

Pollination Connections in the Next Generation Science Standards

Performance Expectations	Science and Engineering Practices	Disciplinary Core Ideas	Cross Cutting Concepts
<p>2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p>	<p>Developing and Using Models Develop a simple model based on evidence to represent a proposed object or tool.</p>	<p>LS2.A: Interdependent Relationships in Ecosystems: Plants depend on animals for pollination or to move their seeds around.</p> <p>ETS1.B: Developing Possible Solution: Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. (secondary to 2-LS2-2)</p>	<p>Structure and Function The shape and stability of structures of natural and designed objects are related to their function(s).</p>
<p>3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification 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.]</p>	<p>Developing and Using Models Develop models to describe phenomena.</p>	<p>LS1.B: Growth and Development of Organisms: Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.</p>	<p>Patterns Patterns of change can be used to make predictions.</p>
<p>4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored</p>	<p>Engaging in Argument from Evidence Construct an argument with evidence, data, and/or a model.</p>	<p>LS1.A: Structure and Function Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.</p>	<p>Systems and System Models A system can be described in terms of its components and their interactions.</p>

<p>petals, heart, stomach, lung, brain, and skin.] [Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]</p>			
<p>07-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. [Clarification Statement: Examples of behaviors that affect the probability of animal reproduction could include nest building to protect young from cold, herding of animals to protect young from predators, and vocalization of animals and colorful plumage to attract mates for breeding. Examples of animal behaviors that affect the probability of plant reproduction could include transferring pollen or seeds, and creating conditions for seed germination and growth. Examples of plant structures could include bright flowers attracting butterflies that transfer pollen, flower nectar and odors that attract insects that transfer pollen, and hard shells on nuts that squirrels bury.]</p>	<p>Engaging in Argument from Evidence Use an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem.</p>	<p>LS1.B: Growth and Development of Organisms Animals engage in characteristic behaviors that increase the odds of reproduction. Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction.</p>	<p>Cause and Effect Phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability.</p>