

Meeting the NYS Learning Standards through...

Nassau BOCES Ecology Programs: Pond, Field, and Forest

Children need to know about the living environment. At the pond, field, and forest, they can:

- Observe living things at various stages of development (life cycles, succession)
- Observe, collect, count, and sort living and non living specimens and identify them
- Observe the effects of pollution and weather on living things and on their basic life functions
- Discuss how environments change over time in response to disturbances
- Observe techniques used for eating, eliminating, breathing, reproducing, self protecting, moving about.
- Note predator/prey relationships and identify herbivores, carnivores, and omnivores (food chains/webs)
- Note differences among similar species and how certain behavioral (migration) and physical (mouth or foot structure) adaptations give them a survival advantage.

Children need to know about the earth as a physical system

At the pond, field, and forest they can observe:

- Watersheds and the characteristics of ponds and lakes
- The effects of the movement of the earth (daily and seasonal changes: migration, leaf color change)
- The difference between the chemical (photosynthesis) and physical changes (trees losing leaves)
- The differences in observable properties
- How the sun's energy is used by humans, plants and animals
- The effects of air and water on the land (erosion, deposition, weather, succession)
- The properties of water and the effects of temperature on water (temperature, salinity, dissolved oxygen, pH, and the water cycle)
- The relationship between biotic and abiotic factors in the pond, field, and forest

Children need to know about environmental processes/systems and about the environment and society.

At the pond, field and forest, they can observe and discuss:

- How human behavior affects the pond field and forest (pollution from pesticides and fertilizers, recreational activities)
- How the environment affects human activity (careers, restoration projects, weather and storms, location of homes, and what types of foods are available to us)
- The use of inventions and technological innovations (weather and navigation tools)
- The availability and limitations of renewable and non renewable natural resources, and how to conserve them (water, air)
- Human choices regarding the preservation of at risk areas, endangered species, invasive species, etc.

Children need to develop questioning and analysis skills.

At the pond, field and forest they can do this by:

- Using their senses
- Making observations and recording data
- Using resources (maps and models)
- Using instruments such as thermometers, dissolved oxygen meters, and microscopes.

For more information about providing these experiences for your students at the BOCES Outdoor Education Center at Caumsett State Historic Park or other local areas, please call 516-396-2264.