

## GRADE 3

### MV Habitat Kids - Conservation Stewards

This program consists of multiple lessons led by the PHA Youth Educator in the classroom and at the Arboretum. Students will learn about the unique habitats of Martha's Vineyard, how these habitats are threatened by fragmentation, and how they can make a difference.

#### Next Generation Science Standards

*3-ESS2-1. Use graphs and tables of local weather data to describe and predict typical weather during a particular season in an area.*

*3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals within the same species may provide advantages to these individuals in their survival and reproduction.*

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

*3-LS4-4. Analyze and interpret data about changes in the environment in an area and describe how the changes may affect the ability of organisms that live in that area to survive and reproduce.*

*3-LS4-5(MA). Provide evidence to support a claim that the survival of a population is dependent upon reproduction.*

## GRADE 4

### Tree Detectives

This program consists of multiple visits to the class and the Arboretum. Students study deciduous trees during 6-8 weeks from bud to full leaf growth. Tree structure and growth from sapling to maturity is analyzed. Trees are measured in a variety of ways and characteristics are compared. Students record, describe, draw, discuss and use a variety of tools and scientific methods.



#### Next Generation Science Standards

*4-LS1-1. Construct an argument that animals and plants have internal and external structures that support their survival, growth, traits and reproduction.*

*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.*



All Youth Education Programs are free to MV Schools. Each program consists of classroom visits and field trips which are accessible to all learners. PHA uses the NGGS to guide our lessons which are aligned to each grade level.

Revised 3/19



*"Educate yourself. Learn. The learning is the fun."  
-Polly Hill*

## EDUCATIONAL PROGRAMMING

For Kindergarten through Fourth Grade  
[jenna@pollyhillarboretum.org](mailto:jenna@pollyhillarboretum.org)

Polly Hill Arboretum strongly believes that every student of Martha's Vineyard is a steward for our island, just like Polly Hill herself. Our programs are designed to engage students in the scientific process: to observe, to ask questions, make hypotheses, and interpret information.

Classroom programs allow every student to participate with in-depth learning about plants using hands-on activities and scientific tools.

Field trips to PHA support what the students have learned in the classroom, providing an outdoor laboratory of discovery. Small groups explore the historic landscape, buildings, plants, and animals that make PHA a special place. Youth Educators help students tie together in-class lessons and the discoveries they have made at the Arboretum.

## KINDERGARTEN

### Spring: Flowers and Pollinators

In the classroom students will become familiar with the purpose of flowers, different types of flowers, and the connection between pollinators and flowers. Using dynamic activities, students will learn vocabulary and make connections around flower structure and pollinators.

While visiting PHA, students will create a flower collection and closely examine the similarities and differences of flowers and their structures.



### Fall: The Amazing Seed

In the classroom we will discuss where seeds come from and their purpose. Students will compare various seeds.

While visiting PHA, students will go on a scavenger hunt to collect seeds and design their own "perfect seed."

### Next Generation Science Standards

*K-LS1-1 Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.*

*K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.*

*K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.*

*K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.*



## GRADE 1

### Spring: The Life Cycle of a Plant

In the classroom students will take an in-depth look at the life cycle of plants and what happens during pollination. Through games and stories students will learn vocabulary and how plants survive generation to generation.

During their visit to PHA, students engage in the scientific process by collecting flowers, dissecting them to identify flower parts, and creating a hypothesis.

### Fall: Why do Plants have Leaves?

In class students will learn the importance of leaves to plants, study different types of leaves, and learn about deciduous and evergreen trees.

During their field trip students will collect leaves from deciduous and evergreen plants and compare.

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## GRADE 2

### Spring: Evolution of Ecosystems

In class, students learn about the heath hen and the habitat it lived in on Martha's Vineyard before it went extinct. Students will learn about the many ecosystems on our island and how to be stewards of the environment.

At PHA students will explore ecosystems and observe some of the native plants of the island. A scavenger hunt to find native plants and animals on the property will show students that Polly Hill was a steward for the native ecosystems of Martha's Vineyard.

### Fall: Seeds Travel

In class, students will learn about seed types and their adaptations. Students will study seed dispersal by designing and creating their own seed and experimenting using wind, water and animals to see how their seed is best dispersed.

During their visit to PHA students will collect seed, make observations, and hypothesize why specific adaptations occurred.



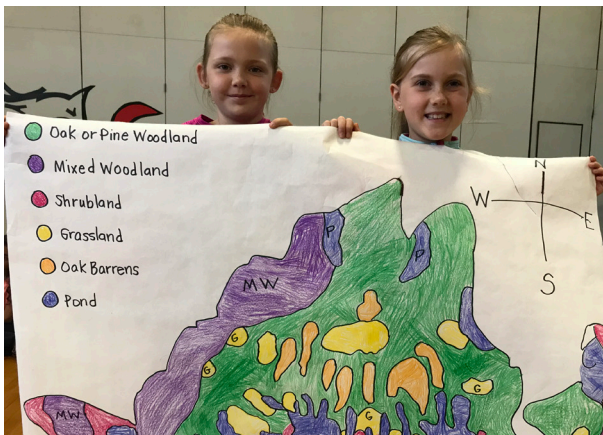
### Next Generation Science Standards

*2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*

*2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.*

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### Fall: From Flower to Seed

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### Fall: Leaves

In class students will learn the importance of leaves to plants, study different types of leaves, and learn about deciduous and evergreen trees.

During their field trip students will collect a leaf collection and learn about pigments through experimentation and art.

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