Elementary School Programs at the Rancocas Nature Center

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Program	Suggested Grade	Description
Take a Look at the Sky	K-1st	There is a lot going on in the sky and we will explore it by studying clouds, the water cycle, states of matter, and shadows. As part of this hands-on program students will make a cloud, explore the states of matter, act out the water cycle, go cloud gazing, and embark on a shadow hunt. Student objectives include: ● Modeling how gases, liquids and solids behave ● Understanding and modeling the water cycle ● Observing and categorizing clouds ● Making observations to determine the effects of sunlight on Earth's surface
A Squirrel's Life	K-2nd	Both Eastern Gray Squirrels and Southern Flying Squirrels reside on the Rancocas Nature Center grounds. Squirrels are easy to observe going about their business year-round as they stay active in the winter. Students will dive deeper into understanding squirrel behavior, communication, and habits. Student objectives include: ● Comparing and contrasting the diurnal gray squirrel and the nocturnal flying squirrel ● Using observation and listening to decipher squirrel communications ● Understanding the relationship between the needs of squirrels and their habitats through role playing ● Developing a simple model that mimics the function of an animal dispersing seeds
Fabulous Frogs	K-2nd	Join us on a "frogging" expedition to learn about our fabulous amphibian friends. New Jersey is home to 15 species of frogs and toads. The program covers the frog life cycle, frog vocalizations, and various frog and toad habitats. Student objectives include: ● Comparing and contrasting frog and toad characteristics ● Observing living frogs and tadpoles while discussing the stages of metamorphosis ● Listening to and identifying frog calls ● Exploring interactions of living things within a frog pond habitat
It's a Birds' World	1st-2nd	Birds can be found in almost every habitat and are a diverse class. Students will be introduced to bird topography, bird classification, bird ID skills, and bird behavior. Students will have a chance to actively practice their bird identification skills by going bird watching. Student objectives include: ● Describing and identifying birds by observing their colors, patterns, and physical characteristics ● Vocalizing common bird calls and discussing communication among birds ● Role playing to experience how adult birds struggle to raise their young and survive in the world ● Examining bird nests and searching for nesting materials
Arthropods & Annelids (aka Bugs!)	1st- 3rd	Insects comprise one of the largest groups of animals on the planet. Through hands-on activities, insect samples, and explorations, participants will learn about the invertebrate life cycle and how not everyone needs to have a backbone to be strong and survive. Student objectives include: ● Investigating the life cycles of insects in a pond ● Observing insects in a meadow to discover their role in the habitat (catch and release) ● Hunting for annelids and crustaceans and understanding their roles as decomposers on the forest floor
The Wonders of Water	2nd-3rd	Water is all around us and all living things need water to survive. The Rancocas Nature Center grounds are adjacent to the Rancocas Creek and its tributaries – a wonderful place to learn about water. Student objectives include: ● Acting out the water cycle ● Creating a simple model of a watershed to better understand watersheds and the protection of this resource ● Participating in interactive lessons on water pollution and what students can do to prevent it ● Observing streams, wetlands, and a river while hiking the Rancocas trails ● Comparing groundwater and surface water and conducting absorption experiments

Traveling Seeds	2nd-3rd	Plants produce a variety of seeds and seed pods, and use several strategies to disperse them, increasing their chances of survival. This engaging, hands-on program offers participants the chance to investigate a sampling of seeds, seed pods, and cones. They will discover that the five basic ways that seeds travel are determined by how the seed is structured. Student objectives include: ● Examining seeds, seed pods, and cones to figure out which method of dispersal each uses ● Dissecting fruit to locate and identify the seeds ● Searching for seeds and seed pods in nature ● Developing a simple model that mimics the function of an animal dispersing seeds
Habitat Explorations/ Eco-Connections	2nd-4th	All habitats include living (biotic) and non-living (abiotic) factors. Students will investigate natural areas to identify biotic and abiotic factors and uncover important interactions (interdependencies) that occur in the natural world and sustain life on this planet. Student objectives include: ● Exploring a habitat closely with a hand lens to find living organisms and discovering how they interact with other living or non-living organisms ● Role playing interactions and interdependencies between biotic and biotic factors, abiotic and abiotic factors, and biotic and abiotic factors and understanding their importance in an ecosystem ● Examining and comparing multiple habitats by hiking to different locations in the preserve
Scales & Tails (Reptiles)	2nd-4th	What fascinating group of animals has scales and tails? The reptiles do! This ancient group of animals makes its home in a surprising variety of habitats. This program includes a hands-on interaction with Rancocas' resident reptiles and shares information about reptile biology and adaptations. Student objectives include: ● Distinguishing vertebrates from invertebrates and determining which vertebrate classes are warm blooded and which are cold blooded ● Examining the general characteristics of the Class Reptilia ● Observing and interacting with live snakes and turtles, and utilizing natural materials and artifacts to learn about their anatomy and habits
Birds & Birding	3rd-4th	Birds can be found migrating through New Jersey throughout the year. Students will have a chance to find out why birds migrate and where they go. Students will take an in-depth look at bird anatomy and discover how their beaks and bodies have adapted to help them survive, and learn bird identification strategies. In an outdoor setting, students will use binoculars to go bird watching. Student objectives include: ● Discussing how seasons and climate affect bird populations ● Acting out the migration of birds to better understand its costs and benefits ● Experimenting with tools to replicate different beak designs to recognize how bird beaks have adapted to habitats and food preferences ● Going bird watching to practice using binoculars to help identify multiple bird species
Nature's Balance	3rd-5th	Nature has a very delicate balance. Students will survey the health of a forest by observing the plants and animals found there. Through exploration and interactive games, students will discover how things have changed over time due to competition among species. The struggle is real; let's see how it plays out in our ecosystem. Student objectives include: ● Simulating deer habits and the components of their habitat in a game to better understand limiting factors and its effect on deer populations ● Graphing simulated changes in populations ● Observing and handling deer skulls, antlers, and fur as the group discovers and discusses physical and social seasonal adaptations that help deer survive ● Searching the nature center trails for invasive plants, identifying their competitive strategies, and better understanding the impact of invasives on deer populations and biodiversity
Trees & Forests	4th-5th	Students will use global data to map out and discover how tree species in our region are dependent on the geography and climate of the area. Students will hike though our local temperate forest to observe and examine multiple tree species first-hand. Students objectives include: ● Comparing climate data and maps to better understand NJ's climate ● Studying biome maps to determine our local forest type ● Participating in "the tree factory game" to better understand photosynthesis and the movement of water and nutrients through trees ● Comparing evergreen and deciduous trees, their relationships to biomes, and how they are affected by the seasons and climate ● Identifying native evergreen and deciduous trees while hiking in a forest

A Sense of Place in NJ (Maps and Topography)	4th-5th	What is topography or a physiographic region? Our nature center and much of South Jersey are located in the physiographic region called the coastal plain. Students will participate in several activities that interpret topography and its impact on the coastal plain. Students objectives include: ● Creating a simple 3-D model to better understand topography ● Practicing reading topographic maps of our local area and the Rancocas Creek Watershed to look for local landmarks and other physical features ● Comparing sediment maps and a timeline to explore the relationship between time, the ground underneath our feet, and the correlation to physiographic regions ● Experiencing topography first-hand by using an elevation app and comparing and graphing data while on a trail hike
Energy and Cycles in Nature	5th	Ever wonder how energy cycles through nature? Students will participate in an interactive exploration into the flow of energy focusing on photosynthesis, the food web, and the carbon cycle. Active learning and exploration of nature center trails encourages students to better understand interdependent relationships that define an ecosystem. Student objectives include: ● Participating in "the tree factory game" to better understand photosynthesis and the movement of water and nutrients through trees ● Role-playing a carbon molecule moving through the carbon cycle ● Creating a food web, addressing trophic levels, and searching for real examples in nature ● Acting out the roles of predators and prey to discover biomagnification and its effects on the food web **Case study: Learn about the impact of DDT on the Bald Eagle and other raptors and compare data to see how the Endangered Species Act and the Clean Water Act helped restore their populations.*
Nature Center Discovery *(Choose your own adventure!)*	K-5th	*Choose your own adventure by mixing and matching any of the above programs to tailor the perfect visit for all your nature education needs. Program duration can be adjusted to fit your time requirements.*

Program Pricing

Kindergarten - 2nd Grade	3rd – 5th Grade
● 1 ½ to 2-hour program/visit is $12 per student ($150 minimum) ● 3-hour program/visit is $13 per student ($185 minimum)	● 2-hour program/visit is $12 per student ($150 minimum) ● 3-hour program/visit is $13 per student ($185 minimum) ● 4-hour program/visit is $14 per student ($220 minimum)

***Grade levels are suggested, but most programs can be adapted to fit your grade level needs.

***Program durations can be adapted to fit into your daily schedule.

***In addition to the programs listed, we can tailor a program to the natural history topic of your choice. Possible topics include, but are not limited to: pollination, tracking, survival, decomposition, skull and bone identification, macro-invertebrate sampling, and pollution.

***We can travel to you! Most programs can be presented at your facility.

***Feel free to use our picnic area for lunch at no extra cost. (We just ask that you take your trash and recyclables with you as we are a "carry in, carry out" park, thanks!)

To schedule a program, please email education@rancocasnaturecenter.org, thank you!