Grades 6–8

3.4.6-8.D Environmental Literacy and Sustainability: Environmental Literacy Skills

Students who demonstrate understanding can *gather, read, and synthesize information from multiple sources to investigate how Pennsylvania environmental issues affect Pennsylvania's human and natural systems.*

Clarifying Statement: Examples could include sediment and nutrient loads in Pennsylvania waterways, indoor and outdoor air quality, urban heat islands, and so on.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 6–8 builds on K–5 experiences and progresses to evaluating the merit and validity of ideas and methods. • Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence.	**Human Impacts on Earth Systems** • Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth's environments can have different impacts (negative and positive) for different living things. **Ecosystem Dynamics, Functioning, and Resilience** • Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations.	**Cause and Effect** • Cause and effect relationships may be used to predict phenomena in natural or designed systems. **Stability and Change** • Small changes in one part of a system might cause large changes in another part.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to Pennsylvania-specific laws, policies, regulations, and agreements such as the Pennsylvania Environmental Plan, Pennsylvania Environmental Rights Amendment, and Chesapeake Bay Agreement; and Pennsylvania agencies and departments such as the Department of Environmental Protection, Department of Conservation and Natural Resources, Bureau of Forestry, Commission for Agricultural Education, Fish and Boat Commission, and Game Commission.

PA Career Ready Skills: Distinguish among various social contexts and how they impact personal feelings.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.04.01.02.a: Read and interpret the definition of sustainability and summarize how it relates to AFNR activities.
Science, Environmental Literacy and Sustainability (NAAEE)	5-8 Strand 1.C. Collecting information: Learners locate and collect quantitative and qualitative information about the environment and environmental topics, using a range of methods and sources. They explain why they used selected information collection methods. 5-8 Strand 2.1.B. Earth's living systems: Learners identify basic similarities and differences among a wide variety of living organisms. They explain ways that living organisms, including humans, affect the environment in which they live, and how their environment affects them.
PA Core Standards: ELA	CC.3.5.6-8.I: Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively.
PA Standards: Social Studies	7.4.6.B: Describe and explain the effects of people on the physical systems within regions.
Educational Technology (ISTE)	1.3. Knowledge Constructor: Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.
Technology and Engineering (ITEEA)	STEL-3E: Analyze how different technological systems often interact with economic, environmental, and social systems.