

## Kindergarten – 2<sup>nd</sup> Grade

### ***Weather Works:*** Measuring Weather and Climate (2-hour visit)

Overview: Students will explore, observe, and measure a variety of elements of weather, using simple tools and equipment. They will learn about types of clouds and conduct a cloud experiment. Weather-permitting, students will conduct hands-on nature explorations that focus on how temperature changes based on the local environment. They will also create their own weather reports in small groups.

### ***Habitats Essentials:*** Food, Water, Shelter, and Space (2-hour or 4-hour visit)

Overview: Students learn about the 4 essential elements that habitats provide to living things through an outdoor habitat walkabout, a habitat game, and meeting live animals and discussing their habitat needs.

### ***What Am I?:*** Animal Classification (2 hour visit)

Overview: Students learn how to classify mammals, reptiles, birds, amphibians and fish through small and large group activities and by meeting several of Asbury Woods' ambassador animals. They also go on a hike to learn about adaptations that allow animals to live in specific habitats.

### ***Maple Magic:*** Energy Flow from Sun to Syrup (2 hour visit)

Overview: Students will learn how maple trees make sap, why sap is important to trees, and they will be introduced to the concept of photosynthesis. They will tour Asbury Woods' sugar bush and sugar shack, and learn about the structure of trees. This visit is best done during maple syrup season January-March.

### ***New Beginnings:*** Growth and Development of Living Things (2 hour visit)

Overview: Students discover how plants and animals grow and develop from the very start of their lives. They will explore different shaped seeds, walk outside to "find" eggs, and meet several Asbury Woods ambassador animals and learn whether they began life as eggs or from live birth.

## 3<sup>rd</sup> Grade- 5<sup>th</sup> Grade

### ***The Power of Water:*** The Role of Water in Shaping the Earth (2-4 hour visit)

Overview: Students will use models and diagrams to explain the distribution and forms of water and water environments. They will explore, observe, and predict the effects of water on the Earth's surface utilizing virtual and actual manipulative models and actual waterways and landforms created over time by the energy of the flowing water. They will also see how manipulation of the land by humans can influence the flow and effects of water on the Earth's surface. This lesson is best conducted at the Brown's Farm location.

### ***Feeding Frenzy:*** Exploring Food Chains and Food Webs (2 or 4 hour visit)

Overview: Students will learn about food chains, food webs, and the scientific process. They will conduct a plot study outside, compare and contrast soils from different habitats, play a game to learn about predator/prey interactions, and explore food chains and webs in small groups.

### ***EcoSeekers:*** Exploring & Protecting Healthy Ecosystems (4 hour visit)

Overview: Students will use a variety of field equipment and tools to measure abiotic conditions and identify biotic components of three distinct ecosystems; wetland, field, and forest. For a two-day program, students will also learn how to use a compass and complete a compass course.

***Metamorphosis and More:*** Discovering Life Cycles (2 or 4 hour visit)

Overview: Students will learn all about animal life cycles, including complete and incomplete metamorphosis, through role playing, by meeting and observing animals at Asbury Woods, and by exploring the wetlands at Asbury Woods to find animals at different life cycles stages.

***The Earth is Home:*** Measuring the Human Impact on Earth's Resources (2 or 4 hour visit)

Overview: Through a variety of hands-on activities using local examples, the students learn how humans can positively or negatively affect the planet. Students will test the need for water filtration by practicing filtering "polluted" water, examine and evaluate the need for green spaces, and lastly categorize native and non-native species on the property while also recommending ways of controlling invasive species.

## **6<sup>th</sup> Grade- 8<sup>th</sup> Grade**

***Watershed Analysis:*** A Deep Dive into Water Quality (4-5 hour visit)

Overview: Students will learn about the health of local watersheds and how water systems are connected. Students will engage in hands on investigation of the macroinvertebrate species living in the creek, conduct chemical tests to determine water quality, analyze long term data, and learn about the importance of healthy riparian zones.

***HydroQuest:*** Exploring Human Impacts on Water (4 hour visit)

Overview: Students will learn about the many properties of wetlands that make them valuable ecosystems. They will work with mini stream tables, take soil samples, identify hydric plants, and investigate runoff in communities in interactive and hands-on ways.

***Begins With Me:*** Renewable and Non-renewable Resources (4 hour visit)

Overview: Students will compare and contrast renewable and nonrenewable resources and will be able to identify examples of each. They will gain hands-on experience with different sources of renewable energy and they will calculate the carbon sequestered by different species of trees.