



The Climate Reality Project[®]

PENNSYLVANIA CHAPTERS COALITION

July 2, 2021

Karen Molchanow, Executive Director
Pennsylvania State Board of Education

Good morning,

As an expansive network of Climate Reality Leaders throughout the state of Pennsylvania, we would like to thank you for the opportunity to provide input during the process of revising the Pennsylvania Science, Technology, and Environment and Ecology standards.

We agree with our colleagues across the state who have expressed concerns about the proposed Integrated Standards for Science, Environment and Ecology and how it will impact current and future students in our state. The new proposed standards at the secondary level do not explicitly include Environment, Ecology and Agriculture as performance expectations. These were previously independent state standards that teachers were required to cover. The proposed integrated standards for grades 6-12 must include Environment, Ecology, and Agriculture as a separate, fifth domain. Furthermore, watershed and wetlands, agriculture and society, and integrated pest management should be addressed through individual performance expectations.

In addition to these concerns, "**climate change**" does not appear in the elementary standards and only once in the secondary standards document. In that document, "**climate change**" is included in the following Performance Expectation under the Earth and Space domain under the Weather and Climate core idea: *"Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems."* While we applaud this inclusion, this solitary reference does not capture the vast and interdisciplinary nature and impact of climate change. Within the Earth and

Space domain alone, it is important for all of our students across grade levels to learn about, consider, and critically engage in an exploration of human-caused climate change within, at minimum, the following core ideas: *History of Earth*, *Earth's Systems*, and *Human Sustainability*. It is equally critical for our students to employ engineering processes in order to understand these issues more deeply while seeking to design engineering solutions to this “complex, real-world problem.”

As we expand our understanding of climate change, it has become increasingly clear that its impacts are far-reaching and touch virtually all science disciplines. We therefore recommend that climate change be added as Performance Expectations within the following Core Ideas: Chemical Reactions, Energy, Waves and Electromagnetic Radiation, Matter and Energy in Organisms and Ecosystems, and Interdependent Relationships in Ecosystems.

We appreciate Pennsylvania’s stated vision which includes your aim “*to establish an equitable and innovative culture so every student can be included in science, engineering, technology, environment and ecology education.*” We also agree with and commend your commitment to conveying an interdisciplinary approach to science education as evidenced by the statement, “*Science, environment, ecology, technology and engineering can be explored through an integrated and active learning process.*” We understand the importance of students being able to “see themselves” in the curriculum and assert that infusing climate change throughout all disciplines will help to build relevance and increase accessibility while emphasizing its interdisciplinary nature.

Finally, we also advocate for the inclusion of climate change as a social justice issue. We understand that climate change does not impact all communities evenly, often disproportionately affecting poor communities of color. Framing this uneven impact as “environmental justice” will help to highlight your commitment to equity and inclusion.

Please ensure that climate change is addressed throughout our students’ learning and practice of science in a comprehensive and meaningful way. We are all stewards of this beautiful planet and have a deep responsibility to the generations that will follow. In order for our children to thrive for generations to come, they need to understand the challenges they will face and be empowered with tools to contribute to the solutions that can fulfill the promise of a thriving planet.

Thank you for supporting meaningful learning for all students across this great Commonwealth.

In solidarity,

The Climate Reality Project: Pennsylvania Chapters Coalition

The Climate Reality Project: Philadelphia and Southeastern PA Chapter

The Climate Reality Project: Lehigh Valley, PA Chapter

The Climate Reality Project: Susquehanna Valley, PA Chapter

The Climate Reality Project: Pittsburgh and Southwestern PA Chapter

The Climate Reality Project is a non-partisan group that advocates for action on the climate crisis. The Climate Reality Project: Pennsylvania Chapters Coalition represents over 1000 members residing across the state. <http://www.climaterealityproject.org>