Grade 4

3.1.4.A Life Science: From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can *construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.*

Clarifying Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.

Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.

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). • Construct and/or support an argument with evidence, data, and/or a model.	**Structure and Function** • Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.	**Systems and System Models** • A system can be described in terms of its components and their interactions.

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.
PA Core Standards: ELA	CC.1.5.4.A: Engage effectively in a range of collaborative discussions on grade-level topics and texts, building on others' ideas and expressing their own clearly. CC.1.5.4.E: Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
PA Core Standards and Practices: Math	MP.3: Construct viable arguments and critique the reasoning of others. CC.2.3.4.A.3: Recognize symmetric shapes and draw lines of symmetry.

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Standards: Social Studies	6.1.4.D: Explain what influences the choices people make.
Educational Technology (ISTE)	1.1. Empowered Learner: Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.
Technology and Engineering (ITEEA)	STEL-4J: Predict how certain aspects of their daily lives would be different without given technologies.