Grade 3

3.1.3.H Life Science: Biological Evolution: Unity and Diversity

Students who demonstrate understanding can *make a claim supported by evidence about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.*

Clarifying Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.

Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Engaging in Argument From Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). • Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem.	**Ecosystem Dynamics, Functioning, and Resilience** • When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. **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. ***Connections to Engineering, Technology, and Applications of Science*** **Interdependence of Engineering, Technology, and Science on Society and the Natural World** • Knowledge of relevant scientific concepts and research findings is important in engineering.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to the impact of invasive species on Pennsylvania's environment, including spotted lanternflies, snakehead fish, phragmites, ailanthus trees (tree of heaven), ticks, crown vetch, and stink bugs.

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.01.02.02.a: Compare and contrast AFNR systems before and after the integration of technology.
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 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.

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	CC.1.2.3.C: Explain how a series of events, concepts, or steps in a procedure is connected within a text, using language that pertains to time, sequence, and cause/effect. CC.1.4.3.A: Write informative/explanatory texts to examine a topic and convey ideas and information clearly. CC.1.4.3.W: Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. CC.1.5.3.D: Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly with adequate volume, appropriate pacing, and clear pronunciation.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.5: Use appropriate tools strategically. CC.2.4.3.A.4: Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.
PA Standards: Social Studies	7.4.3.B: Identify the effect of people on the physical systems within a community.
Educational Technology (ISTE)	1.4. Innovative Designer: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
Technology and Engineering (ITEEA)	STEL-7M: Evaluate the strengths and weaknesses of existing design solutions, including their own solutions.