Grades 3–5

3.4.3-5.D Environmental Literacy and Sustainability: Environmental Literacy

Students who demonstrate understanding can *develop a model to demonstrate how local environmental issues are connected to larger local environment and human systems.*

Clarifying Statement: Examples include watersheds, food webs, human food systems, and life cycles. Emphasis is on investigating local environments and understanding how they connect to larger regional, national, and global systems.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions. • Use and/or develop models to describe phenomena.	**Human Impacts on Earth Systems** • Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. **Biodiversity and Humans** • Populations live in a variety of habitats, and change in those habitats affects the organisms living there.	**Systems and System Models** • A system can be described in terms of its components and their interactions. **Cause and Effect** • Cause and effect relationships are routinely identified and used to explain change.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to Pennsylvania's natural environment, waterways, watersheds, natural ecosystems and changes (natural and human-caused), and natural disasters such as flooding, tornadoes, hurricanes, fires, and droughts.

PA Career Ready Skills: Identify possible behaviors and anticipate reactions in response to a specific social context.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.06.02.02.b: Analyze the connections and relationships impacted when there is a change in an AFNR system on a national and global level.
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 3.1.B. Sorting out the consequences of issues: Learners use their knowledge of how ecological and human systems are interconnected to describe the environmental, social, and economic consequences of local environmental issues.

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	CC.1.4.3.U: With guidance and support, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others. CC.1.4.4-5.U: With some guidance and support, use technology, including the internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting. CC.1.4.3.V: Conduct short research projects that build knowledge about a topic. CC.1.4.4.V: Conduct short research projects that build knowledge through investigation of different aspects of a topic. CC.1.4.5.V: Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.4.3.A.4: Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. CC.2.4.4.A.4: Represent and interpret data involving fractions using information provided in a line plot.
PA Standards: Social Studies	7.2.3.B: Identify the basic physical processes that affect the physical characteristics of places and regions.
Educational Technology (ISTE)	1.6. Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
Technology and Engineering (ITEEA)	STEL-2F: Describe how a subsystem is a system that operates as part of another, larger system.