



GREENBURGH NATURE CENTER SCHOOL PROGRAMS LISTING 2017-2018

The following guide provides a full listing of grades 3-5 education programs provided to schools and institutions. Many of the descriptions note which New York State Standards are addressed in the program. All of our top quality programs can be customized for presentation at your location unless otherwise indicated. For grades 3-5 programs, this includes student clubs, large groups, assemblies, and scout troops.

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GRADES 3-5

** Indicates Teacher's Guide available upon registration*

Animal Adaptations * – Year round

Animals possess a variety of instinctual behaviors that help them survive in their environments. Through classroom discussions and an outdoor hike, students will investigate how local wildlife uses physical and behavioral adaptations such as camouflage and hibernation to survive in the natural world. Also available as an outreach program – **Meet The Animals.**

NYS Standards: Standard 1- 1.1; Standard 4- 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 4.1, 5.1, 5.2, 6.1, 7.1, 7.2

Birds of Prey * – Year round

These magnificent creatures capture the minds of all as they soar, swoop and dive. Students will explore the differences between raptors and other birds using our live animals and museum artifacts. At the outdoor Birds of Prey House, students will observe first-hand the

physiology and adaptations that enable these animals to survive. An investigation of raptors, including the dissection of an owl pellet, provides insight into “specialization” and what life is like near the top of the food chain. Material fee of \$20 per class. Offered at the Nature Center only.

Orienteering * – April through October

Smart phones and the GPS are helpful, but knowing your way around a map (literally) is a must. Geared up with a map and compass, students will learn map reading and navigational skills, develop an awareness of the geography of the New York, and examine the relationships and interactions between the natural environment and humans. Using their newly developed skills, students will be challenged to navigate their way along an outdoor orienteering course. Offered at the Nature Center only.

Plants: Our Partners *– April through October

Welcome to the fascinating world of plants! This program provides students with a deep understanding of the role of plants. Students will learn about the function and fashion of plant parts as well as their life cycles, adaptations, and importance in our eco-system. They’ll be introduced to in-door crop growing at our hydroponics table and students will prepare their very own take-home plantings. Offered at the Nature Center only.

NYS Standards: Standard 1- 1.1; Standard 4 Physical - 1.1, 2.1; Standard 4 Living Environment- 1.1, 1.2, 2.1, 2.2, 3.1, 4.1,5.1, 5.2, 6.1, 6.2, 7.1, 7.2

Recycling: Where Does All the Garbage Go? * – Year round

Reduce, Reuse, Recycle! Conserving our natural resources is the ultimate goal of the 3R concept. This program empowers children to take small steps that can have a big collective impact on our environment, our economy and our wildlife. Students will play Trash Mountain, a waste management game that demonstrates how much and what kinds of waste we generate, and focuses on opportunities for reusing or recycling. In addition, students will learn how our community currently disposes of waste and will consider how humans can make better choices to fit into nature’s system of interconnected cycles. This program can be customized to address recycling and composting opportunities in your school or organization. Also available as an outreach program.

Apple Cidering * – September through November

New York is the second largest producer of apples in the country, providing us with locally grown apples that offer the best flavor and highest nutrition. In this mouth-watering program, children will use an old-fashioned screw press to make apple cider. Students will learn about the colonial experience of cider making and get a taste of fresh, tangy apple cider. Experience why “an apple a day keeps the doctor away”. Each group must bring 2-3 apples per child. Offered at the Nature Center only.

Pond Ecology * – April through June

An abundance of life and activity exists in a seemingly quiet pond. In this hands-on exploration, students will use a variety of tools to discover aquatic ecosystems and learn to identify macro-invertebrates. They will learn about the interrelationships and life cycles of plants and animals and the adaptations of each. This program is designed to create an understanding of a pond's balance of life and how easily it can be disrupted. Teachers may choose for students to conduct water quality tests (pH, temperature, turbidity). Offered at the Nature Center only.

NYS Standards: Standard 1- 1.1; Standard 4 Physical- 1.1, 2.1; Standard 4 Living Environment- 1.1,1.2, 2.1, 2.2, 3.1, 3.2, 4.1, 5.1, 5.2, 6.1, 7.1, 7.2

Bees – April through October

The ability to make honey is only one of the many wonders of the honey bee. In this introductory program, students will get a chance to explore the fascinating world of the honey bee and get an up close experience with real examples of pollen, wax comb, standard beekeeping equipment, and even real bees. The program includes a game designed to highlight the importance of bees for pollination, an overview of the physical structure and jobs within a honey bee colony, and a taste testing of local honey, fresh from the Greenburgh Nature Center bees! Also available as an outreach program.

Forest Ecology * – April through October

Discover hidden secrets in this sensory journey through nature. Students explore a forest habitat and uncover some of the differences between deciduous and coniferous forests by doing field-testing of plots, studying the flora and fauna and making field observations. Biological communities associated with forest sub-floor, floor, understory, canopy, and emergent layer will be observed. Challenges faced by forest communities in Westchester County will be discussed. Offered at the Nature Center only.

Solar Energy: Let the Sun Shine In! – May through October. 90 minute program.

The sun bathes the earth with more energy in one hour than is used by the world in an entire year. Students will learn about the different ways in which humans are harnessing this power to meet the needs of people around the globe. And they will learn how to optimize solar energy collection by designing a STEM-based passive solar system (e.g., solar building design, cooking, water heating) or a photovoltaic application (e.g., solar panel-driven model car). Also available as an outreach program.

NYS Standards: Standard 1- 1.1, 1.2, 1.3, 1.4, 1.5; Standard 4 Physical- 4.1, 4.2, 4.3, 4.4, 5.2

Native Americans: Living off the Land – Year round

In our 60 or 90 minute program, students will experience a day in the life of Northeast Woodlands Native Americans who inhabited our land 5000 years ago. Visiting our full-scale replica longhouse, wigwam, and canoe, students' imaginations will soar as they learn how

indigenous peoples met their needs for food, shelter, medicine, family and community. Together we explore daily behaviors in and around the longhouse, covering the roles that men, women, children, and elders carried out in the community. We hike along the same paths and trails that the local Eastern Woodland Indians hiked years ago and students learn about the Native Americans' hunting and gathering techniques as well as their knowledge of local plants, animals and the land. Offered at the Nature Center only.

NYS Standards: NYS Science Standard: 1, 4, 5; NYS Social Studies Standard: 1, 2, 3

Native American Tools & Toys – Year round

Experimenting with replicated artifacts including stone axes, arrowheads, and mortar and pestle, students will be fascinated by some of the ways in which Native Americans living in the Westchester area provided for themselves. And students will try their hand at some of the toys Native American children used for play as well as to practice skills critical to their survival. Also available as an outreach program.

NYS Science Standard: 1, 4, 5; NYS Social Studies Standard: 1, 2, 3

Bugs & Insects * – May through October

Join us on this invertebrate safari and compare the life cycles of insects to our own bodies. Learn how humans depend on bugs and insects and explore their critical role in every ecosystem on earth. Students will discover the astounding diversity of these creepy crawlers and learn about the many adaptations they utilize for survival. Meet some of our live insects and then venture outdoors through varied landscapes to observe them in their natural habitat. Offered at the Nature Center only.

NYS Standards: Standard 1- 1.1; Standard 4 Physical- 2.1; Standard 4 Living Environment- 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 4.1, 5.1, 5.2, 6.1

Composting & the Magic of Decomposition – April through October

Through exciting, hands-on investigation of different methods of composting, students will experience nature's great drama of decomposition. They will explore how water, air, bacteria, fungi, and macroinvertebrates all work together to recycle organic matter into the nutrient-rich soil-enhancer we call "compost". And they'll learn how humans optimize conditions for efficient decomposition through process control. Outdoors rain or shine. Offered at the Nature Center only.

Winter Birds/Avian Ecology * – December through March

Viewing a variety of birds from our live animal museum, students are introduced to the basics of avian anatomy and behavior. They learn how to identify some of our common winter residents, why some birds migrate and how others adapt to winter life. And we will discuss changes in the lives and migration patterns of birds as they seek to adapt to climate change. Students make a pinecone feeder that they can hang outdoors to attract winged

visitors. (No peanuts are used.) Offered at the Nature Center only.

NYS Standards: Standard 1- 1.1; Standard 4 Physical - 1.1; Standard 4 Living Environment- 1.1, 1.2, 2.1, 3.1, 3.2, 4.1, 5.1,5.2, 6.1

Maple Sugaring * – January through March

Students will travel back in time to discover the history of maple sugaring with several stops along the way. Native American, colonial, and some modern-day techniques are demonstrated at our outdoor sugaring sites. We'll discuss how climate change poses challenges to sugar maple trees and therefore to the maple sugar industry. Students can challenge their taste buds as they try to determine the difference between corn syrup and the "real deal" -100% maple syrup. Offered at the Nature Center only.

NYS Standards: Standard 1- 1.1; Standard 4 Physical- 1.1, 2.1, 3.2; Standard 4 Living Environment- 2.1, 3.1, 4.1, 5.2, 6.2, 7.1

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