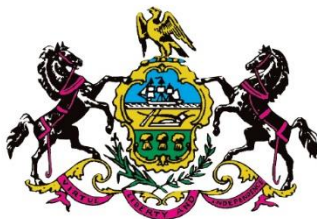


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Senate of Pennsylvania

July 2, 2021

State Board of Education
333 Market Street, 1st Floor,
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To the Pennsylvania Board of Education:

The world is facing complex environmental challenges. Pennsylvania is no different. Our public health, infrastructure, and economy are reliant on an environmentally literate workforce that can navigate these issues now and in the future.

Environmental issues, while often rooted in science, impact all our systems and are inherently cross-disciplinary. When ecological systems are disrupted, we see increases in extreme weather, pollution, and invasive species that destroy natural resources and agricultural crops. Environmental stress in our food, water, and energy systems impacts public health, infrastructure, and results in significant economic loss for Pennsylvanians.

All Pennsylvanians are impacted by environmental issues. Therefore, we should be prepared to be resilient and thrive in the face of these complex challenges. To do so will require a strong foundation in complex environmental concepts and the skills to analyze, problem solve, and communicate solutions. Students need to understand the role that humans play in the environment and how to advocate for sound environmental decisions in their communities, workplaces, and schools.

As stated in the Environmental Education Act of 1993; "The Department of Education has primary responsibility for formal environmental education within this Commonwealth's schools. A quality education should provide each student with knowledge of natural and human resources, an understanding of geographic environments, knowledge of the interrelationships and interdependence of natural and human systems, the development of environmental problem solving and management skills and knowledge of and appropriate uses of energy."

While we are pleased the proposed standards include increased focus on critical skills like investigation, systems and design thinking, our concern is the lack of complex content explicitly required, especially at the secondary level (grades 6-12). Attached is a list of concepts that no longer exist in the new standards. While there is a mention of systems focus in the environmental standards, it is critical that concepts like watersheds, agriculture, environmental policy and law, and human connections are provided for, for every student in Pennsylvania. We are concerned that if these foundational environmental concepts are not explicitly required in public schools, it will be nearly impossible to ensure all students in the Commonwealth have equitable access to build their own environmental literacy.



We urge the board to provide your committees with additional time to revise the proposed secondary education standards (grade 6-12) and add an environmental domain similar to physical science, life sciences and earth systems sciences. Additionally, we hope the board will review and include agriculture concepts and content at the secondary level. This should include complex content related to environmental systems, the impact on humans and the intersection with content areas like English (ELA), civics, and math.

As a leader in environmental issues in Pennsylvania, I know that comprehensive environmental education (EE) is more critical than ever. I believe Pennsylvania must ensure that all students graduate high school as environmentally literate individuals. Environmentally literate populations successfully navigate the STEM challenges that environmental issues create while addressing their social and economic impacts

The following list from the 2002 Standards was identified as having limited or no connection(s) to the recently proposed standards:

1. Watersheds and Wetlands – Cycles, Role of Watersheds, Physical Factors, Characteristics and Functions of Wetlands, Impacts of Watersheds and Wetlands
2. Renewable and Nonrenewable Resources – Uses, Influential Factors
3. Environmental Health – Biological Diversity
4. Agriculture and Society – Society Needs, Agriculture Science, Agriculture Systems, Technology
5. Integrated Pest Management – Effects Benefits and Impacts, Health Risks, Management Practices
6. Ecosystems and their Interactions – Change Over Time
7. Threatened, Endangered, and Extinct Species – Management Strategies
8. Humans and the Environment – Society Needs, Sustainability, Supply and Demand
9. Environmental Laws and Regulations – Environmental Laws and their Impacts

Additionally, the recently proposed standards do not address the following North America Association for Environmental Education (NAAEE) Guidelines:

1. Human Systems – Individuals Groups and Societies, Culture, Political Systems, Economic Systems
2. Decision-Making and Action Skills – Forming and Evaluating Personal Views, Evaluating Need for Action, Planning and Taking Action, Evaluating Results of Action
3. Personal and Civic Responsibility – Recognizing Rights and Responsibilities, Recognizing Efficacy and Developing Agency, Accepting Personal Responsibility

Respectfully submitted,

Sincerely,



Amanda M. Cappelletti, State Senator
17th Senatorial District