Grade 3

3.1.3.C Life Science: Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can *analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.*

Clarifying Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.

Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Analyzing and Interpreting Data 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. • Analyze and interpret data to make sense of phenomena using logical reasoning.	**LS3.A: Inheritance of Traits** • Many characteristics of organisms are inherited from their parents. **LS3.B: Variation of Traits** • Different organisms vary in how they look and function because they have different inherited information.	**Patterns** • Similarities and differences in patterns can be used to sort and classify natural phenomena.

Pennsylvania Context: N/A

PA Career Ready Skills: Demonstrate respect for the uniqueness of others.

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 (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. 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.

Science, Technology & Engineering, and Environment Literacy & Sustainability (STEELS)

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	CC.1.2.3.A: Determine the main idea of a text; recount the key details and explain how they support the main idea. CC.1.2.3.B: Ask and answer questions about the text and make inferences from text; refer to text to support responses. 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.1.5.3.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.4: Model with mathematics. CC.2.4.3.A.4: Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.
PA Standards: Social Studies	7.1.3.A: Identify how basic geographic tools are used to organize and interpret information about people, places and environment.
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-3D: Explain how various relationships can exist between technology and engineering and other content areas.