

Birds of Magnuson NGSS Correlations 3-5

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Field Trip Activity	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	MNP Objectives
<p>Nature's Grocery Store: In this activity students explore the idea that birds need to find food from the surrounding habitat by making a "grocery list" of available food sources on a stretch of trail in the park. Students observe the surrounding habitat, hypothesize what food sources it might provide, explore those potential food sources, and record their thinking on their "grocery list." Additionally, students are asked to think about what kinds of birds would be able to utilize the different food sources, and what adaptations those birds have that would enable them to do so.</p>	<p>LS1.A: Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)</p>	<p>Structure and Function: Different materials have different substructures, which can sometimes be observed. Substructures have shapes and parts that serve functions</p>	<p>Asking Questions and Defining Problems: Ask questions about what would happen if a variable is changed.</p>	<p>Understand that seeds are contained in spent flowers, fruits, pods, and cones</p>
	<p>LS1.D: Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)</p>	<p>Systems and System Models: A system is a group of related parts that make up a whole and can carry out functions its individual parts cannot. A system can be described in terms of its components and their interactions.</p>	<p>Constructing Explanations and Designing Solutions: Construct an explanation of observed relationships (e.g., the distribution of plants in the back yard). Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem. Identify the evidence that supports particular points in an explanation.</p>	<p>Understand the hard work that birds need to do to provide food for themselves and their nestlings, and to provide a safe and sturdy nest for their nestlings;</p>
	<p>LS2.A: The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1)</p>	<p>Patterns: Patterns can be used as evidence to support an explanation.</p>	<p>Analyzing and Interpreting Data: Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.</p>	<p>Understand how even a small area of plants, especially native plants, can provide a huge amount of food.</p>
	<p>LS2.D: Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size (Note: Moved from K-2). (3-LS2-1)</p>	<p>Cause and Effect: Cause and effect relationships are routinely identified, tested, and used to explain change. Events that occur together with regularity might or might not be a cause and effect relationship.</p>	<p>Engaging in Argument from Evidence: Construct and/or support an argument with evidence, data, and/or a model.</p>	<p>Understand the hard work that birds need to do to provide food for themselves and their nestlings, and to provide a safe and sturdy nest for their nestlings;</p>
	<p>LS4:C: For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)</p>			

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	LS4.D: Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)			
Bird Nest Bounty: Students explore the reasons behind nest building and the similarities and differences in nests made by different bird species. They are then given the opportunity to build their own nest from different "ingredients" found around the site, with the additional challenge of only being able to use their "beaks" (clothespins, tweezers, etc) to grab onto the nest materials.	LS1.A: Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)	Structure and Function: Different materials have different substructures, which can sometimes be observed. Substructures have shapes and parts that serve functions	Constructing Explanations and Designing Solutions: Construct an explanation of observed relationships (e.g., the distribution of plants in the back yard). Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem. Identify the evidence that supports particular points in an explanation.	Understand that each bird nest is a customized and complex structure, containing specific features that nestlings need;
	LS1.B: Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)	Systems and System Models: A system is a group of related parts that make up a whole and can carry out functions its individual parts cannot. A system can be described in terms of its components and their interactions.	Analyzing and Interpreting Data: Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.	Understand the hard work that birds need to do to provide food for themselves and their nestlings, and to provide a safe and sturdy nest for their nestlings;
	LS4.C For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)	Patterns: Patterns can be used as evidence to support an explanation.	Developing and Using Models: Develop a diagram or simple physical prototype to convey a proposed object, tool, or process.	Understand that plants provide food and nesting materials in a wide variety of ways, whether they are living or dead, for many species of birds;
	LS4.C: Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)		Asking Questions and Defining Problems: Ask questions about what would happen if a variable is changed.	
	ETS1.A: Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (3-5-ETS1-1) (secondary to 4-PS3-4).			
Owl Extravaganza: Students engage in discussion and kinesthetic activities designed to help them explore how owl adaptations allow them to be amazing hunters. They then get a hands on look at the results of these amazing abilities by dissecting owl pellets and puzzling out what the owl ate for dinner.	LS1.A: Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)	Systems and System Models: A system is a group of related parts that make up a whole and can carry out functions its individual parts cannot. A system can be described in terms of its components and their interactions.	Asking Questions and Defining Problems: Ask questions about what would happen if a variable is changed.	Understand that animal's adaptations are designed to help them to survive in some way, and that animals have many adaptations that work together to help the animal achieve survival.

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	LS1.D: Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)	Structure and Function: Different materials have different substructures, which can sometimes be observed. Substructures have shapes and parts that serve functions	? Analyzing and Interpreting Data: Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.	Understand that some birds eat other animals, and that catching prey carries a different set of challenges for predators.
	LS4.D: Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)		Constructing Explanations and Designing Solutions: Construct an explanation of observed relationships (e.g., the distribution of plants in the back yard). Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem. Identify the evidence that supports particular points in an explanation.	Understand that animals may eat different food at different times or in different proportions, depending on what is available in their habitat.
			Obtaining, Evaluating, and Communicating Data: Read and comprehend grade-appropriate complex texts and/or other reliable media to summarize and obtain scientific and technical ideas and describe how they are supported by evidence.	Feel empowered to participate in the scientific process, share their ideas, and support those ideas with evidence.
			Planning and Carrying out Investigations: Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.	
Overall Message -	ESS3.C - Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)			Be curious about birds, and develop empathy and respect for them.
				Develop the art of watching and listening, and recognizing the rewards that result.
				Feel empowered to instigate and carry out stewardship activities in their own community that will benefit birds.
				Understand that the parks and natural areas around their own homes and schools are an important resource for birds

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				Empowering children to see their own schoolyard and/or backyard as having the potential to be a great “grocery store” and “bird nest recipe box” by what they grow there and how they take care of it.
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