Integrating Environmental Literacy Into Career Pathways: A Delaware Case Study

Over the past 3 years, Advance CTE and the Delaware Department of Education, in partnership with the National Oceanic and Atmospheric Administration, worked to develop an Environmental Literacy Framework that connects to each statewide secondary career pathway. Supported by state environmental and economic imperatives, this framework provides common competencies and a set of resources that help local instructors link environmental concepts to their curriculum and instruction. This case study outlines the rationale behind the project, the process through which Delaware developed and validated this framework, and how other states could potentially replicate a similar model.

Overview

Delaware is at the forefront of integrating environmental literacy into middle grades and secondary Career Technical Education (CTE), recognizing CTE's critical role in workforce development and environmental sustainability. As the state faces growing environmental challenges—increasing temperatures, sea level rise, deforestation, heavier precipitation, and flooding—and related economic and labor market conditions change commensurately, the urgency to cultivate a climate-resilient workforce has never been greater.[1] In response to the growth in creation of green careers, the evolution of the workforce landscape, and a generation of purpose-driven learners increasingly aware of the environmental changes affecting their lives, Delaware has taken proactive steps to ensure that learners are prepared to be environmentally responsible in their future careers. Recognizing the urgency of equipping learners with the tools to implement sustainable practices across all career pathways, the state has positioned environmental literacy as a critical component of CTE.

Delaware first developed the following key statewide initiatives and enacted supporting legislation:

Environmental Literacy Plan: This framework defines the importance of meaningful outdoor experiences, underscores how these experiences cultivate an environmentally literate community, and sets clear goals for environmental literacy across various educational settings.

Climate Action Plan: This plan reinforces Delaware's long-term commitment to sustainability by setting goals to reduce greenhouse gas emissions across sectors and enhance resilience to climate-related challenges. A 2025 update is currently in development.

Delaware Climate Change Solutions Act of 2023 (House Bill 99): Enacted in August 2023, this act establishes statutory targets for greenhouse gas emissions reductions—a 50% reduction from a 2005 baseline by 2030 and net-zero emissions by 2050. The act mandates regular updates to the Climate Action Plan and appoints climate change officers in key cabinet-level departments to assist in its implementation.

Delaware Energy Solutions Act of 2024 (Senate Bill 265): Passed in 2024, this legislation supports the net-zero goals of House Bill 99 by facilitating offshore wind development as a significant component of Delaware's energy future. It delegates decision making authority regarding offshore wind to the State Energy Office and the Public Service Commission.

Building upon these efforts, the Delaware Department of Education (DDOE), in partnership with Advance CTE and supported by educators, workforce and state agency partners, and funding from the National Oceanic and Atmospheric Administration, developed a framework to embed environmental literacy into CTE pathways through the Delaware Pathways initiative. This collaboration was a direct response to the growing demand for green, blue, and clean jobs and Delaware's need for a workforce prepared to tackle environmental challenges.[2] Delaware believes all jobs can be green jobs and aims to fuel learner passion by equipping educators to make the connection between their subject area and the environment. Unlike traditional environmental education programs, this initiative directly connects environmental literacy to workforce development, ensuring that learners not only understand environmental issues but also develop the technical skills to address them.

While many states have implemented similar plans, Delaware is pioneering a comprehensive approach to preserve its natural resources and promote sustainability by integrating environmental literacy directly into CTE. The framework facilitates this effort by compiling pertinent resources to help CTE educators bridge the gap between environmental education and workforce preparation.

Developed in collaboration with industry leaders, educators, and policymakers, the Environmental Literacy Framework is a comprehensive tool that helps educators:

- promote interdisciplinary learning by integrating environmental education across all Delaware CTE pathways;
- showcase green careers and innovations by highlighting industries adopting sustainable practices and offering sustainability-friendly job opportunities; and
- connect learners to educational opportunities by creating career pathways for learners to engage with sustainability-focused education options.

The Environmental Literacy Framework built around seven common competencies (see page 5 for the full list) that are applicable to all statewide programs of study. For each Career Cluster® it includes an exploration of careers, news articles, curricular resources, and other materials that illustrate the green workforce in a given sector. Crosswalks between each program of study's knowledge and skills statements and the environmental literacy competencies and between the competencies and core academic standards were also developed.

Discussion Questions for Reflection

As other states begin to consider how environmental literacy could fit within their own CTE systems, the following reflection questions can help guide early conversations and planning efforts:

What are the most pressing environmental issues in your state (e.g., water quality, air pollution, deforestation, extreme weather), and how do these challenges intersect with education and workforce development?

How geographically positioned is your state e.g., coastal, inland, forested, agricultural), and how might those characteristics shape the types of environmental literacy your learners need?

What emerging green industries or environmentally focused job sectors are growing in your state or region, and how is your education system preparing learners to access those opportunities?

In what ways are current learners already engaging with environmental issues—through lived experiences, local activism, or community challenges—and how can that engagement be leveraged in classroom instruction?

How important is environmental literacy in light of your state's climate action goals, economic priorities, and workforce development strategies?

What systems or programs already exist (e.g., career pathways, work-based learning, advisory councils) that could support the integration of environmental literacy into CTE?

What barriers—such as lack of curriculum, training, or buy-in—would need to be addressed to implement environmental literacy across career pathways?

How can your state center learner voice in developing or refining environmental literacy initiatives?

Project Cycle

The integration of **environmental literacy in Delaware Pathways** was a multiphase effort. The DDOE and Advance CTE developed a structured approach that ensures that learners, educators, and industry groups are prepared to address growing workforce needs while mitigating environmental challenges in the state.

1. Developing Competencies (January-August 2023)

The foundation of this initiative was the creation of a set of competencies designed to help CTE learners apply environmental literacy within their chosen career fields. The competencies were developed using a meta-analysis of state environmental literacy plans; environmental education resources that connect learning to work; and grade-level science, geography, and other academic standards. The competencies went through multiple rounds of feedback from CTE directors, educators, and learners.

Finalized in late 2023, these competencies provide a framework for understanding environmental impacts, their connection to industry sectors, and the importance of sustainability-driven decision-making. As Delaware learners of all levels prepare for future careers, they will achieve environmental literacy by analyzing, evaluating, and predicting environmental impacts, actions, and outcomes and applying that understanding to the career paths they pursue. The competencies are designed to be incorporated throughout an entire program of study. They are specific enough to meet environmental and economic needs and broad enough to help learners in all career pathways develop a clear connection between their career of choice and interest and the environmental outcomes connected to that field.

Delaware's Environmental Literacy Competencies

To be environmentally literate in their chosen career pathway, a CTE learner will be able to:

1. Identify and explore career paths within a chosen industry that improve environmental outcomes for the economy, businesses, communities, and individuals.
2. Explain human-created local and/or global environmental disparities and impacts within a chosen industry and the results on economic, business, community, and individual health and wellness.

3. Demonstrate an understanding of interrelationships between and among components of environmental systems, e.g., atmosphere (air), hydrosphere (water), biosphere (living organisms), and geosphere (rocks and minerals).

4. Conduct a cost-benefit analysis with respect to a chosen industry to evaluate the environmental, social, and economic impact of business, community, and individual decisions.

5. Discern between rigorous environmental scientific research and speculative interpretations using data-driven information.

6. Identify and analyze environmental issues, policies, regulations, and legislation with respect to a chosen industry.

7. Propose new or updated policy, regulation, and/or legislation that supports environmental conservation, energy efficiency, environmental justice, and/or health and wellness in the workplace or community.

These competencies serve as the backbone for embedding environmental literacy across Delaware CTE pathways, ensuring that learners develop both environmental awareness and technical expertise applicable to their future careers.

2. Building the Framework (March 2024-May 2025)

With the competencies in place, the project team began development in January 2023 of a full Environmental Literacy Framework– a comprehensive resource for educators to seamlessly integrate environmental literacy into their curricula. The framework provides resources and links to green career opportunities across each of Delaware's Career Clusters, allowing learners to explore how they can pursue a more sustainable career in their chosen field.

For each Career Cluster, the framework includes the following:

- The seven environmental literacy competencies that are to be integrated into coursework.
- A curated list of green careers nationwide and postsecondary programs in Delaware that are specifically applicable to that sector.
- Alignment with each career pathway's knowledge and skills statements, Delaware's environmental literacy plan, and statewide academic standards.
- A list of resources to support educators in curriculum implementation.

Before addressing all Career Clusters, the project team focused on Agriculture, Food, and Natural Resources (AgriScience); Health Sciences; and Education career pathways in Phase 1 of the framework development. To ensure the effective integration of environmental literacy into CTE pathways, the DDOE and its partners solicited comprehensive feedback from educators. This feedback focused on the usability of environmental literacy resources, the clarity of the framework, the adaptability of teaching strategies, and the overall impact on learners' understanding of environmental issues and careers. Educators were also asked to identify challenges faced during implementation and to suggest additional resources or support needed for future integration efforts. During Phase 2, which started in September 2024, the project team expanded across the remaining 13 Career Clusters, with

research and content development led in collaboration with the University of Delaware. A range of audiences (e.g., secondary and postsecondary educators, employers, state agency partners, and community-based organizations) offered input on the framework. For a full list of participating organizations, see **Appendix A.**

3. Learner Engagement (April 2024-April 2025)

A central component of this initiative was ensuring that learners– those directly affected by the integration of environmental literacy into Delaware career pathways—had a voice in shaping the framework and implementation in classrooms. The project team actively sought input from learners across Delaware through multiple avenues, ensuring that their perspectives informed both the development and the implementation of the Environmental Literacy Framework.

Learner Surveys & Classroom Discussions

To capture authentic learner perspectives, the project team distributed surveys to learners enrolled in all Delaware CTE pathways. The survey assessed learners' understanding of environmental literacy, their interest in sustainability-related careers, and the perceived relevance of environmental literacy within their fields of study. Most learners expressed a desire to see more environmental and sustainability-focused content embedded in their coursework.

Additionally, listening sessions were facilitated with 11 learners, during which they had the opportunity to engage directly with educators and project leaders. These discussions allowed learners to express their thoughts on what sustainability means within their career pathways and how environmental literacy could be integrated in a meaningful and engaging way. They shared their experiences with an environmentally focused curriculum and the importance of incorporating environmental concepts into all aspects of CTE instruction.

Nine learners also participated in a statewide student champion group from April 2024 to April 2025, through which they helped codesign professional learning for educators and offered valuable insights about how to increase learner interest and center learner voice.

At the end of the process, the project team surveyed additional classes of learners to hear how implementation was continuing through classroom instruction.

Learner-Led Vision and Goals

As part of the engagement process, the environmental literacy student champions (ELSCs) were invited to articulate their own vision and goals for environmental literacy in CTE. Through facilitated workshops and monthly convenings, they developed the following guiding statements:

Vision Statement

"Our Vision is to empower educators through comprehensive training and elevate student voices in integrating environmental literacy into career and technical education pathways in Delaware. By fostering a mindset where sustainable development and environmental innovation are prioritized, we aim to cultivate conscientious citizens equipped to lead in creating a sustainable future."

Goals

1. The ELSC group will increase CTE educators' awareness of the need for environmental education in CTE by sharing their passion, goals, and stories with 15 educators by December 15, 2024.

2. ELSC membership will increase to 10 students by March 1, 2025.

The learners met their first goal by presenting to multiple groups of Delaware educators who were convened by the project team to review and provide feedback on the framework documents. During these sessions, ELSCs shared personal stories and expressed their passion for environmental literacy, highlighting its relevance in preparing them for their future career. Out of the nine ELSCs, seven were actively engaged—contributing to presentations, participating in group discussions, providing feedback on project materials, and taking part in public speaking opportunities such as the YES! Delaware Youth Environmental Summit. Looking ahead, ELSCs will continue to be involved in learner-centered structures and engagement opportunities.

Learner Voice in Action

Recognizing that learners are at the heart of CTE, the project team prioritized their voices in every phase of the work. This commitment was underscored by the team's attendance at the YES! Delaware Youth Environmental Summit in February 2025. The summit is a powerful, learner-led event that unites environmental advocates, educators, and community leaders from across the state. Attending this summit was crucial, as it aligned directly with the project's goal of centering learner perspectives in shaping sustainable career pathways. At the event, ELSCs Lani Carrera and Shrenik Patha exemplified this impact by participating in a learner-led panel, during which they shared their journey in environmental advocacy, illustrating how learner-led efforts can influence both community action and education. Their collective message—highlighting the transformative power of learner voices in advancing sustainability—reinforced the central role learners play in making environmental literacy both relevant and actionable within CTE programs.

Delaware's commitment to centering learners in this work was further exemplified through its Career Technical Student Organizations (CTSOs). ELSCs took the lead in designing and facilitating workshops at two of Delaware's CTSO state conferences. As CTSOs play a vital role in all Delaware CTE pathways, these learner-led workshops will serve as a model for future engagement between educators and learners.

4. Stakeholder Engagement (May 2023-April 2025)

Another crucial element of the initiative was the comprehensive engagement of stakeholders across multiple sectors, ensuring that the Environmental Literacy Framework is both relevant and practical.

Meetings and Workshops

Throughout the project, the team hosted meetings and workshops across Delaware, engaging more than 150 participants, including educators, business leaders, environmental organizations, and policymakers. These workshops provided an interactive platform for discussing the integration of environmental literacy in CTE and allowed key audiences to share insights on workforce demands in green industries.

Surveys and Feedback Forms

Secondary and postsecondary educators, school administrators, industry and state agency partners, and community members were surveyed to gauge the understanding and acceptance of environmental literacy. The responses provided data on current environmental literacy integration challenges and opportunities in different Career Clusters. Many survey participants supported the inclusion of environmental literacy competencies in career pathways, emphasizing the growing demand for sustainability education.

Focus Groups and Interviews

The project team conducted multiple focus groups with 10 local CTE directors and 13 CTE instructors. Additionally, 37 interviews were conducted with approximately 50 staff members from other agencies and organizations, including the Delaware Department of Natural Resources and Environmental Control, the Delaware Science Foundation, Wilmington Green Jobs, National Geographic, and Green Buildings United, among others.

Educator Engagement

To foster educator engagement, the project team collaborated with ELSCs and key external partners to deliver three training sessions across different school districts. These sessions explained the Environmental Literacy Framework and competencies while soliciting ongoing feedback on classroom implementation and educator resources.

5. Conducting a Pilot Program (March-May 2025)

The launch of the pilot program marked a significant step in translating the developed framework into actionable classroom practices. Designed to assess the practicality and impact of environmental literacy integration, the pilot was critical for refining resources, implementation strategies, and professional learning support before scaling statewide.

Conducted over 8 weeks in spring 2025, the pilot targeted educators and learners in three CTE program areas: AgriScience, Education, and Health Sciences. Participants received comprehensive resources—including Environmental Literacy Framework documents and crosswalk guidelines—to support integration into their existing coursework. Educators were compensated with a stipend upon completion, while learners and administrators who provided feedback through surveys received gift cards.

The purpose of the pilot was threefold: to determine how environmental literacy concepts could be effectively embedded into CTE lessons, to gather meaningful feedback from educators and learners on the clarity and relevance of provided materials, and to evaluate how the content influenced learners' understanding of environmental issues within their career fields. Classroom activities during the pilot included hands-on projects, group discussions, and career- focused sustainability assignments, such as analyzing waste management practices in Health Sciences or exploring regenerative agriculture in AgriScience.

Educators engaged in a structured implementation timeline, beginning with a planning period in late March followed by active curriculum integration in April and May. They also participated in midpoint check-ins and a final evaluation session. Throughout the pilot, the project team maintained regular communication and conducted classroom observations when possible.

Educators expressed appreciation for the environmental literacy resources, noting their practicality and ease of integration. Some shared that the crosswalks and indicators provided valuable guidance and fit naturally into their existing lesson plans. Others pointed out challenges specific to AgriScience, including the absence of a standard curriculum, which required educators to tailor lessons based on available resources. Despite the timing challenges—particularly the late arrival of the crosswalk documents during preset curriculum planning—educators found creative ways to incorporate environmental literacy materials retroactively. AgriScience educators suggested introducing environmental literacy resources during the Delaware Association of Agriculture Educators conference, a recommendation that underscores the importance of embedding environmental literacy into statewide professional networks.

"When I'm able to make connections to the environment, I can see additional impact for my career. I didn't think about it as much before, but I definitely do now." –12th grader, Animal Science

Feedback from learners was equally insightful. In the Teacher Academy program, learners reported a noticeable shift in how they perceived their future careers due to the integration of environmental literacy content. Warm-up activities, projects, and classroom discussions helped them draw real-world connections—particularly around local environmental concerns such as beach preservation and deforestation. Some learners shared how witnessing trees being cut down in their neighborhood deepened their understanding of environmental issues and inspired urgency around sustainability. In the Health Sciences program, learners reflected on the environmental impact of medical waste and mass production, presenting green nursing concepts in class presentations. Elsewhere, learners demonstrated environmental literacy comprehension and competency in the Materials Engineering Technology program through hands-on projects such as building robots for underwater trash collection and melting scraps into reusable materials. These activities not only made environmental literacy tangible but also linked directly to their career pathways. Across career pathways, both learners and educators expressed interest in additional resources and extracurricular opportunities—such as environmental clubs—to reinforce environmental literacy concepts. Collectively, their feedback highlighted the pilot's success in making sustainability both relevant and actionable across CTE disciplines.

"[Focusing on environmental concepts] really just brings it to the forefront of your mind. There's so many things I didn't think about before. I want to make sure my future students can learn about this stuff too." – 9th grader, Teacher Academy

Lessons Learned

The implementation of environmental literacy in Delaware career pathways provided valuable insights into learner engagement, educator participation, and the importance of cross-sector collaboration. As the project team navigated this process, opportunities and challenges arose, offering critical takeaways for future environmental literacy initiatives.

1. Secure Learner Interest and Engagement

One of the most promising outcomes of this initiative was the enthusiasm and awareness learners demonstrated regarding the connection to green careers and environmental literacy. Learners expressed interest in sustainability-focused career pathways, showing a concern for their community. Learners also demonstrated a foundational understanding of environmental issues and a strong

commitment to sustainability—an encouraging sign, as they represent the future of Delaware's workforce.

2. Diversify Learner Participation

While the initiative sparked enthusiasm among learners, broadening learner participation across multiple career pathways emerged as an opportunity for growth. Learners who initially engaged with the project demonstrated strong leadership qualities within their career pathways, as many were actively involved in their programs, self-motivated, and eager to share their ideas. Inspiring broader learner engagement requires identifying strategies that spark curiosity, build relevance, and connect environmental literacy to learners' lived experiences and career aspirations. This lesson learned highlights the importance of intentional outreach and peer-to-peer engagement strategies to expand environmental literacy-focused career exploration across a wider range of CTE programs.

3. Strengthen Implementation through Educator Engagement

Securing active engagement from key audiences—particularly educators—was a challenge. While educators recognized the importance of environmental literacy, many struggled to find the time to engage with the initiative due to competing responsibilities. This challenge underscores the realities of educator workload and time constraints, which often make participation in professional development sessions or framework codesign difficult. Many educators expressed interest in incorporating environmental literacy concepts into their teaching but cited limited capacity to take on new initiatives, particularly when not directly tied to mandated requirements. Despite the resources provided and support offered by the project team, widespread educator participation remained a challenge, emphasizing the importance of building flexibility, relevance, and sustained support into future professional learning and engagement strategies.

4. Fostering Cross-Sector Collaboration

Delaware's approach was greatly enhanced by strong state-level support and the availability of federal funding, which facilitated partnerships with industry leaders, policymakers, and educational institutions. This alignment across sectors created a shared vision and sense of urgency to equip learners to nurture Delaware natural resources, helping to accelerate decision making and streamline implementation. As funding phases out and the work transitions into broader implementation, ensuring that everyone with a stake in environmental education—from advocates and workforce leaders to learners and educators—has the opportunity to contribute will be critical. This collective approach not only strengthens the impact of environmental literacy work but also ensures that it reflects the diverse perspectives, needs, and contexts of learners and communities across Delaware.

5. Securing Funding for Sustainability

The availability of federal funding allowed the project team to invest in high-quality resources, stakeholder engagement, and pilot programming—elements that would have been difficult to achieve with limited state or local budgets. This foundational support enabled the initiative to move from concept to action more efficiently and with broader buy-in. However, as the project transitions beyond its pilot phase, Delaware must sustain and scale the work that has begun. This shift underscores the importance of securing a consistent and long-term funding stream to maintain momentum. Sustainable funding is essential not only for implementation but also for accountability, evaluation, and continuous improvement of the framework.

Implementation and Applicability

While Delaware's Environmental Literacy Framework is still in the early stages of implementation, the process so far has demonstrated that integrating environmental literacy into CTE pathways not only is possible but also holds real promise as a practical approach to preparing learners for sustainability-focused careers. Because CTE connects learners directly to industry practices and real-world applications, it offers a unique opportunity to embed environmental literacy in a way that is relevant to each learner's career interests.

Delaware's experience shows that even modest integration efforts can spark meaningful learner engagement and deepen their understanding of the environmental impact within their fields. By aligning environmental literacy with existing CTE programs, learners are able to connect big-picture environmental challenges to specific skills and practices in areas such as healthcare, agriculture, engineering, and education. For other states considering a similar path, Delaware's work offers one possible model and a hopeful signal that CTE can serve as a powerful driver for building a more environmentally literate and future-ready workforce. The following is a detailed outline of the key steps Delaware has taken to roll out and implement its Environmental Literacy Framework.

Delaware's Key Steps to Roll Out and Implement the Environmental Literacy Framework

Early Stage Implementation

1. Identify and connect with environmental champions. Delaware's most impactful progress came from partnerships with individuals and organizations that not only believed in the mission but also were positioned to influence others. Champions drove peer-to-peer learning, served as early adopters, and provided essential momentum for broader uptake.

2. Build awareness and capacity. Delaware learned that meaningful adoption occurs only when educators understand both the purpose and practical applications of environmental literacy. By investing in professional development, outreach materials, and awareness campaigns, Delaware empowered educators to lead this work with confidence.

3. Engage state-level leadership early. Because the DDOE led this effort, it was able to provide access to resources and authority to embed environmental literacy into formal education structures. State-level leadership increased the work's sustainability and scalability.

Intermediate Stage Implementation

4. Conduct a needs assessment. Before designing Delaware's environmental literacy competencies, the team conducted surveys and interviews to understand where environmental literacy was already being addressed and where gaps remained. This assessment ensured that the framework responded to local realities rather than importing a one-size-fits-all model.

5. Incentivize participation. Delaware provided stipends and resources to participating educators, which helped secure engagement and feedback during the pilot process. Offering compensation, recognition, or professional growth opportunities fosters meaningful involvement and signals institutional commitment.

6. Center learner voice. Learners co-led professional development, shaped messaging, and shared their lived experiences to inspire educators. Their involvement grounded the work in real needs and aspirations, helping shift environmental literacy from abstract ideas to authentic practice. Learners also developed a vision and belief statement that now guide the initiative.

Advanced Stage Implementation

7. Integrate environmental literacy into existing curricula. Instead of creating new standalone courses, Delaware embedded competencies into its preexisting career programs. This strategy increased relevance for learners and reduced the lift for educators. States should map environmental literacy with their own career clusters to find natural alignment.

8. Monitor and evaluate outcomes. Delaware collected both quantitative data (such as survey responses and participation rates) and qualitative input (through focus groups and interviews). This feedback loop allowed the team to adjust strategies and demonstrate value to stakeholders. Other states can use similar evaluation models to guide continuous improvement.

Next Steps and Future Work

Increasing Further CTE Buy-In

One of the key next steps is deepening buy-in among CTE stakeholders statewide. While the pilot demonstrated that environmental literacy can be integrated into existing career pathways without being burdensome, broader engagement is essential to scale this initiative. Delaware aims to strengthen current partnerships and identify additional environmental literacy leaders who can serve as peer advocates and demonstrate the real-world impact of this work. Continued messaging that emphasizes environmental literacy as a value-add to existing instruction—not an additional requirement—will be central to increasing enthusiasm and adoption. Building trust by improving communications, sharing success stories, and involving educators and learners in future resource development is anticipated to help grow internal momentum.

Rolling Out Statewide and Building Awareness

Delaware is preparing for broader integration of the framework in the 2025-26 school year. This expansion provides a strategic opportunity to formally embed environmental literacy competencies into state-approved curricula and instructional standards. To support this effort, the state is looking to develop additional resources and toolkits for educators across Delaware. Educators will have access to resources, including lesson plans, assessment strategies, and interdisciplinary collaboration, that have been updated based on their initial feedback. A coordinated communication campaign, including presentations and updates through professional networks, will further build awareness and capacity for long-term implementation.

Strengthening Partnerships

A key priority is reengaging environmental education advocates, nonprofit organizations, and local industry leaders who bring vital expertise and real-world relevance to the initiative. The goal is to strengthen connections that support authentic learning experiences for learners, such as project-based learning, fieldwork, and internships that bridge the gap between classroom learning and

community-based environmental action. Partnerships will also play a pivotal role in scaling the initiative to new districts, informing continuous improvement, and identifying career-aligned opportunities in the green economy.

With initial grant funding concluding, Delaware is actively seeking additional funding sources and exploring policy avenues to integrate the Environmental Literacy Framework into the state's official program of study revision and approval process, a critical step toward embedding environmental literacy competencies across all Delaware career pathways. By aligning this framework with the formal mechanisms that govern CTE curriculum design and approval, the state seeks to institutionalize environmental literacy as a core component of workforce preparation, ensuring the initiative's sustainability beyond initial pilot efforts.

Delaware's work is already influencing national conversations around the integration of environmental literacy in CTE. Through its collaborative approach—engaging learners, educators, industry leaders, and policymakers—the state is demonstrating how environmental education can be meaningfully embedded in technical instruction to support both economic and ecological resilience. These insights will inform broader efforts led by Advance CTE and other partners to scale and adapt similar frameworks across the country, positioning Delaware as a leader in aligning environmental literacy with future-ready green/blue/clean career pathways.

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Related Resources

Additional environmental literacy State Standards and Examples

Ranking State Standards on Climate Change (National Center for Science Education and the Texas Freedom Network Education Fund, 2020)

State Standards (K12 Climate Action, The Aspen Institute)

New Jersey Climate Change Education Resources (Department of Education, 2024)

Wisconsin Standards for Environmental Literacy & Sustainability (Wisconsin Department of Public Instruction, 2018)

Other Connected Resources

Leading the Way to Environmental Literacy and Quality: National Guidelines for Environmental Education (Edward J. McCrea, Environmental Education and Training Partnership)

Developing a Framework for Assessing Environmental Literacy (North American Association for Environmental Education, 2011)

Mapping the Landscape of K-12 Climate Change Education Policy in the United States (North American Association for Environmental Education, 2022)

To Build a Pipeline of Workers for the Economy of the Future, High School Students Need CTE Training in Green Jobs. Federal Funding Can Help (Rachel Rosen, The 74, 2022)

Career and Technical Education for Sustainability: A Multiple Case Study of Innovative Community College Programs (James A. Gregson and Karen Ruppel, Journal of Research in Technical Careers, 2017)

APPENDIX A: Participating Organizations

Community Partners

- Boys & Girls Clubs
- Delaware Nature Society
- Healthy Food for Healthy Kids
- Kingswood Community Center
- Plastic Free Delaware
- Teen Warehouse
- West End Neighborhood House

Employers

- Bloom Energy
- Delaware Restaurant Foundation
- Green Buildings United
- Marine Education, Research and Rehabilitation Institute
- New Ecology
- SoDel
- Wilmington Green Jobs

Secondary Education

- Brandywine School District
- Cape Henlopen High School
- Capital School District
- Delmar School District
- Dover High School
- Odyssey Charter School

Postsecondary Education

- Delaware State University
- Delaware Tech Community College
- University of Delaware Center for Geographic Education
- University of Delaware Water Resource Center
- Wilmington University

State Agencies

- City of Wilmington
- Delaware Department of Technology and Information
- Delaware Division of Historical and Cultural Affairs
- Delaware Natural Resources and Environmental Control
- Delaware Sea Grant
- Delaware Solid Waste Authority
- Delaware State Parks

Others

- Delaware Association for Environmental Education
- Delaware Science Foundation
- National Geographic

[1] Delaware Pathways. (n.d.). *What is environmental literacy?* https://delawarepathways.org/environmental-literacy/

[2] Hinderliter, D. (2023, March 16). *Building environmental literacy in CTE: A new partnership in response to current and future economic needs.* Advance CTE. https://careertech.org/blog/building-environmental-literacy-in-cte-a-new-partnership-in-response-to-current-and-future-economic-needs/