Use the chart below to discover how selected Science A–Z resources in the Adaptations unit support certain Next Generation Science Standards* (NGSS). While a single reading resource, science activity, comprehension support, or lesson cannot satisfy an entire Performance Expectation, using these resources together can help students develop the understandings and abilities they will need in order to satisfy each standard listed below. Most standards cited align with the grade level of this Science A–Z unit. For a reverse correlation tool that connects the standards to resources, visit our NGSS correlations page: www.sciencea-z.com/main/NextGenerationScienceStandards.

TIP *Check the Performance Expectations Key below this chart for the complete text of the standards cited for each resource.*

Resource Type	Resource Title	Performance Expectations
Unit Nonfiction Book	*Adaptations* (3 reading levels)	**3-LS3-1; 3-LS3-2; 3-LS4-2; MS-LS1-4; MS-LS1-5; MS-LS2-1; MS-LS2-4; MS-LS3-1; MS-LS4-2; MS-LS4-4; MS-LS4-5; MS-LS4-6**
Process Activity	*Bird Beak Adaptations*	**3-LS3-2; 4-LS1-1; MS-LS1-4; MS-LS1-5; MS-LS2-4; MS-LS4-4**
Process Activity	*Controlling Water Loss from Leaves*	**3-LS3-2; 5-LS1-1; MS-LS1-5; MS-LS1-6**
Process Activity	*Design Animal Adaptations*	**3-LS3-2; 3-LS4-3; 3-5-ETS1-2; MS-LS1-4; MS-LS1-5; MS-LS2-4**
FOCUS Book	*Plant Behavior*	**3-LS3-2; MS-LS1-4; MS-LS1-5; MS-LS4-4**
FOCUS Book	*Dogs by Design*	**3-LS3-2; 3-5-ETS1-1; 3-5-ETS1-2; MS-LS1-5; MS-LS3-1; MS-LS4-5; MS-ETS1-1**
FOCUS Book	*Emperors of the Ice*	**3-LS2-1; 3-LS3-2; 3-LS4-3; 3-5-EST1-2; 3-5-EST1-3; MS-LS1-4; MS-LS1-5; MS-ETS1-1; MS-ETS1-2**
FOCUS Book	*The Curious Case of the Peppered Moth*	**3-LS3-2; 3-LS4-2; 3-LS4-3; MS-LS2-4; MS-LS3-1; MS-LS4-4; MS-LS4-6**
FOCUS Book	*Darwin's Finches*	**3-LS3-2; 3-LS4-3; 3-5-EST1-2; 3-5-EST1-3; MS-LS1-5; MS-LS2-1; MS-LS2-4; MS-LS4-4; MS-LS4-6; MS-ETS1-1**

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Resource Type	Resource Title	Performance Expectations
Investigation Pack	<u>Topic</u>: Structural Adaptations <u>I. Files</u>: *Carnivorous Plants; Corpse Flower; Hammerhead Shark; Kiwi; Naked Mole Rat; Horseshoe Crab* <u>Mystery File</u>: *Monarch Butterfly*	**3-LS3-2; 3-LS4-3; MS-LS1-4; MS-LS1-5**
Debate	*Living Near Alligators*	**4-LS1-1; 3-5-ETS1-2**
Science Video	*City vs. Country Birds*	**3-LS3-2; MS-LS1-5; MS-LS2-4; MS-LS4-4**
Science Video	*Creatures of the Deep: Anglerfish*	**4-LS1-1; MS-LS1-4; MS-LS1-5**
Science Video	*Deep Ocean*	**MS-LS1-5**
Science Video	*Deep-Ocean Volcanoes*	**MS-LS1-5; MS-LS2-1**
Science Video	*Glowing Fish*	**MS-LS1-4; MS-LS1-5**
Science Video	*The Octopus and the Coconut* (no audio)	**4-LS1-1**
Career Files	*Wildlife Technician; Botanist; Microbiologist*	**MS-LS1-4; MS-LS1-5; MS-LS2-1; MS-LS2-4**
Quick Read	*Fossil Horses* (3 reading levels)	**MS-LS4-1; MS-LS4-2**
Quick Read	*Good Taste, Bad Taste* (3 reading levels)	**4-LS1-2; MS-LS1-8**
Quick Read	*Saved by the Stripes* (3 reading levels)	**3-LS3-2; 4-LS1-1; MS-LS4-4**
Quick Read	*Talking Dolphins?* (3 reading levels)	**4-LS1-2; MS-LS1-8**
Quick Read	*The Oh-So Adaptable Cactus* (3 reading levels)	**3-LS3-2; MS-LS1-4**

Performance Expectations Key

3-LS2-1. Construct an argument that some animals form groups that help members survive.

3-LS3-1. 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.

3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.

3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

MS-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.

MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

MS-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-LS3-1. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

MS-LS4-1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

MS-LS4-5. Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.

MS-LS4-6. Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.

MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.