

NJSOC Class Descriptions 2022-23

The Environmental Sciences

Fish Ecology

This hands-on field-oriented class introduces students to the field of ichthyology, a branch of zoology that concentrates on the study of fish. Students will learn to appreciate the scientific, historical, aesthetic, and recreational values associated with fish. All participants will actively engage in the capture, identification, weighing, measuring and release of the fish in Lake Wapalanne. The ecological importance of fish, threats to their populations, and conservation measures will be summarized.

Herpetology

Herpetology is the study of reptiles and amphibians. This session is a practical field and classroom approach to understanding reptiles and amphibians, particularly frogs and salamanders. Session activities include a brief discussion of the similarities and differences between reptiles and amphibians and their value to the wildlife community. Students will have the opportunity to look for and collect live specimens of the different species of frogs and salamanders on SOC grounds. Field guides and taxonomic keys will be used to identify the various species that are collected. The session will end with a discussion of the importance of herptiles in natural communities, the threats they face, and what each of us can do to minimize those threats.

Interpretive Hike

This free-form session takes advantage of whatever is of interest during a hike through Stokes State Forest. Anything and everything is addressed on these student-lead hikes. Topics of discussion inevitably include plant-animal interactions, nutrient recycling, soil building, wildlife micro-habitats, evolution and coevolution, natural selection, forest regeneration, invasive species and much more.

Water Ecology

This is one of our most popular sessions. This session is a quality approach to water as a key human resource. Session activities include a brief description of water on the planet and how it relates to all life and a survey of stream water quality using water test kits and aquatic organism sampling. The majority of the class is conducted on the Big Flatbrook during spring and fall.

Wildlife Ecology

This session concentrates on the inherent values of wildlife in our current culture and the critical interface that exists between wildlife and human populations. The importance of wildlife species to the survival of human populations in both the past and present is stressed. Important ecological processes carried out by wildlife species are covered as well as an examination of specific human/wildlife interactions. Activities in this session include: an exploration hike to observe native wildlife in their natural habitats, a food pyramid and web simulation, and a habitat search for wildlife signs.

Wildlife Skull Stories

Although skulls are common to all vertebrates, they vary from species to species, and even among individuals of the same taxonomic group. Knowing what to look for—both the similarities and the differences—can provide a fascinating perspective on how animals are related, what they eat, how they avoid being eaten, how they're responding to ecological change, and where our own species fits into the evolutionary picture.

Web of Life

An exciting game of predator and prey. Students simulate how the food pyramid operates in nature. As herbivores, omnivores and carnivores, they scavenge the NJSOC campus in search of their basic needs while avoiding predators, humans, pesticides, etc. In addition to learning about the structure of survival and bioaccumulation, students learn that everything is connected, everything goes somewhere, nature knows best, and there is no such thing as a free lunch. These make up what Barry Commoner called, "The Four Laws of Ecology." Group size: 30+ needed

The Social Sciences

Early American Woodworking

The overall purpose of this session is to give students a feeling for early American use of wood and forest resources, as well as an understanding of the implications of this use in influencing our contemporary attitudes toward forest resources. Typical activities include:

- a discussion of wood crafts which may at one time have been important to the participants' home community
- a display of various objects relating to these crafts
- a brief survey of five to six trees significant to early American woodworkers
- a demonstration of several primitive woodworking tools
- an opportunity for participants to use these tools to fashion their own wood artifact

Metalsmithing

The folklore behind early American metalsmithing and the ecological dilemma of today are combined to provide a unique look at the problems that have faced our nation for nearly two centuries. Students will experience the joy of bending and hammering red-hot metal in blacksmithing and fashioning tin in whitemithing as they produce an artifact of colonial America. Consideration will be given to consumptive uses of non-renewable, yet recyclable, resources and some of the environmental impacts of mining. Please wear a long-sleeved shirt and long pants.

Pioneer Life

Situated in a 19th-century hand-hewn log cabin, this session focuses on daily living skills and history of pre-industrial America. Discussion centers on providing living necessities, particularly food and shelter (housing and clothing). Activities such as cornbread preparation and an exterior and interior cabin analysis illustrate how necessities were provided for in pre-industrial times. Comparisons are drawn between the environmental impacts of the pre-industrial lifestyle and our present lifestyle, with special emphasis put on different sources of energy, and renewable and nonrenewable resources use.

The Humanities

Conservation Photography

Capturing images of the natural world is one of the most pleasurable and rewarding ways students can express their feelings about the environment artistically. For many students who struggle with drawing, painting and other methods for creating art, photography provides a workable medium that allows them to be creative and expressive. The advent of digital photography has opened a new door into visual creativity, providing tools for self-expression that were formerly unavailable to all but the most accomplished artisan. This session introduces the students to the artistic power and potential of photography to change the way we interact with the natural environment, through the creation of inspirational images of the natural world.

Voices from the Land

Based on a program designed by the Monarch Teacher Network, this class encourages students to engage all their senses to develop/increase their knowledge, appreciation and respect for the environment. Students briefly explore a natural area, reflect on the available natural materials and create a work of ephemeral landscape art using only materials provided by nature. They interpret their artwork, giving it a voice, through creative writing. Research reveals there is an ancient and intimate connection between language and landscape found in all cultures throughout the world. Voices projects allow students to develop their inherent gifts as artists, orators, writers, and performers while developing respect for nature, other people, and other cultures.

The Outdoor Pursuits

Adventure / Challenge Activities

Classes in this area are intended to help students build confidence individually and in groups. Teamwork, critical and creative thinking, and increased social skills are the primary objectives of these sessions.

Action Socialization Experience/ Group Initiatives

An ASE is a problem-solving situation that stimulates immediate participation in the activity. These experiences encourage small groups of students to cooperatively decide on a solution to a carefully designed problem and then carry out their plan of action as quickly and efficiently as possible. Participation may be timed, with students given approximately 15 minutes at each

station. As a result, the students realize that through communication and cooperation they are able to solve numerous challenges.

Wilderness Education Activities

The main objective of these lessons is to develop outdoor skills. These are skills that will allow students to enjoy our natural resources with minimum impact.

Survival

Staying alive in the woods requires one to remain calm and make the best possible use of what is available in the area to obtain the basic necessities of life. Although the emphasis is on basic survival concepts, shelter building, starting a fire, finding drinking water, and foraging for food are among some of the subjects that may be covered.

Hiking

No matter what the season, there are many things to be seen while walking the trails of Stokes State Forest. A New Jersey School of Conservation staff member will help you plan a hike based on the needs and abilities of your group. An all-day hike can be arranged to meet your needs in any one of the four teaching areas or a combination of: the Sciences, Humanities, Social Studies, or Outdoor Pursuits. An all-day hike emphasizing Outdoor Pursuits may include trail techniques, emergency preparedness, as well as some natural history interpretation. Have students bring their own day-packs and water bottles on hikes when lunches are carried.

Outdoor Recreational Activities

The primary objective of these activities is to introduce and begin to build skills in outdoor sports that students can continue to enjoy for a lifetime. Because the emphasis is on fun, we must be aware of those times when the weather conditions are too severe for the activity to be enjoyable. Alternative plans for indoor activities are advised.

Archery

The major part of this session concentrates on teaching shooting skills. Safety is emphasized at all times during the course of the lesson. Archery is not available during the winter months.

Boating

Although the major emphasis of this session will be on canoeing, the proper use of rowboats will also be covered. In canoeing, a variety of skills can be taught, including proper techniques for loading and unloading from a dock, carrying, as well as various paddle strokes. This session is intended to give students an opportunity to experience canoeing or row boating in a recreational rather than an academic setting.