



Grades 6–8

3.1.6-8.P Life Science: Natural Selection and Adaptations

Students who demonstrate understanding can *apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.*

Clarifying Statement: Emphasis is on explanations of the evolutionary relationships among organisms in terms of similarity or differences of the gross appearance of anatomical structures.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories. <ul style="list-style-type: none"> Apply scientific ideas to construct an explanation for real-world phenomena, examples, or events. 	Evidence of Common Ancestry and Diversity <ul style="list-style-type: none"> Anatomical similarities and differences between various organisms living today and between them and organisms in the fossil record, enable the reconstruction of evolutionary history and the inference of lines of evolutionary descent. 	Patterns <ul style="list-style-type: none"> Patterns can be used to identify cause and effect relationships. <hr/> Connections to Nature of Science Scientific Knowledge Assumes an Order and Consistency in Natural Systems <ul style="list-style-type: none"> Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation.

Pennsylvania Context: Examples of Pennsylvania context include Pennsylvania's local fossil evidence.

PA Career Ready Skills: Explain how empathy and perspective taking foster relationship building.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.02.02.01.a: Identify and summarize the components within AFNR systems (e.g., Animal Systems: health, nutrition, genetics, etc.; Natural Resources Systems: soil, water, etc.).
Science, Environmental Literacy and Sustainability (NAEE)	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.



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	<p>CC.3.5.6-8.A: Cite specific textual evidence to support analysis of science and technical texts.</p> <p>CC.3.6.6-8.B: Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.</p> <p>CC.3.6.6-8.H: Draw evidence from informational texts to support analysis reflection, and research.</p> <p>CC.1.5.8.A: Engage effectively in a range of collaborative discussions, on grade-level topics, texts, and issues, building on others' ideas and expressing their own clearly.</p> <p>CC.1.5.8.D: Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound, valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume and clear pronunciation.</p>
PA Core Standards and Practices: Math	<p>CC.2.4.6.B.1: Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.</p> <p>CC.2.4.7.B.1: Draw inferences about populations based on random sampling concepts.</p>
PA Standards: Social Studies	7.2.7.A: Explain the characteristics of places and 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.