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Plant and Animal Secrets

PreK and Kindergarten Program Suggestions

Our PreK and Kindergarten naturalist programs are all about getting young learners exploring and discovering all the amazing plants and animals living right outside their homes. Below is a list of potential programs for grades PreK and Kindergarten with *suggested* locations and seasons for each program. Please keep in mind that all programs can be modified to fit your school's curriculum goals and the learning interests of your classroom. If you are unable to come to Manomet, we can always find a way to bring programming to your school in-person or virtually!

We recommend combining **Songbird Science** with one of our **Stewardship Nature Walks**; however, programs can be mixed and matched in any way.

	Program Description	Location			Season		
		Manomet	Greenspace	Classroom	Fall	Winter	Spring
Songbird Science	Students will learn how birds find food and shelter in different habitats, how birds cope with seasonal changes, and how human activity at very local scales (e.g. back yards) can affect birds. Students will retrieve model birds from a net, identify them, and weigh them to see if they are healthy. We'll discuss what an underweight bird could do to get back into the healthy range, and then hunt for food like birds during a scavenger hunt! We'll relate our findings to back yards and talk about what families can do to support birds no matter where they live. We'll learn how each of their birds copes with winter, then hop along a migratory pathway to find out what birds need during migration. **The experience will culminate with a visit to the Manomet banding lab* – in person or virtual – to meet some live birds and see their adaptations in real life!**						
Woodpecker Walk	Students will play "what's that sound" to identify the differences between woodpeckers drumming and other similar noises. They will then become woodpeckers and explore different habitats to find the perfect place to live and eat. Students will practice their woodpecker calls, drum on trees, find an ideal hollow to build a nest in and even find bugs to eat inside and under decaying logs. We'll use a combination of photos, models, examples, and student-collected specimens to identify what makes woodpeckers so unique, and to find evidence of real woodpeckers! At the end of the walk, students will make connections between the needs of woodpeckers and their habitats.						
Animal Super Senses	Is all tree bark the same? Why is moss so soft? Do leaves have a smell? All these questions and more will be answered during a sensory scavenger hunt in which students will make connections to the natural world using sight, sound, touch, and smell. As they are exploring, students will take breaks to engage in sensory oriented activities that highlight special animal traits to learn what it feels like to be an animal living in the area we are exploring. Students will experience the benefits of big ears, wet noses, camouflage coloration, soft steps, and so much more as they "try on" these different traits in several engaging activities. At the end of the walk, students will make connections between the different animal traits and the habitats we explored.						
Flower Hour	Students will turn into pollinators as they explore the relationship between flowers and all the different creatures they support! Using sight and smell, students will figure out what makes flowers so attractive to pollinators. As we identify the bees, butterflies, spiders, and other creatures that rely on flowers for shelter and food, students will transform into native pollinators! Students will take on the characteristics of the pollinators they are exploring by going through metamorphosis like a butterfly (acting out the different stages) or performing a waggle dance to communicate where food is just like bees! By taking on the role of different pollinators, students will understand the important relationship between pollinators and the flowers they visit. *Optional: it may be possible to arrange a visit with a local beekeeper as part of this activity.*						

*The banding lab operates in the Spring and Fall. If you are unable to schedule your program during these times, we can provide a link to a pre-recorded visit to the banding lab so students can see banding in action!

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PreK and Kindergarten
Songbird Science and Stewardship Nature Walk
MA STE/NGSS Standards Alignment

Manomet Programs and MA STE/NGSS: Manomet education programs can be used to support student progression toward a wide range of Massachusetts Science and engineering/NGSS performance expectations. Below for each grade level range, we provide a list of relevant Performance Expectations, Science and Engineering Practices, Disciplinary Core Ideas, and Cross-Cutting Concepts covered. All Manomet education programs are customizable; teachers are encouraged to reach out to share their curricular priorities.

Performance Expectations Supported:

PreK-ESS2-1(MA): Raise questions and engage in discussions about how different types of local environments (including water) provide homes for different kinds of living things.

PreK-ESS2-6(MA): Provide examples of the impact of weather on living things.

PreK-ESS3-2(MA): Observe and discuss the impact of people's activities on the local environment.

PreK-LS2-2(MA): Using evidence from the local environment, explain how familiar plants and animals meet their needs where they live.

K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment.

K-LS1-1: Observe and communicate that animals (including humans) and plants need food, water, and air to survive. Animals get food from plants or other animals.

		Songbird Science	Stewardship Nature Walk
Science and Engineering Practices	**Developing and Using Models**	Students will manipulate and use model birds to identify the birds and determine their health status. We will compare the models to real birds.	
	Analyzing and Interpreting Data	Students will use drawings to record predictions about what birds might need, and then to adjust drawings in response to information they gather during the lesson. Students will collect and interpret data on weighted models of birds to assess bird health.	Students will record information and use observations to describe a pattern or relationship found at one or more of the study sites to answer scientific questions and solve problems.
	Constructing Explanations/Engaging in Argument from Evidence	Students will use information from qualitative and quantitative observations to construct evidence-based explanations for how birds get food and shelter, and how birds are affected by weather and by people.	Students will use information from qualitative and quantitative observations to construct evidence-based explanations for the plant and animal interactions observed during data collection.
	Asking Questions and Defining Problems		Students will discuss data collected and share further questions that they have based on their observations.
	Communicating Information	Students will share their findings and ideas with the group, listening actively and comparing findings.	

		Songbird Science	Stewardship Nature Walk
Cross-Cutting Concepts	**Cause and Effect**	Students will identify major events in the life of a bird such as migration and discuss how migration can be triggered by season changes.	Students will connect their observations of plants and animals to different environmental factors, such as seasons, present in the habitat they are studying.
	Scale, Proportion and Quantity	Students will use relative scales to describe the weight of their bird models and relate those measurements to bird ecology.	Students will collect data on organism abundance or size and compare their findings to those of other students.
	Patterns		Students will make observations of plant and animal abundance and describe the patterns they are seeing as a group.
	Systems and System Models		Students will observe how different plants and animals work together to create systems.
	Stability and Change	Students will discuss how organisms are affected by seasonal changes and by human impacts on habitat at very local scales.	
Disciplinary Core Ideas Addressed	**LS1.C**: Animals obtain food they need from plants or other animals.		
	LS2.A: Plants and animals depend on their surroundings to get what they need.		
	LS4.C: Different places on earth each have their own unique assortment of organisms.		
	ESS3.A: Living things need water, air, and resources from the land, and they live in places that have the things they need.		
	ESS3.C: Things people do can affect the environment but they can make choices to reduce their impacts.		