

EXPANDING ENVIRONMENTAL LITERACY

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WHY IT MATTERS

Virginia's environmental challenges—from flooding and sea-level rise to water quality protection and land conservation—demand a generation of students prepared to understand, address, and adapt to complex environmental issues and strengthen the Commonwealth's natural resources and communities. Environmental literacy helps build this capacity by connecting classroom learning to real-world environmental issues and local solutions.

Environmental literacy provides an effective framework for helping students master Virginia Standards of Learning in science, history, mathematics, and English.¹ Through hands-on investigations and place-based learning, students apply classroom concepts to real-world challenges, strengthening content knowledge while increasing engagement and retention.

High-quality environmental education also helps students build durable workforce skills that are increasingly valuable across industries. Research shows that environmental education strengthens critical thinking, collaboration, communication, and problem-solving abilities.² Students who participate in outdoor and place-based learning experiences are often more engaged in school and better prepared to apply scientific concepts in practical settings.

Virginia's growing demand for workers in clean energy, environmental engineering, sustainable agriculture, water resource management, and resilient infrastructure creates new opportunities for students. Environmental literacy helps build foundational knowledge and transferable skills that prepare students for both traditional natural resource careers and emerging green economy jobs. Employers increasingly seek workers who can adapt to environmental changes, understand sustainability practices, and solve complex challenges collaboratively.³

Research increasingly demonstrates that time spent outdoors supports student mental health, reduces stress, improves attention, and strengthens social-emotional skills.⁴ Environmental education helps students develop resilience, confidence, and a sense of connection to their communities while providing opportunities for physical activity and positive outdoor experiences.⁵

Environmental literacy also helps foster stewardship of waterways, forests, parks, and working lands. Students who participate in hands-on environmental learning are more likely to become informed citizens who understand the value of protecting local natu-

ral resources and supporting resilient communities.⁶ Expanding access to environmental literacy opportunities ensures that students across the Commonwealth—regardless of geography or income—can benefit from these experiences and contribute to the environmental and economic future.

CURRENT LANDSCAPE

Environmental literacy is advanced primarily through Virginia's Standards of Learning (SOLs) and strengthened by community-based partnerships. The **Virginia Department of Education** mandates that environmental education be included in science instruction and encourages interdisciplinary approaches.⁷ Programs like **Virginia Naturally** and the proposed **Environmental Education K-12 Literacy Strategic Plan** promote **Meaningful Watershed Educational Experiences (MWEEs)**—hands-on, outdoor learning opportunities that build real-world knowledge and skills.

MWEEs help students connect scientific concepts to local environmental issues while building critical thinking and civic engagement skills. Under the **Chesapeake Bay Watershed Agreement**, Virginia has committed to ensuring students have access to multiple MWEEs during their K-12 education.⁸

Despite this progress, access to environmental literacy programming remains inequitable. Many school divisions—particularly in rural and under-resourced communities—face barriers such as limited funding, transportation costs, and insufficient staff capacity.⁹ State funding is currently limited to the Chesapeake Bay watershed,¹⁰ leaving many schools across the Commonwealth without access to grant opportunities. These challenges restrict consistent access to outdoor and place-based learning experiences.

Additionally, state funding has not kept pace with demand. The Virginia Department of Conservation and Recreation's **Virginia Watershed Education Program** Fund expects to award about \$250,000 statewide for the 2026–2027 school year, despite receiving more than \$1 million in funding requests in 2025.¹¹

Federal funding reductions are also creating challenges. Between 2020 and 2025, Virginia organizations received more than \$4.8 million through **National Oceanic and Atmospheric Administration (NOAA)**'s **Bay Watershed Education and Training** program to support teacher training, MWEEs, and school-community partnerships.¹² As federal support declines, sustaining environmental literacy efforts will increasingly depend on state investment.

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OPPORTUNITIES

In 2024, only 22% of school divisions reported being prepared to implement high-quality environmental education.¹³ One intended outcome of the Chesapeake Bay Watershed Agreement was that all states and school divisions across the watershed would develop and implement Environmental Literacy Plans to ensure environmental education is systematically integrated into K–12 instruction, supported by teacher training, outdoor learning experiences, and sustained coordination across agencies and partners.¹⁴ An important opportunity exists to support school divisions in developing these plans, providing a roadmap for expanding environmental education and outdoor learning. These locally developed plans help divisions assess existing programs, identify gaps in access, establish goals, and coordinate efforts across schools and community partners.

Environmental Literacy Plans also serve as a framework for integrating environmental literacy into instruction aligned with Standards of Learning, expanding professional development for educators, increasing equitable access to outdoor learning experiences, and strengthening partnerships with parks, nonprofits, higher education institutions, and businesses. They also help school divisions identify infrastructure and resource needs, such as transportation, schoolyard learning spaces, curriculum materials, and evaluation tools.

Strengthening partnerships among schools, environmental organizations, state agencies, businesses, and higher education institutions connects students with local expertise and real-world applications. These collaborations also increase awareness of career pathways in fields such as conservation, renewable energy, sustainable agriculture, environmental engineering, and water resource management, helping prepare Virginia's future workforce.

TOP TAKEAWAYS

Environmental literacy prepares students to succeed in school, thrive in a changing workforce, and contribute to resilient communities and healthy natural resources.

Virginia has a strong foundation of environmental education programs and partnerships, but access and implementation remain inconsistent across school divisions, resulting in unequal opportunities for students.

Supporting school divisions with the planning, resources, and partnerships needed to develop Environmental Literacy Plans can create a coordinated framework for expanding high-quality environmental education across Virginia.

ENDNOTES

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