

Dyken Pond Environmental Education Center School Field Trip Programs

Innovative STEAM field investigations are offered for students in pre-school through high school. All activities are designed to meet Next Generation Science Standards and are inquiry based. We partner with Cornell Cooperative Extension and use many of their research-based science curricula. Programs may be tailored to meet the needs of the teacher and audience and can be adapted for various grades. Choose one program per class. Three classes maximum per field trip.

Fee: \$3 per student. No charge for chaperones with school groups. <u>Please inquire about field trip scholarships.</u> Spend the day with us! We can customize the day to fit your bus schedule. Bring a picnic lunch and end the day with fun environmental games.

Program Descriptions:

Preschool – 2nd Grade

Five Senses Adventure

Description: Students will develop their powers of observation, the starting point of all scientific inquiry. Focus on a sense of awe in nature while on an interpretive hike that uses the outdoors and discovery as a teaching catalyst. LS1-1, 2-LS4-1

Pond Investigation

Description: Enjoy a fascinating day at the edge of the water. Use dip nets and magnifiers and be prepared to be amazed at who you find living in the pond. Focus on the wonder of pond life or life cycles and adaptations. LS1-1, 1-LS3-1, 2-LS4-1

Interesting Insects

Description: Capture, identify and release forest and field insects. Use insect nets, magnifiers and field guides to study insect adaptations, life cycles and learn why they are so important to all life on the planet. LS1-1&2, 2-LS4-1

Animal Adaptations

Description: Investigate the forest and lake edge on a short walk. Learn about mammals and birds who live here, their habitats and special adaptations they may have. K-LS1-1, K-ESS2-2, 2-LS4-1

Environmental Games

Take time out to just play and have some fun! Each game teaches an environmental lesson about animal adaptations or habitats. Note: If you bring two classes for the day, we will include games after lunch.

Pond Investigation: Life Cycles and Adaptations

Description: Collect, identify and compare macroinvertebrates and amphibians using dip nets, identification charts and magnifiers. Focus on either the water cycle and the importance of clean water for life or animal life cycles and adaptations to their habitat. 3&4-LS1-1, 3-LS4-3, 5-LS2-1

Seed to Soil: The Life Cycle of Trees

Description: Investigate the life of a tree from seed to soil on a short walk. Identify parts of a tree and their functions. Discover how trees are recycled into soil and nutrients made available for new plant growth. 3-LS4-3, 4&5-LS1-1,

Wildlife Walk

Description: Investigate the forest and lake edge on a short walk. Learn about mammals and birds who live here, their habitats and special adaptations they may have. You may also choose to study one animal in particular including bats, birds, beavers, or another of your interest. 3-LS4-3, 4-LS1-1, 5-LS2-1

Forest Ecology

Description: Use an increment borer to take a core sample from a tree to determine its age. Look at growth rings and connect photosynthesis to annual growth. Optional math activity: use Biltmore sticks to measure height and diameter of trees to see how much wood is needed to build a house. 3-LS4-3, 4-LS1-1, 5-LS2-1

Water Cycle

<u>Description:</u> Follow the Incredible Journey of a single rain drop to find out where most of the planet's water is located._Discover the importance of water to plants, animals and humans. 3-LS3-2, 4-LS1-1, 5-LS1-1

Wonderful Wetlands

Description: Dyken Pond Center is home to a variety of fascinating wetlands including one called a fen (similar to a bog). Visit the fen and compare its characteristics to the forest. Compare and contrast through observation to determine how it differs from the forest. Discover a carnivorous plant living there and how native people used plants for survival. 3-LS4-3, 4-LS1-1, 5-LS2-1

Food Chains

Description: Students will learn about an aquatic or forest food chain and how energy flows throughout an ecosystem. Visit a wetland to observe pitcher plants, carnivorous plants that are backwards on the food chain! 5-PS3-1, 5-LS2-1

Map and Compass

Description: Explore the forest while learning a new skill. Begin by reviewing how to use a compass in an open field. Divide into small exploratory teams to navigate a short forested course. 4-ESS2-2

Middle and High School, including AP Environmental Science and Biology

Aldo Leopold Education Project

Description: Excerpts will be read in advance from Aldo Leopold's <u>A Sand County Almanac</u>. This program will combine excellent literary prose with an interactive activity and discussion of land ethics and conservation. Requires pre-visit lessons. ELA R1.8.8, MS-LS2-5

Water Quality and Aquatic Ecology

Description: Analyze biotic and abiotic factors while comparing differences in water ecology between a lake, pond. Sampling equipment may include a plankton net, secchi disc, thermometers, benthic sampler, microscopes, dissolved oxygen test and pH test. Data will be collected and interpreted. Can be adapted for most grades and AP classes. MS & HS-LS2

Forest Ecology

Description: Compare deciduous and coniferous communities found at Dyken Pond Center; use an increment borer to age a tree and collect basic information on the growth patterns of trees. Biltmore sticks may be used to collect data on height and diameter of trees. All data collected will be interpreted by students. Can be adapted for most grades and AP classes. MS & HS-LS2

Is it a Marsh, Swamp or Bog?

Description: Field Investigation comparing two different wetlands. Students will be challenged to define each ecosystem based on collecting data on biotic and abiotic factors. MS-LS2-1, HS-LS2-2

Wildlife and Trail Cameras

Description: How can we use actual photographs captured on our network of wildlife trail cameras to give us real scientific data that is useful? Analyze photographs to determine when deer, fisher and otter are most active. Create graphs to organize and interpret collected data. MS-LS2-1 & 2, HS-LS2-1 & 2

Teamwork and Team Play

Description: Groups participate in a series of challenges that create situations that will stimulate creative thinking, positive group dynamics, leadership development, and have each group working together to collectively solve problems.

All Grade Levels

Build your own!

Don't see the program you would like offered here? Give us a call and we'll do our best to tailor a program to meet your group's unique needs.

Interpretive Hike

Description: Explore the ecology of the area through seasonal interpretation. Choose a focus for the hike from the program descriptions listed above or choose wildflowers, wildlife, forest plants or birding.

Environmental Games

Take time out to just play and have some fun! Each game teaches an environmental lesson about animal adaptations or habitats. Note: If you bring two classes for the day, we will include games after lunch.

Contact Information:

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