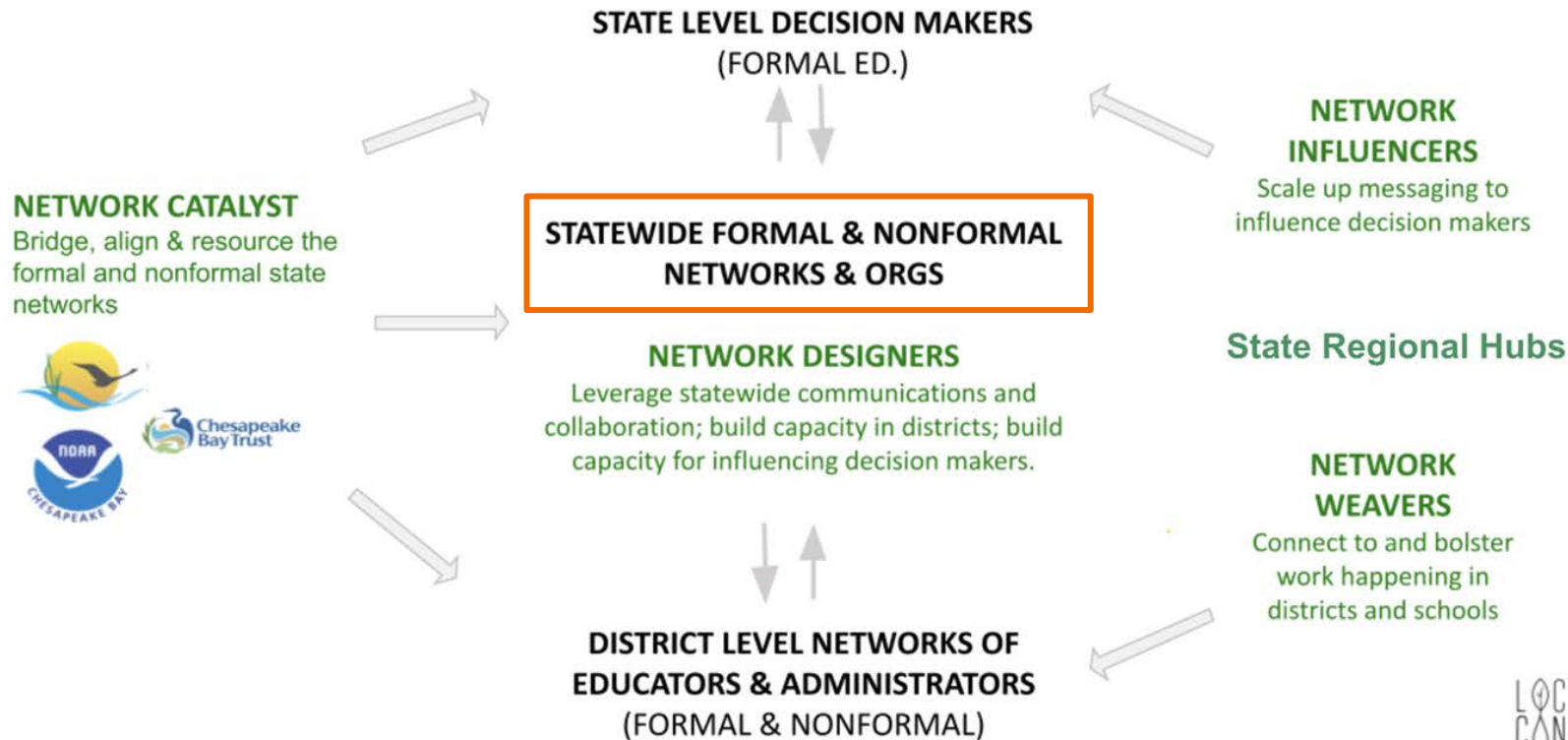
Student Experiences (MWEEs)

Sustainable Schools

Supportive Policies & Metrics

Strengthening State-Level Environmental Literacy Network of Networks

ROLES & RESPONSIBILITIES





Resourcing the Work

1. Funding!!!!

- a. NOAA B-WET State Capacity Building
- b. Chesapeake Bay Trust
- c. Pisces Foundation
- d. Local organizations

2. Facilitation & Training

- a. Network development (common agenda) + communication support
- b. 1-on-1 consulting & product/agenda development support

3. Supplemental Elements & Enhancements

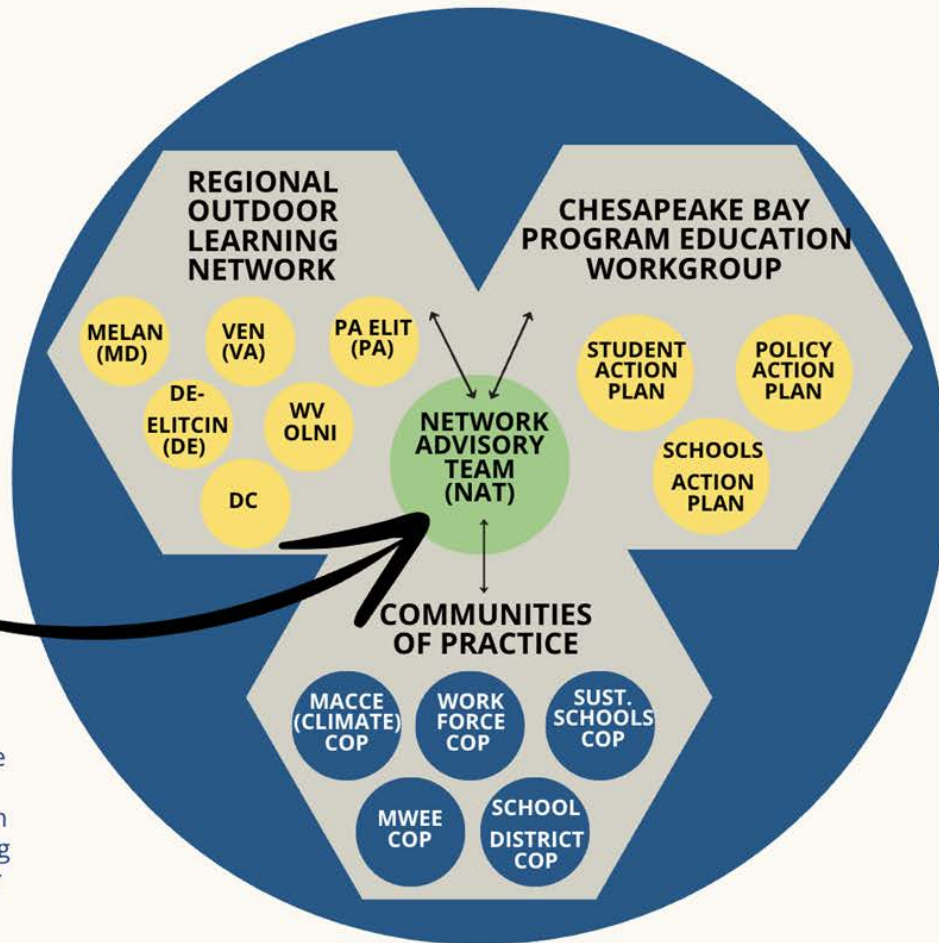
- a. EL Forums + EL Summits
- b. Resources: District EL Planning Toolkit, MWEE 101, Facilitator's Guides

Environmental Literacy Network Ecosystem

Mid-Atlantic Region

What's NAT?
A network design team convened from across the Mid-Atlantic Environmental Literacy Network of Networks

NAT Purpose
Coordinate, promote and weave the environmental literacy network ecosystem in the Mid-Atlantic region by increasing communication among groups and collectively planning for regional gatherings (including Environmental Literacy Forums).



COLOR KEY



COORDINATION FOCUSED

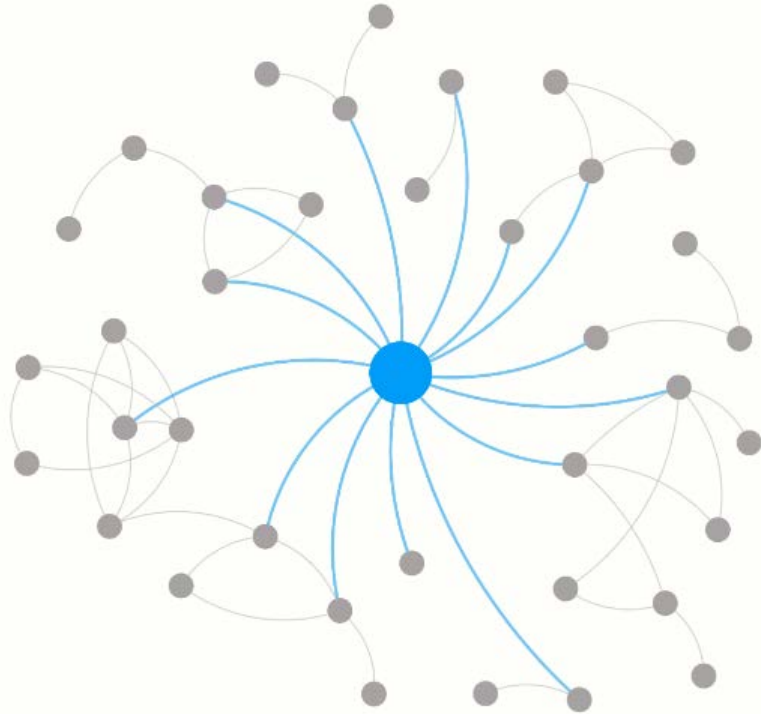


LEARNING FOCUSED

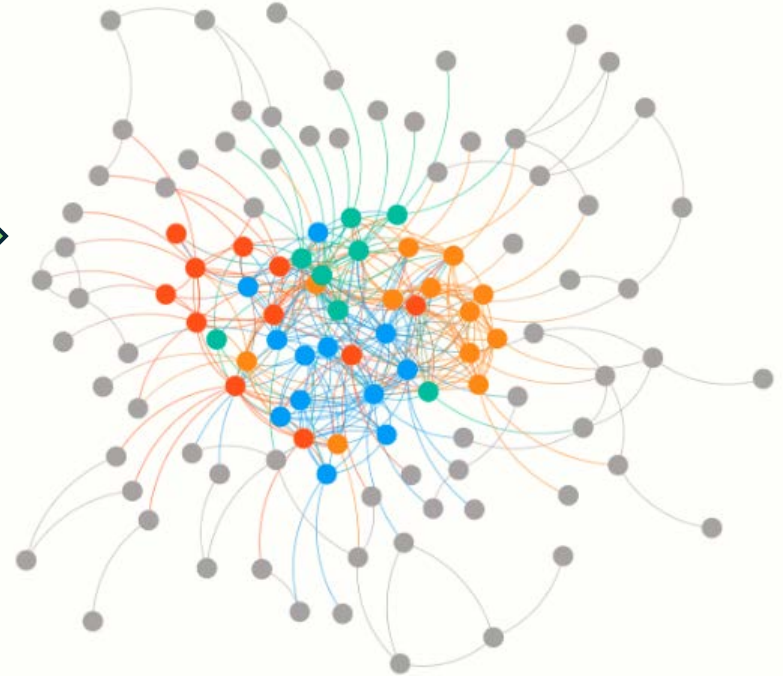


ACTION FOCUSED

Virginia Environmental Literacy Network (VEN): Our Story



Connected, not really connecting

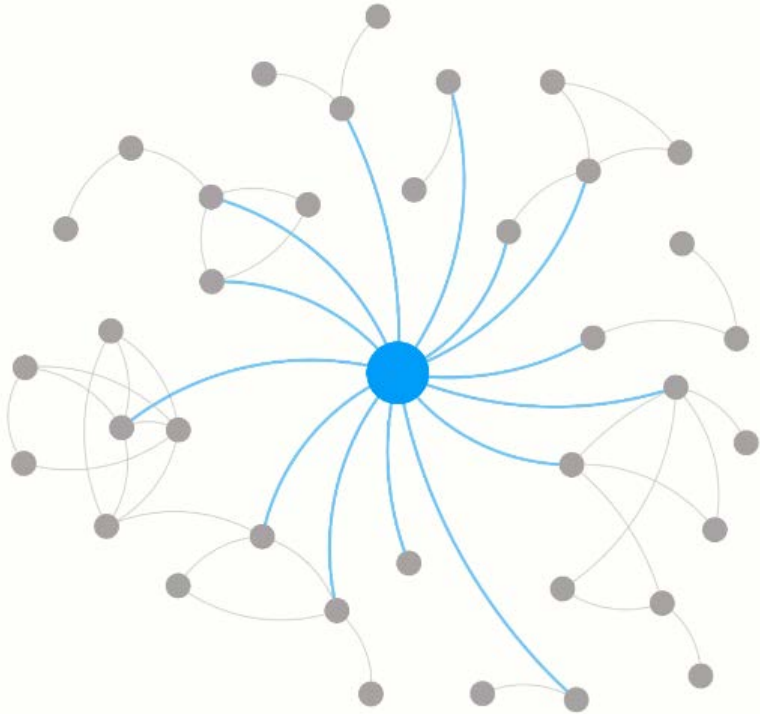


Increased connectivity thru shared purpose

Virginia Environmental Literacy Network (VEN): Our Story



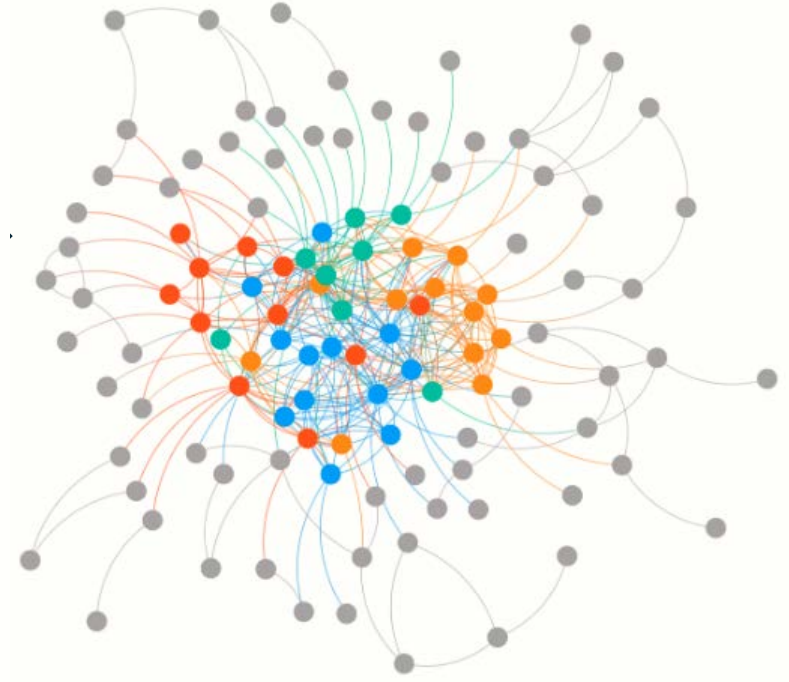
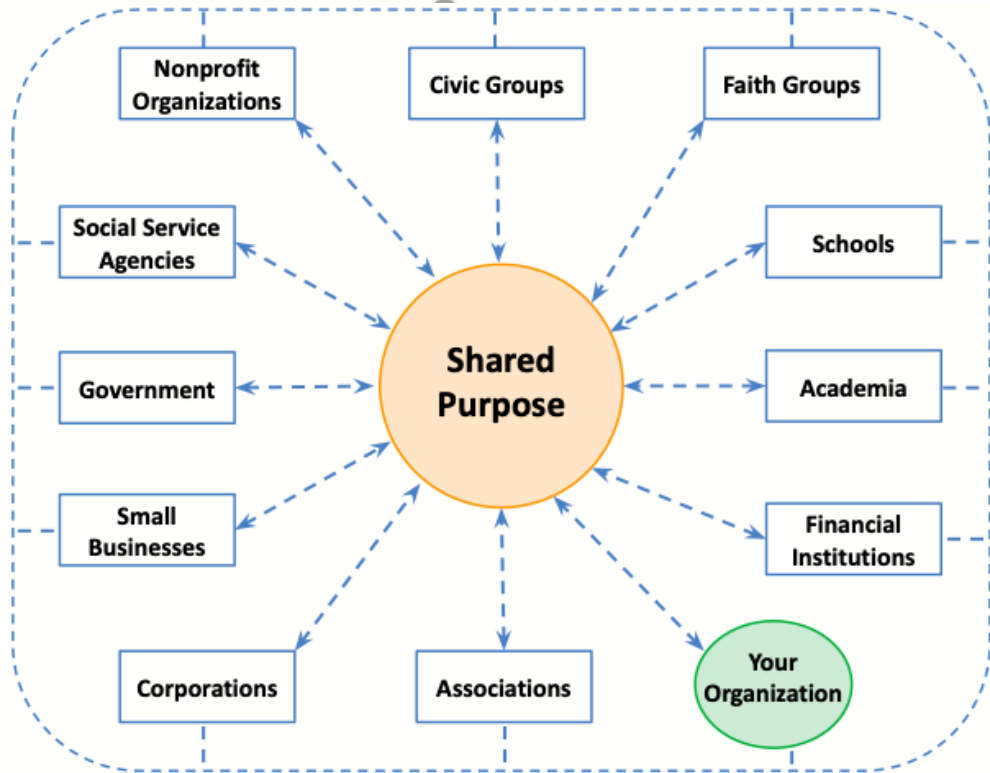
Graphics: <https://www.converge.net/toolkit/book-graphics>



Connected, not really connecting



Virginia Environmental Literacy Network (VEN): Our Story



Increased connectivity thru shared purpose



BLANDY
EXPERIMENTAL FARM



University
of Virginia



Who are we?

VEN is a NETWORK representing strategic partners with a common goal to support teachers & their students in developing environmental literacy.

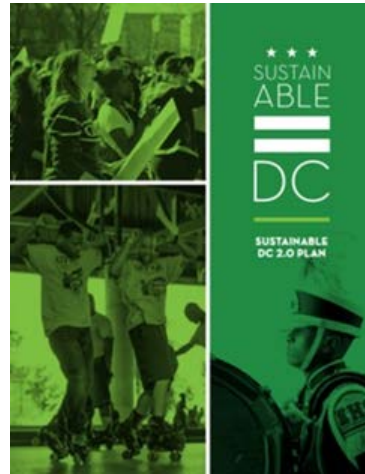




Virginia Environmental Literacy Network (VEN)

Accomplishments	Future goals	Purpose
Statewide network established: Members include formal & environmental educators representing a diversity of EE providers	Expand network: Broaden participation; Focus on underserved areas & environmental justice issues	Increase capacity for ELit by sharing: purpose, resources, opportunities, challenges & successes; connect, communicate, collaborate
Developing a shared vision for ELit in VA	Supporting school divisions in VA in developing ELit plans	A unified approach to supporting VA schools
Training to prepare EE to partner with school divisions	Joint EE & formal education partner trainings	Increase standards-based outdoor ELit opportunities for prek-12 students
Network hub in VDOE Region 1 established	Create 7 additional regional hubs in VA	Address unique needs of each region

Environmental Literacy Drivers in the District of Columbia



Some Networks

DC Environmental Literacy Advisory Committee:

District government agencies and partners named in the Environmental Literacy Plan and report on implementation



DC Environmental Education Consortium:
network of environmental community organizations

Whenever possible, pry open & leverage windows of opportunity

Accomplishments	Future Goals
<ul style="list-style-type: none">● Increased awareness of aligned initiatives (e.g., Career & Technical Education and workforce development)● Explored emerging projects to integrate environmental literacy (e.g., course collection, DC Futures program)● Collaborated on data visualization projects (e.g., outdoor Learning Online Tools)	<ul style="list-style-type: none">● Updating the Environmental Literacy Framework (i.e., standards alignment document)● Identifying communication channels to amplify efforts● Empowering new voices to serve in the role of convener



Discussion: VA & DC

Maryland Priorities and Policy Drivers

- [Environmental Literacy Standards & Graduation Requirement](#)
- [Environmental Literacy Framework](#)
- [Chesapeake Bay Watershed Agreement](#)
 - Education Working Group
- [Executive Order \(EO01.01.2024.15\)](#)
 - Outdoor Learning Partnership
- [Maryland Climate Solutions Now Act](#)
 - Maryland Commission on Climate Change
 - Education, Communication, & Outreach Working Group of MCCC
- Blueprint for Maryland's Future
- NOAA BWET & CBT Funding for Capacity Building (Networks) 2022
- Maryland Green Schools Act of 2019

Maryland Environmental Literacy Partners



Maryland Department of the Environment



Maryland Department of Agriculture



REGIONAL HUBS	COMMUNITY OF PRACTICE
Lower Eastern Shore	LatinX Community
Mid Shore	Higher Education
Central MD	
Southern MD	
Western MD	

Accomplishments

- Executive Order to Create OLP with increased participation and goals to continue env lit work and include climate education (April 2024)
- MELAN Regional Networks, Higher Education Networks, and supporting Latinx Network (BWET funded through 2025)
- Sustainable Schools Summit leading into MAEOE 40th Annual Conference building on CBP Sustainable Schools Forum Nov 2023
- Green Careers Guide (MD-DNR) 2023
- Higher Education Environmental Literacy Fellows

Future Goals

- Engage with School District Superintendents to develop stronger ELIT and Climate Education connections
- Increase Green Schools participation to 50%
- Continue to expand and strengthen regional networks and communities of practice
- Develop Sustainable Schools toolkit
- Support School District Elit and Climate literacy Plans
- Gen Thrive directory

Environmental Literacy Movement in Delaware

2010 - Governor Jack Markell established Delaware Children in Nature (DCiN) Taskforce

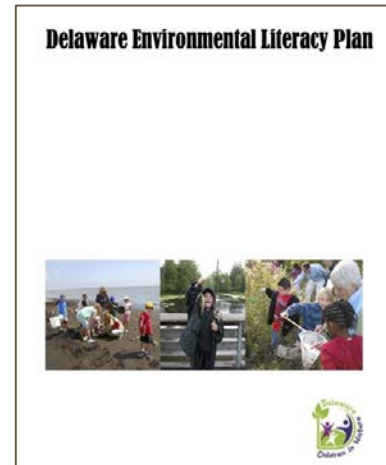
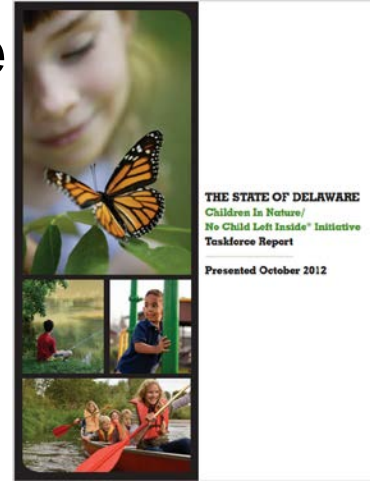
2012 - DCiN Taskforce Report released

2016 - DCiN Coalition completed and released first [Delaware Environmental Literacy Plan](#).

2019 - Delaware Children in Nature becomes Delaware Communities in Nature

- Management transferred from DE Dept. of Natural Resources and Environmental Control to the Delaware Association for Environmental Education (DAEE)

~**2021** - Delaware E-LitCiN Network initial meetings





Delaware



DELAWARE DEPARTMENT OF AGRICULTURE



Appoquinimink School District
THE WORLD IS OUR CAMPUS



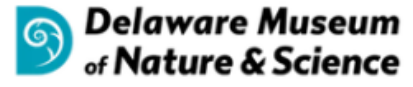
RED CLAY
CONSOLIDATED SCHOOL DISTRICT



Delaware Association for Environmental Education



FOR SCIENCE AND MATHEMATICS EDUCATION
"Encouraging excellence in science and math education"



Environmental Literacy Movement in Delaware

Activities	Accomplishments	Challenges
<ul style="list-style-type: none"> • 2021 B-WET - Building Capacity for MWEEs • 2022 B-WET - E-Lit in CTE • E-Lit Community of Practice • School District Environmental Literacy Planning template & School District Environmental Literacy Plans in (2) Districts • EE in Early Childhood Education - UD Lab School • Field program pilots in (3) DE School Districts • NFWF funding conservation & education initiatives in (2) DE School Districts • Teacher Professional Development • YES Conference 	<ul style="list-style-type: none"> • Administration level Environmental Education specialist positions in (2) DE School Districts • MWEE Educator Training Workshops • DE-focused Facilitators' Guide to MWEE Training • Delaware Outdoor Learning Spaces StoryMap • Environmental Literacy Competencies for CTE • Delaware Freshwater Wetlands Day 	<p>Capacity...</p> <p>School System Priorities & Curricular Rigidity</p>

Looking Ahead

Strengthening collaboration and coordination of Network participants in DE and the region

Expanding participation & engagement in our Network



Discussion: MD & DE



Vision: All Pennsylvanians are environmentally literate, prepared with the knowledge & skills to make informed decisions about complex environmental issues, & take actions that sustain a healthy environment for present & future generations.

Mission: To honor the diversity of Pennsylvania by cultivating a network of regional hubs to advance equitable, systemic, and meaningful environmental literacy & sustainability education for all.

Audience	Cumulative unique individuals reached during most recent BWET Grant (Jul 2022-Jun 2024)
K-12 In-service Educators	3177
Nonformal educators	1883
Other - School/District Administrators	717
Other - Pre-service Teachers	83
Other - Outreach Audiences	633

Our Environmental Literacy and Education work so far...

Our first grant project from 2017-2020

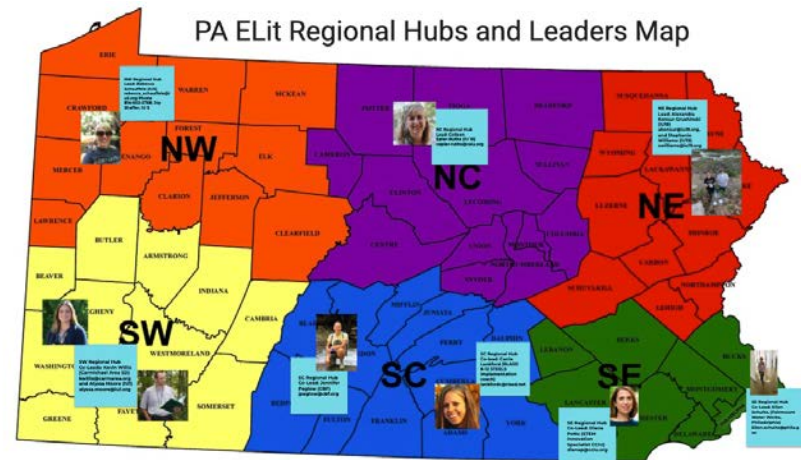
We cast a wide net & brought in the catch

Our second grant project from 2020-2022

We refined our objectives; advanced MWEE Awareness & PDs, expanded our stakeholder reach & integrated the IUs in statewide MWEE training & implementation

Our third grant project (we are in it!) 2022-2024

Establish 6 Regional Hubs in PA to be more responsive to localized context, diversify in all ways, foster engagement & drive momentum





Teacher Preparation - Higher Ed



DEPARTMENT OF EDUCATION



**SCIENCE, TECHNOLOGY & ENGINEERING, AND
ENVIRONMENTAL LITERACY & SUSTAINABILITY STANDARDS
(STEELS)**

K-12 Standards



project **WET**
WATER EDUCATION TODAY



Pennsylvania Department of Environmental Protection Environmental Education Grants Program

Since 1993, the most continuous source of EE funding in Pennsylvania. More than **\$14 million** has been awarded for **over 2,200 projects**.

Funds Pennsylvania environmental education projects that:

- 1) Address program priorities;
- 2) Provide meaningful opportunities to learn about environmental issues; and
- 3) Develop skills needed to make informed decisions and take responsible action on behalf of the environment.

Funding priority for projects that address **Water and/or Climate Change** and engage people living, working and/or going to school within **Environmental Justice** areas.

Non-formal and **Formal** Education Projects

Mini-Grants - Up to \$5,000

General Grants - Up to \$30,000

Up to \$65,000 may be awarded for projects that engage teachers and students from at least 60 counties at three levels: Local, State, and National

One Year Project Period: July 1 through June 30

Funds are provided on a **reimbursement** basis

LIVE EE Grants Program Webinar session is hosted **annually**

Questions?

Contact Kathleen Banski

kbanski@pa.gov



Pennsylvania
Department of Environmental Protection

Nurturing New York's EE Network

A sampling of relevant existing networks:

- [New York State Outdoor Education Association](#)
The NYS affiliate of NAAEE
- [The Climate and Resilience Education Task Force](#) A coalition of environmental institutions & Individuals working on climate change education. It is a project of the National Wildlife Federation in partnership with WE ACT for Environmental Justice
- [Connected Learning Ecosystems](#) supported by NASA



Support from Paleontological Research Institute (PRI)

- B-WET Grant with Prince George's County (MD) Public Schools: [A Watershed of Trees](#)
- [The Center for Climate Change Education at PRI](#)
- [The Teacher-Friendly Guide to Climate Change](#)
- Sharing resources and networking through our educator newsletter, [Learning Earth](#), and online programming like [Science in the Virtual Pub](#), online workshops. Including...



NOVEMBER 13, 2024 | 5:00 - 6:00PM EASTERN

An Introduction to the Center for Climate Change Education at PRI

With PRI's Climate Team



PALEONTOLOGICAL
RESEARCH INSTITUTION



Stroud Water Research Center

- Partners on PA & DE B-WET Statewide Capacity grants
- Provide student programming & professional development in multiple states — PA, DE, VA, NY
 - Lancaster Outdoor Learning Network Initiative (OLNI)
- International environmental education research
- Online & in-hand tools & curricula to support environmental literacy & education in formal & nonformal settings

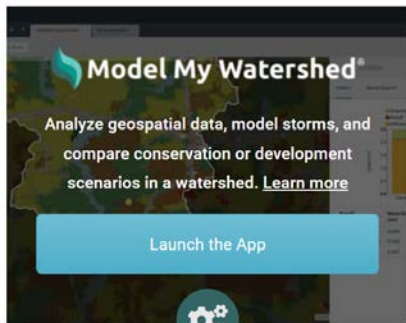
WATERS

Watershed Awareness using
Technology & Environmental
Research for Sustainability



WikiWatershed[®]

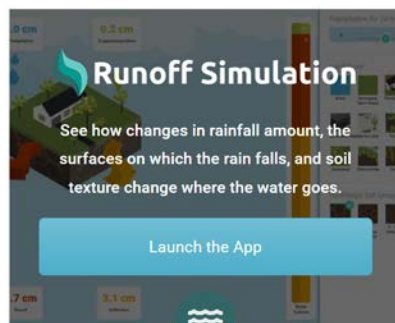

Online Toolkit of Resources



Model My Watershed[®]

Analyze geospatial data, model storms, and compare conservation or development scenarios in a watershed. [Learn more](#)

Launch the App



Runoff Simulation

See how changes in rainfall amount, the surfaces on which the rain falls, and soil texture change where the water goes.

Launch the App



Monitor My Watershed[®]

Discover and map monitoring data from multiple sources. Share and compare your monitoring data with the world. [Learn more](#)

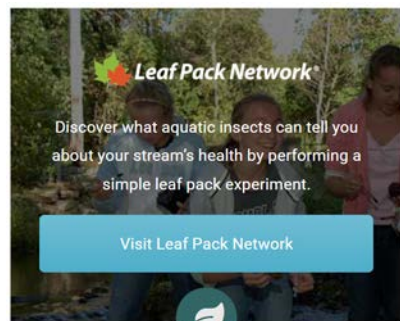
Launch the App



EnviroDIY

Join a community of do-it-yourself enthusiasts sharing open-source ideas for environmental science and monitoring.

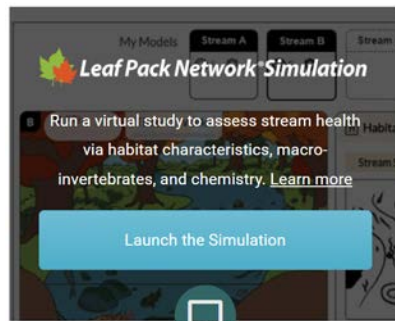

Visit EnviroDIY



Leaf Pack Network[®]

Discover what aquatic insects can tell you about your stream's health by performing a simple leaf pack experiment.

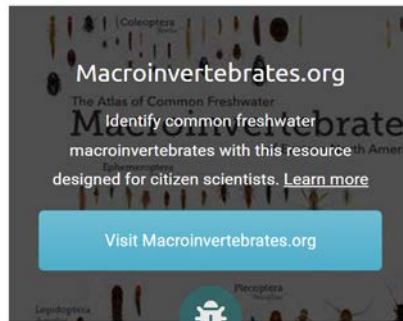

Visit Leaf Pack Network



Leaf Pack Network[®] Simulation

Run a virtual study to assess stream health via habitat characteristics, macroinvertebrates, and chemistry. [Learn more](#)

Launch the Simulation

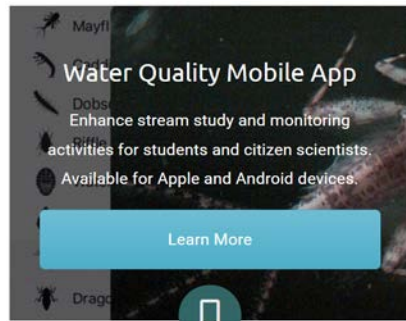



Macroinvertebrates.org

The Atlas of Common Freshwater Macroinvertebrates

Identify common freshwater macroinvertebrates with this resource designed for citizen scientists. [Learn more](#)


Visit Macroinvertebrates.org



Water Quality Mobile App

Enhance stream study and monitoring activities for students and citizen scientists. Available for Apple and Android devices.

Learn More



Visit <https://wikiwatershed.org/>



Discussion: PA & NY Wrap-up Q&A

Are You in the Chesapeake Bay Watershed?



**A number of the programs shared today are funded by
NOAA's Chesapeake Bay Watershed Education and
Training Program**



**To learn more about B-WET visit:
www.noaa.gov/office-education/bwet**