



Duration

30-45 minutes

Location

North Barn on Flanders Road or Sugar House on Church Hill Road

Supplies- Can use binoculars

Standards

Teachers: Your field trip to the farm or pond easily connects to Next Generation Science Standards. We create an opportunity for students to compare farm life from the past to a farms contribution to our community today. We can custom design programs to meet your needs.

Flanders Education Office
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www.flandersnaturecenter.org

OBSERVATIONS ON THE HAYRIDE

Grade Level/Range: Grades K-5

OBJECTIVE

- Our scenic hayride provides students an opportunity for observations of wildlife, seasonal changes and evidence of our past. Our tractor pulling a wagon acts as a classroom on wheels and allows students to focus on the landscape to be inspired to ask questions, collect and document data for journal entries and science investigations. Our fields, meadows, wetland and forest provide diverse habitats for viewing wildlife and help develop our stewardship role in a changing planet.
- Each highlight along the hayride route assists in connecting and enhancing Next Generation Science Standards.

STONEWALLS

Every historic stone wall is an archaeological artifact, and serves as animal habitat, an ecological boundary, a rock collection, and an aesthetic object. Used as fences and borders, each is the work of colonial and early American farmsteads built by Euro-settlers and their descendants since 1607.

ROCK BOULDERS-EVIDENCE OF THE ICE AGE

The Earth's climate began cooling around 35 million years ago (Cenozoic Era), but glaciation in the northern hemisphere began only 3-5 million years ago. During this time, Connecticut was covered by ice. The big

rounded rocks you see were carried by ice and put down as the glacier melted more than 10,000 years ago.

THE OLD APPLE ORCHARD

In the 1600s, apples made their way to North America, some of these apples were very good for eating and cooking, most of the early varieties would be considered poor quality today. Often, they were used for cider, and the ground-up apples were fed to livestock.

A Massachusetts man, John Chapman, became famous for planting trees throughout Ohio, Indiana, and Illinois. You might know him by his nickname, "Johnny Appleseed."

EASTERN BLUEBIRDS

Male Eastern Bluebirds are vivid, deep blue above and rusty or brick-red on the throat and breast. Females are grayish above with bluish wings and tail, and a subdued orange-brown breast. Eastern Bluebirds live in meadows and openings surrounded by trees that offer suitable nest holes for cavity nesters. Bluebirds are secondary cavity-nesters, meaning their beaks are not strong enough to excavate their own nests. With the construction of nest boxes and our bluebird trail, bluebirds are now a common sight at Flanders. You will see both males and females working together to raise the baby birds.



TWIN SHAGBARK HICKORY TREES

Scientific Name: *Carya ovata*

It's easy to see how shagbark hickories got their name! Their trunks are characterized by long, peeling strips of bark. Some animals make their homes in snug crevices beneath the loose bark. Hickories are deciduous trees, so when autumn arrives, their leaves turn pale green to yellowish-brown before falling to the ground. Hickory nuts are consumed by a variety of animals, both gray squirrels and chipmunks flourish in this area thanks to these trees.

MILKWEED FOR MONARCH BUTTERFLIES

The meadow is bursting with life which includes nesting birds, mammals and insects. Many butterflies have a single plant required as a food source for their larval form and is referred to as a host plant. Milkweed is the host plant for the monarch butterfly. Without milkweed, the larva would not be able to develop into a butterfly

Adult monarchs feed on the nectar of many flowers, but they breed only where milkweeds are found.

WETLAND HABITAT

From the top of the hill you can see lily pads, a beaver's lodge, cattails and other wetland plants creating perfect habitat for aquatic species. Canada geese, red winged blackbirds and mallard ducks are just a few potential bird observations along with turtles, frogs and dragonflies. What you can't see is the value of wetland filtering out pollutants and creating clean water for this generation...and the next.

TEACHER RESOURCES

For Stonewalls

The Stonewall Initiative

<http://stonewall.uconn.edu/>

For Rocks and Connecticut Geology

Yale-New Haven Teachers Institute-Geology of Connecticut

<http://teachersinstitute.yale.edu/curriculum/units/1995/5/95.05.01.x.html>

For Apple Orchard

National Geographic History of Apples

<http://theplate.nationalgeographic.com/2014/07/22/history-of-apples/>

For Bluebirds

CT DEEP Eastern Bluebird factsheet

<http://www.ct.gov/deep/cwp/view.asp?a=2723&q=325966>

North American Bluebird Society

<http://www.nabluebirdsociety.org/>

Cornell school of Ornithology

https://www.allaboutbirds.org/guide/Eastern_Bluebird/id

For Hickory Trees

National Wildlife Federation Wildlife Library

<http://www.nwf.org/Wildlife/Wildlife-Library/Plants/Shagbark-Hickory.aspx>

For Milkweed and Monarchs

USDA Forest Service

https://www.fs.fed.us/wildflowers/pollinators/Monarch_Butterfly/habitat/

For Wetland

Department of Environmental Protection, US. Fish and Wildlife Service National Wetlands Inventory

<https://www.fws.gov/northeast/ecologicalservices/pdf/WetlandsofConnecticut.pdf>

SUGGESTED READING BEFORE YOUR FIELD TRIP

National Science Teachers Association (NSTA) Outstanding Science Trade Books

<http://www.nsta.org/publications/ostb/>

Egg: Nature's Perfect Package Kindle Edition
by Robin Page (Author), Steve Jenkins

Eyewitness Explorer: Nature Ranger (Eyewitness Explorers)
by DK (Author)

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<http://www.nextgenscience.org/>