



### Grade 3

#### 3.1.3.E Life Science: Biological Evolution: Unity and Diversity

**Students who demonstrate understanding can** *analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.*

**Clarifying Statement:** Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include marine fossils found on dry land, tropical plant fossils found in Arctic areas, and fossils of extinct organisms.

**Assessment Boundary:** Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.

| Science and Engineering Practices (SEP)   | Disciplinary Core Ideas (DCI)  | Crosscutting Concepts (CCC)   |
|---|--|---|
| <b>Analyzing and Interpreting Data</b><br>Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used. <ul style="list-style-type: none"> <li>Analyze and interpret data to make sense of phenomena using logical reasoning.</li> </ul> | <b>Evidence of Common Ancestry and Diversity</b> <ul style="list-style-type: none"> <li>Some kinds of plants and animals that once lived on Earth are no longer found anywhere.</li> <li>Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments.</li> </ul> | <b>Scale, Proportion, and Quantity</b> <ul style="list-style-type: none"> <li>Observable phenomena exist from very short to very long time periods.</li> </ul> <hr/> <b>Connections to Nature of Science</b><br><b>Scientific Knowledge Assumes an Order and Consistency in Natural Systems</b> <ul style="list-style-type: none"> <li>Science assumes consistent patterns in natural systems.</li> </ul> |

**Pennsylvania Context:** Examples of Pennsylvania's context include but are not limited to the state fossil, the trilobite (Phacops).

**PA Career Ready Skills:** Identify one's own strengths, needs, and preferences.

#### Connections to Other Standards Content and Practices

| Standard Source   | Possible Connections to Other Standard(s) or Practice(s)  |
|---|---|
| Agriculture (AFNR)  | CS.02.01.01.c: Evaluate geographic data and select necessary data sets to solve problems within AFNR systems.   |
| Science, Environmental Literacy and Sustainability (NAEE) | K-4 Strand 1.E. Organizing and analyzing information: Learners describe data and organize information to search for relationships and patterns concerning the environment and environmental topics.<br>K-4 Strand 1.G. Drawing conclusions and developing explanations: Learners develop explanations that address their questions about the environment. |



| Standard Source                              | Possible Connections to Other Standard(s) or Practice(s)  |
|--|---|
| <b>PA Core Standards: ELA</b>                | <p>CC.1.2.3.B: Ask and answer questions about the text and make inferences from text; refer to text to support responses.</p> <p>CC.1.2.3.A: Determine the main idea of a text; recount the key details and explain how they support the main idea.</p> <p>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.</p> <p>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.</p> <p>CC.1.4.3.V: Conduct short research projects that build knowledge about a topic.</p> <p>CC.1.5.3.A: Engage effectively in a range of collaborative discussions on grade-level topics and texts, building on others' ideas and expressing their own clearly.</p> |
| <b>PA Core Standards and Practices: Math</b> | <p>MP.5: Use appropriate tools strategically.</p> <p>CC.2.4.3.A.4: Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.</p>  |
| <b>PA Standards: Social Studies</b>          | 7.2.3.B: Identify the basic physical processes that affect the physical characteristics of places and regions.  |
| <b>Educational Technology (ISTE)</b>         | 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.  |
| <b>Technology and Engineering (ITEEA)</b>    | STEL-3D: Explain how various relationships can exist between technology and engineering and other content areas.  |