



Grades 6–8

3.4.6-8.G Environmental Literacy and Sustainability: Sustainability and Stewardship

Students who demonstrate understanding can *obtain and communicate information to describe how best resource management practices and environmental laws are designed to achieve environmental sustainability.*

Clarifying Statement: Emphasis is on the intended outcomes of best management practices (e.g., stormwater, forest, land use, wildlife, and waste management) and environmental laws (i.e., international, federal, state, and local jurisdictions).

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 and progresses to evaluating the merit and validity of ideas and methods. <ul style="list-style-type: none"> 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 now supported by evidence. 	Human Impacts on Earth Systems <ul style="list-style-type: none"> 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. Developing Possible Solutions <ul style="list-style-type: none"> There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. 	Cause and Effect <ul style="list-style-type: none"> Cause and effect relationships may be used to predict phenomena in natural or designed systems. Stability and Change <ul style="list-style-type: none"> 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: Identify conflict resolution skills to deescalate, diffuse, and resolve differences.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.04.01.02.c: Evaluate sustainability policies and plans and prepare summary of potential improvements for AFNR businesses or organizations.



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Science, Environmental Literacy and Sustainability (NAEE)	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 3.2.C. Planning and taking action: Learners use their research results to develop action strategies and design solutions at levels consistent with their maturity and preparation. As appropriate, they implement their plans.
PA Core Standards: ELA	CC.3.6.6-8.E: Use technology, including the internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently. CC.3.6.6-8.H: Draw evidence from informational texts to support analysis reflection, and research.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. CC.2.4.6.B.1: Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions. CC.2.4.7.B.1: Draw inferences about populations based on random sampling concepts. association can be seen in bivariate data utilizing frequencies.
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-3G: Explain how knowledge gained from other content areas affects the development of technological products and systems.