



Grades 6–8

3.4.6-8.B Environmental Literacy and Sustainability: Agricultural and Environmental Systems and Resources

Students who demonstrate understanding can *analyze and interpret data about how different societies (economic and social systems) and cultures use and manage natural resources differently.*

Clarifying Statement: Emphasis is on comparing and contrasting data from two or more societies and cultures to draw evidence-based conclusions. Examples could include how different societies and cultures manage agriculture, recycling and waste management, fossil fuels, land development, and so on.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Analyzing and Interpreting Data Analyzing data in 6–8 builds on K–5 and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis. <ul style="list-style-type: none"> Analyze and interpret data to determine similarities and differences in findings. 	Natural Resources <ul style="list-style-type: none"> Humans depend on Earth’s land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes. 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. 	Cause and Effect <ul style="list-style-type: none"> Cause and effect relationships may be used to predict phenomena in natural or designed systems.

Pennsylvania Context: N/A

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.04.02.01.b: Analyze natural resources trends and technologies and explain how they impact AFNR systems (e.g., climate change, green technologies, water resources, etc.).



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Science, Environmental Literacy and Sustainability (NAAEE)	5-8 Strand 2.2.B. Culture: Learners describe examples of the interconnection between cultural perspectives and the environment.
PA Core Standards: ELA	CC.3.6.6-8.F: Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
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)	1.7. Global Collaborator: Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.
Technology and Engineering (ITEEA)	STEL-3E: Analyze how different technological systems often interact with economic, environmental, and social systems.