



Grade 3

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

Students who demonstrate understanding can develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

Clarifying Statement: Changes organisms go through during their life form a pattern.

Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p>Developing and Using Models</p> <p>Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> Develop models to describe phenomena. <hr/> <p style="text-align: center;">Connections to Nature of Science</p> <p>Scientific Knowledge is Based on Empirical Evidence</p> <ul style="list-style-type: none"> Science findings are based on recognizing patterns. 	<p>LS1.B: Growth and Development of Organisms</p> <ul style="list-style-type: none"> Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. 	<p>Patterns</p> <ul style="list-style-type: none"> Patterns of change can be used to make predictions.

Pennsylvania Context: Examples of Pennsylvania context include recognized species such as hemlock, mountain laurel, and white-tailed deer.

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 (NAEE)	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.F. Working with models and simulations: Learners use models to represent environmental relationships, patterns, and processes.



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	CC.1.4.3.V: Conduct short research projects that build knowledge about a topic. 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.
PA Core Standards and Practices: Math	MP.4: Model with mathematics. CC.2.1.3.B.1: Apply place value understanding and properties of operations to perform multidigit arithmetic. CC.2.1.3.C.1: Explore and develop an understanding of fractions as numbers.
PA Standards: Social Studies	6.1.3.B: Identify needs and wants of people. Identify examples of natural, human, and capital resources.
Educational Technology (ISTE)	1.6. Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
Technology and Engineering (ITEEA)	STEL-7L: Apply universal principles and elements of design.