

Educator's Guide



Exploring the Natural World: Grades pre K - 8
(Central Connecticut)



Dear Educator,

For over 60 years Connecticut Audubon Society teacher-naturalists have been sharing their passion and knowledge of our natural world with classrooms around the state -- empowering students to become better environmental stewards and fostering a life-long interest in science.

The goals of our education programs, which are at the heart of Connecticut Audubon Society's mission, are to:

- Assist educators in implementing the State Board of Education science curriculum guidelines in their classrooms
- Assist students as they develop skills in science and research through hands-on, inquiry-based learning.

Cognizant of the limited resources and transportation issues that exist in every school district, we deliver many of our educational programs directly in local schools - whether in the classroom or on school grounds. Transportation budgets permitting, we also lead outdoor field trips at one of our local nature facilities.

In central Connecticut, our local facility and source of teacher-naturalists is the Connecticut Audubon Society Center at Glastonbury, which has been providing science-based nature programming to schools in the region for over 25 years. The Center at Glastonbury features over 30 live animals, over 100 animal mounts, and sits adjacent to Earle Park, a 48-acre sanctuary with a variety of habitats including forests, meadows, Tom's Pond, Holland Brook, and the Connecticut River. This rich diversity provides students a wealth of opportunities to for learning about the environment.

We hope that you will take a moment to review the programs listed in this brochure. We are confident you will find programs that will assist you in meeting the state framework and that will supplement your text books and foster a sense of real-world science and stewardship of the environment in your students.

Contact and registration information are found at the end of the brochure. We look forward to hearing from you and to tailoring a curriculum that meets your needs.

Sincerely,

Cynthia Bartholomew

Cynthia Bartholomew
Director

Kasha Breau

Kasha Breau
Naturalist-Teacher

Natural World Education for Grades pre K-8



Central Connecticut

The following programs introduce students to the natural world while cultivating their observational and problem-solving skills. These programs and others are offered at the Connecticut Audubon Society Center at Glastonbury, at your school, or at another suitable field site. Programs include outdoor activities unless noted. Programs are offered through the year, unless noted. Abbreviations used: Sp = Spring; Su = Summer; F = Fall; W = Winter. A grade-appropriate range follows each program title, although our naturalists can adapt to different grade levels and requirements. The letter-number codes for each offering reference the applicable Standards of the Connecticut Science Framework, which are reproduced at the end of the program listing.



ADAPTATIONS (5-8)

Take a close look at a Connecticut food web with live animal guests in your class. See how an oak tree affects everything from squirrels to red tailed hawks. Learn how each of our animals has special adaptations that help it survive in the wild.

B INQ.1, B INQ. 5, 6.2, C5, C6



ANIMALS FROM THE CENTER (Animal Kingdom)

(Pre-K – 3)

Learn about different animal families. Find out how to care for them and how these animals differ from cats and dogs. Program can be customized to meet your curriculum needs.

A INQ.1, A INQ.4, K.2 1.2, A4, A14, B3, B4

BIRDS OF A FEATHER (2-6) (indoors only)

Investigate the overall classification of birds and then look more closely at particular species. Examine physical features of birds, listen to calls, and look at nests to better understand bird behavior, family life, and habitats. Mounted specimens, bird calls, puppets and related games may be used to provide a multi-sensory experience.

B INQ.1, B INQ 4, 1.2, 3.2, A4, A12, B3, B4

BIRDS OF PREY (2-8)

Get up close and personal with live raptors, mounted specimens, and props to learn about the special adaptations of raptors and the role they play in ecosystems. Refer to the FEES section for the additional cost of this program.

B INQ.1, 1.2, 3.2, 4.2, 6.2, B3, B11, C5, C6



BIRDS: BEAKS, BILLS AND FEET (3-5)

After an introductory discussion of bird adaptations, students take part in a trial-and-error, problem solving activity to determine which tool (and by analogy, which type of bird beak) works best with different food resources. Bird mounts provide real examples of different beak types, and lead to a discussion about the relationship of beak type to food preference.

B INQ.1, B INQ.4, 1.2, A4, A12, A14, B3, B4

“CRIME” SCENE INVESTIGATION (CSI) (3-6)

There is evidence of recent wildlife activity in our yard. By discussing food webs and investigating the clues left behind, students will solve the “crime” and find how easy it is to read signs from nature. Offered only at the Audubon Center.

B INQ.1, B INQ.4, B INQ.9, 1.2, B10, 6.2, C5, C6

DON'T BUG ME! (Minibeasts) (K-6) (Sp, Su, F)

Learn about the characteristics that distinguish insects from other organisms. Examine and identify the parts of insects vs. arachnids, and learn about the phenomenon of metamorphosis. Classes that come to the Audubon Center will visit a stream, forest or field, and use magnifying glasses and nets to find the “bugs” that inhabit the Connecticut River Valley.

B INQ.1, B INQ 4, 1.3, 3.2, A15, B3

FUR, FEATHERS AND SCALES (K-5) (Skin and Bones)

Observe several live animals and examine mounts, skins, and feathers. In the process, learn to identify, compare and contrast specific characteristics of different animal species. Use the findings to categorize the animals.

B INQ.1, B INQ 4, 1.2, 3.2, A4, A14, B3, B4

GIMME SHELTER (2-5)

Uncover the secrets of life in an animal shelter by studying the materials and architecture used in a beehive, spider web, and bird’s nest to see how similar human structures are to those in nature. Find out what materials animals use to build their shelters and where they build them. Offered only at the CT Audubon Center.

B INQ.1, 3.2, 4.2, A9 B3, 6.2

LET IT ROT! (4-6) (Sp, Su, F)

See what happens at the end of the life cycle by surveying a rotted log for evidence of organisms such as millipedes, centipedes, snails, sow bugs, earthworms, and fungi. Related activities teach students about food chains, and

the important, dynamic role of decomposers in the natural world. Offered only at the Audubon Center.

B INQ.1, C INQ.5, 6.2, C6, A12



LET’S ROOT FOR PLANTS (K-2)

Understanding plants is an integral part of understanding the environment. Through hands-on activities using seeds, leaves, tree sections and other plant parts, students will learn the basics of plant life.

A INQ.1, A INQ.9, 1.2, 2.2, 6.2, A13, A19, C4

LIFE CYCLES OF THE POND (1-8) (Sp, Su, F)

Venture into Earle Park to reach Tom’s Pond and Holland Brook, a tributary of the Connecticut River. Use nets and buckets to collect a sampling of organisms. Examine specimens and learn about the importance of food chains and other relationships between plants and animals that share a common habitat. Related activities teach students about the phenomenon of metamorphosis. This 1½ hour program is offered only at the Audubon Center.

B INQ.1, B INQ 4, 1.3, 4.2, A5, A15, A16, B10



LIFE UNDERGROUND (2-5) (Sp, Su, F)

Take a look at the unusual animals that are usually found beneath the ground. Find out which animals dwell there, how they live and move around in their dark tunnels, where they find their food, and how they hide from predators. Students experience the conditions within an animal underground home when they go inside the Center’s portable “burrow.” Offered only at the Audubon Center.

B INQ.1, A4, B3, 4.2, 6.2

LIVING/NONLIVING (K-2)

What do all living things have in common? Students will be able to identify the characteristics and needs of living things, and compare them to nonliving things in the world around them.

K.2, K.2a, 1.2, A6, A12, B10, C4, 3.2, 4.2

NATIVE AMERICANS ALONG THE CONNECTICUT RIVER (1-3) (Indoors only)

Handle some genuine Native American artifacts and learn how they were made. Play games that native children played, learn songs and dances, and listen to the stories that have kept their traditions alive. Activities introduce and explain how Native Americans made use of natural resources.

B INQ.1, A9, A24

SEEDS IN YOUR CEREAL (1-3)

What did you have for breakfast? Did you eat seeds today? A fun look at your breakfast examines the relationship of where our food comes from and how it is grown.

A INQ. 9, 1.2, A13, A19, A20

SEEDS ON THE MOVE (K-2)

Through a story and games, students learn how seeds travel, grow and provide for survival of their species. Classes that visit the Audubon Center will hunt for seeds in our forest and field and will compare the differences in how seeds travel.

A INQ.4, A13, A19, A20, B3, B4, 1.2, 3.2

SHAKE RATTLE, AND ROLL (3-6) (Indoors only)

Emphasis will be on glaciations and the geology of central Connecticut. Through song and dance, find out why the earth quakes and volcanoes erupt. Offered only at the Audubon Center.

3.3, B5, B6

SKULLS AND SKELETONS (3-8) (Indoors only)

Get an inside-out view of mammals by handling real skulls. Students will explore the relationship between the skulls of carnivores, omnivores, and herbivores and their food preferences. Different types of teeth and their functions are studied. Older students will learn how to use a dichotomous key to identify animal skulls.

B INQ. 9, B INQ. 4, B3

STRICTLY SEASONAL (Pre K-2)

Take a close look at nature and search for clues of plant and animal activity first hand. Depending on the season, the program may focus on seeds and how they travel, and how animals get ready for winter; how animals cope with winter; or the rebirth and growth of plants and animals.

A INQ. 1, A INQ. 2, A INQ.4, K.2, 1.2, 1.3, A19, 4.2, B11

WILD NIGHTS (2-5)

Under the cover of night, another world wakes up when we go to bed. Become enlightened about the creatures of the dark by learning who they are and how they are adapted to nocturnal life.

B INQ. 1, B3, 3.2, 6.2, C5, C6

WONDERS OF THE WOODS (K-3)

An Introduction to the Woodland Habitat. Students will discuss woodland communities and habitats; learn the various layers of the forest, identify some plants and animals that live in each layer, and discuss the importance of woods. They will go outside to observe and interact with nature and may adopt a class tree.

A INQ. 4, B INQ. 1, K.2, A4, 1.2, 2.2, A19, 3.2, B3, 4.2, B11, 6.2, C6

JUST FOR YOU

Our naturalists can work with you to adapt existing programs or to design a new program to meet your curriculum needs.



References from the Connecticut State Department of Education, Core Science Curriculum Framework: Core Themes, Content Standards and Expected Performances

A INQ.1 Make observations and ask questions about objects, organisms and the environment.

A INQ.2 Use senses and simple measuring tools to collect data.

A INQ.3 Make predictions based on observed patterns.

A INQ.4 Read, write, listen and speak about observations of the natural world.

A INQ.6 Present information in words and drawings.

A INQ.9 Count, order, and sort objects by their properties.

K.2 Many different kinds of living things inhabit the earth.

A4. Describe the similarities and differences in appearance and behavior between animal groups.

A5. Describe the similarities and differences in the appearance and behavior of adults and their offspring.

A9. Describe the types of materials used by people to build houses, and the properties that make the houses useful.

1.2 - Living things have different structures and behaviors that allow them to meet their basic needs – air, water, and food.

A12. Describe different ways that animals obtain water and food.

A13. Describe the different structures plants have for obtaining water and sunlight.

A14. Describe the structures that animals use to get around.

1.3 – Organisms change in form and behavior as part of their life cycles.

A15. Describe the changes in organisms as they undergo metamorphosis.

A16. Describe the life cycles of organisms that grow but do not metamorphose.

2.2 – Plants change their forms as part of their life cycles.

A19. Describe the lifecycles of flowering plants as they grow from seeds, proceed through maturation, and produce new seeds.

A20. Explore and describe the effects of light and water on seed germination and plant growth.

2.3 – Earth materials have varied physical properties which make them useful in different ways.

A21. Sort different soils by their properties, such as particle size, color and composition.

A22. Relate the properties of different soils to their capacity to retain water and support the growth of certain plants.

B INQ.1 Make observations and ask questions about objects, organisms and the environment.

B INQ.4 Employ simple equipment and measuring tools to gather data and extend the senses.

B INQ. 5 Use data to construct reasonable explanations.

B INQ.9 Use measurement tools and standard units (e.g. centimeters) to describe objects and materials.

3.2 – Organisms can survive and reproduce only in environments that meet their basic needs.

3.3 -Earth materials have different physical and chemical properties

B3. How animals are adapted to obtain air, food, water and protection on land.

B4. How animals are adapted to obtain air, food, water and protection in water.

4.2 – All organisms depend on the living and non-living features of the environment for survival. When the environment changes, some organisms survive and reproduce and others die or move to new locations.

B10. Describe how animals, directly or indirectly, depend on plants to provide the food and energy they need order to grow and survive.

B11. Describe how natural phenomena and some human activities may cause changes to habitats and their inhabitants.

C INQ.5 Use appropriate tools and techniques to make observations and gather data.

C INQ.8 Draw conclusions and identify sources of error.

6.2 An ecosystem is composed of all the populations that are living in a certain space and the physical factors with which they interact.

C5. Explain how populations are affected by predator-prey relationship.

C6. Describe common food webs in CT ecosystems.

Scheduling Your Program

HOW TO REGISTER

To register for a program, please call CAS Center at Glastonbury (860) 633-8402, Tuesday through Friday, 10:00 a.m. to 5:00 p.m., and Saturday, 10:00 a.m. to 5:00 p.m.

Program dates are filled on a first-come basis. We offer classes Monday - Saturday year-round. Programs should be scheduled at least two weeks in advance. Since some seasons fill quickly, early registration increases your chances of getting the programs and dates you desire. After registration, you will receive written confirmation.

Directions to our Center are on the next page.

You can also visit www.ctaudubon.org/visit/glastonbury.

Please have the following information at hand when you call:

- Name of teacher responsible for the group and an evening phone number
- Names of other teachers who will be participating
- Name, address and phone number of your school
- Name and place of program(s) you wish to schedule
- Preferred dates and alternate dates for scheduling
- Arrival and departure times: programs are one hour long. If you are coming to our Center, we recommend planning on 1 ½ hours per visit.
- Grade level and number of your students
- Special educational or physical needs of your students
- Directions to your site, if applicable

FEES

Programs at our Center cost \$6 per student, with a minimum fee of \$60 (transportation not included). There is a sliding fee scale for multiple presentations of the same program scheduled on the same day at your site:

- One program - \$130 plus mileage at IRS rate
- Second hour – additional \$120 (same program in a row)
- Third hour –additional \$110
- 45-minute programs - \$105
- 30-minute programs - \$90

Birds of Prey (one hour, 3 birds) - \$200 plus mileage

Please add \$25 for 1 1/2-hour programs at the Audubon Center.

DEPOSITS, REFUNDS AND CANCELLATIONS

For each program, a \$50 deposit is required to hold your reservation and is due within two weeks of your request. If you are unable to keep a scheduled program date, please notify us as soon as possible. Programs cancelled with at least one month's notice will receive 50% credit on their deposit. Programs will be held rain or shine, although severe weather cancels. We will make every attempt to reschedule programs cancelled because of severe weather.

TYPES OF PROGRAMS

We offer a variety of environmental programs that can be adjusted for age-appropriateness. We can also tailor a special program for any specific need you may have. Programs are 60 minutes. Because of the interactive nature of our programs, maximum class size is 25 students. Most programs at our Center include time outdoors, so students should dress appropriately for the weather.

CONNECTICUT FRAMEWORK STANDARDS

Our programs follow the National Science Standards and the CT Science Framework. The Framework is the basis of the Connecticut Mastery Test Science Component. Our lessons will give your students a competitive edge with the hands-on and problem-solving portions of the science component of the CMTs.



Complement Your Science Curriculum

The Connecticut Audubon Society Center at Glastonbury is conveniently located in central Connecticut, and serves schools throughout the region with an extensive range of environmental programs. We offer:

- Customized programs that complement your science curriculum.
- A learning experience enriched with hands-on classroom and outdoor activities.
- An opportunity for your students to develop respect for the environment and enjoyment of our natural world.

Directions to CAS Center at Glastonbury 1361 Main Street, Glastonbury, CT 06033

From Hartford: Take Rt. 2 East to Exit 7 (left exit to Rt. 17 south - Portland/South Glastonbury); follow Rt. 17 south for 2.5 miles and continue through the intersection with a traffic light. The Center is on the right, just past the Gilmore Manor home.

From Middletown: Go east on Rt. 66 to Rt. 17 North; follow through South Glastonbury center and proceed on Rt. 17 about 1.5 miles further. The Center will be on your left just after the cemetery.

About Connecticut Audubon Society

Founded in 1898, Connecticut Audubon Society (CAS) conserves Connecticut's environment through science-based education and advocacy focused on the state's bird populations and habitats. CAS operates nature facilities in Fairfield, Milford, Glastonbury and Pomfret as well as an EcoTravel office in Essex and an Environmental Advocacy office in Hartford. CAS manages 19 wildlife sanctuaries around the state, preserves over 2,600 acres of open space in Connecticut and educates over 200,000 children and adults annually. Working exclusively in the state of Connecticut for over 100 years, Connecticut Audubon Society is an independent organization, not affiliated with any national or governmental group.

Contact Connecticut Audubon Society Center at Glastonbury

Telephone: (860) 633-8402 Fax: (860) 657-4228

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You can also check our website at www.ctaudubon.org/visit/glastonbury.htm