



EDUCATION PROGRAMS CATALOG

*Hands-on, feet-wet,
experiential learning for all ages*

The Eno River Association is a local leader in providing outdoor environmental education and natural resource conservation programs. Since the 1970s, the Association has published journals, calendars, and articles exploring and promoting the Eno's historic roads, mills, communities, and food ways. The Association's special events and educational program include guided & interpreted hikes, youth education programs, a 5K race, and more. These education programs are a critical step in our mission to conserve and protect the natural, cultural, and historic resources of the Eno River basin.

The following educational programs are available through the Eno River Association and are delivered by our staff or cadre of trained education volunteers.

- Programs are customizable to the group's interests, and in many cases multiple activities can be combined into one session. If you cannot find what you are looking for contact us as we can often customize an offering to meet your educational needs and the Association's mission.
- Many programs align with [NC Education Standard Course of Study](#) curriculum, and can be used to enhance this course-work through experiential and hands-on learning. We have marked this alignment in the program description and in the last section of this document (page 18).
- Age restrictions are set in the interest of safety and enjoyment of program participants, please respect and follow our guidelines.
- Location of activities are noted in the descriptions, and most activities are best conducted on a field trip to the Eno River. The activity description will list if that activity can be brought to your group's location not on the Eno, noted as "outreach option."

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

Program Fees:

We aim to keep our programs accessible for all, and program fees are set significantly below our direct costs. If the fee is a barrier to your participation, please let us know and we will work with you.

- The cost for each program is \$30 per hour (for a group of up to 10), prorated by the half hour and invoiced prior to the program.
- Digital learning programs are available at no charge through YouTube, Vimeo & the Association website. Descriptions & links are included below.
- [Eno River Association Members](#) receive a reduced hourly rate.

To schedule your group's program:

e-mail education@enoriver.org

or

call (919) 620-9099 extension 1204

COVID-19 SAFETY PRECAUTIONS – Group sizes are limited to 10 for educational programs and 15 for volunteer youth stewardship projects. All participants must wear face coverings over their mouth and nose. We will come to your facility provided that safe distancing and use of face coverings are practiced. All participants and parents of minors must sign a waiver of liability. When handling of equipment and supplies is necessary, we will provide hand sanitizer.

Updated 10/20/2020

IN-PERSON PROGRAMS BY AGE LEVEL



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Water Quality, Chemistry, & Resources	Page 10
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Age Level	6	7	8	9	10	11	12	13	14	15	16	17+
Bacon Quarry Guided Hike												
Buckquarter Creek Guided Hike												
Build a Beaver Dam												
Candid Critters												
Eno Hikes												
Eno Topics												
Enviroscape												
Exploring Wetlands												
Fanny Breeze Homesite Hike												
Fantastic Fishes Adventure												
Frogs of the Night												
Geology Trail Adventures <i>4 options</i>												
Go with the Flow												
High-Tech Bat Survey												
Holden Mill History Guided Hike												
Insect Expedition												
Investigating Erosion												
Mind Your Ps & Hs												
Mineral Medley												
Project Wet												
Project Wild												
Ranger Tales												
Reptile & Amphibian Safari												
Saving the Eno												
Sediment: The "S" Word												
The Ever-flowing Eno												
The Notorious Eno												
Tree Detective												
Tree Hike												
Water Bugs												
Wildflower Hike												
Wishes for Fishes												
Youth Conservation & Stewardship	Projects vary by age											

Some programs cover more than one topic area and may be listed in multiple sections.

A NOTE ABOUT EARLY CHILDHOOD EDUCATION – Environmental education for children ages 3-6 is often best through nature play and crafts – things that let them interact and use their senses. We are happy to set up programs that meet your group’s needs for young children. Please contact us to discuss what works best.

To schedule your group’s program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.



WILDLIFE BIOLOGY

CANDID CRITTERS: outreach option, 1 hour, ages 8-15

This activity is based around the wild mammal study the Eno River Association participated in through the NC Wildlife Resources Commission using camera traps. Participants use sight and touch to test their identification skills of native wildlife with photographs from the study, furs, skulls, scat, and tracks. Everyone becomes more familiar with wild mammals found along the Eno.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.L.3)
- High School Biology (2.1.3)

EXPLORING WETLANDS: at the Eno only, 1-2 hours, ages 14+

Wetlands are an important filter for the Eno River. We visit easily accessed wetlands in the Few's Ford area and discover the flora and fauna that thrive in these conditions and talk about the importance of wetlands.

Aligns to NC Education Standards

- High School Biology (2.1.1, 2.1.3, 2.1.4)
- High School Earth & Environmental Science (2.4.1, 2.4.2, 2.7.1, 2.7.2, 2.7.3)

FANTASTIC FISHES OF THE ENO ADVENTURE: on the Eno River and tributaries only, 2 ½ hours, ages 11+, April - October

There are more than 60 species of fish that call the Eno River home. Wade into the water with seine nets and fish traps alongside our educators, capturing, identifying, and learning life history. During cooler seasons we have waders for most participants.

Also check out our video adventure on Page 6.

Aligns to NC Education Standards

- 8th Grade Science (8.E.1.3 & 8.L.3)
- High School Biology (2.1.3)
- High School Earth & Environmental Science (2.4.1, 2.4.2, 2.7.1, 2.7.2, 2.7.3)

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

FROGS OF THE NIGHT: at the Eno only, 1 ½ hours, ages 8+, April – September

Capturing and identifying frogs and toads after dark through spotlighting. Learn their calls and life history. Flashlights and headlamps provided.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.L.3)
- High School Biology (2.1.3)
- High School Earth & Environmental Sciences (2.7.1, 2.7.2, 2.7.3)

HIGH-TECH BAT SURVEY: outreach option, 90 minutes, ages 11+, maximum 12 participants, May – September

Using portable computerized Echo-Location equipment participants can detect and graphically display the echo-location sounds of nearby bats, which cannot be heard by the human ear. The programming identifies the species. Instructor provides information about the life history of bats local to the Eno River Valley.

Aligns to NC Education Standards

- 8th Grade Science (8.L.3)
- High School Biology (2.1.3, 2.2.1)
- High School Earth & Environmental Sciences (2.7.1, 2.7.2, 2.7.3)

INSECT EXPEDITION: at the Eno only, 1 ½ hours, ages 8+, May- September

Survey the wide variety of insects in the fields and forests of the Eno using sweep and aerial nets. Learn identification and life history. Use special viewers to see the world through insect eyes. For our younger participants we add a drawing component with colored pencils to help them key in on the anatomy of their captured specimens.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.L.3)
- High School Earth & Environmental Sciences (2.7.1, 2.7.2, 2.7.3)

PROJECT WILD: outreach option, 1 hour 15 minutes, ages 8-12

Students will play three games that teach the wildlife and ecological concepts of predator/prey relationships, limiting factors, adaptation, food chain, pesticide accumulation in the food chain, and habitat.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)

REPTILE AND AMPHIBIAN SAFARI: at the Eno only, 2 ½ hours, ages 8+, April - October

Come along with our educators as we search the forest, creeks, and river for reptiles and amphibians. Learn techniques herpetologists use in field surveys as we identify and discuss the life history of what we find. Emphasis on safety for the creatures and the participants. All handling equipment provided.

Also check out our video safari on Page 7.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.L.3)
- High School Bio (2.1.3, 2.1.4)
- High School Earth & Environmental Sciences (2.7.1, 2.7.2, 2.7.3)

WATER BUGS: at the Eno only, 1 hour, ages 8+, April – October

This is a shoes and hands wet activity. Tiny creatures under the loose rocks of the Eno have a story to tell about the cleanliness of the water. In this activity participants kicknet to capture small *macroinvertebrates* (water bugs), identify them, and use them to calculate an index of river quality. We also discuss factors necessary for a healthy river ecosystem and life cycles of aquatic insects.

Aligns to NC Education Standards

- 3rd Grade Science (3.E.2.1)
- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.E.1.3 & 8.L.3)
- High School Bio (2.1.3, 2.2.1, 2.2.2)
- High School Earth & Environmental Science (2.4.1, 2.4.2, 2.7.1, 2.7.2, 2.7.3)

WISHES FOR FISHES: outreach option, 45 minutes, ages 6 -12

Participants get a lesson on the external parts of fish anatomy using the Roanoke Bass, a fish found native only to the Eno/Neuse and Tar River basins. Then using the Japanese art of Gyo-taku we all make fish prints using life size silicone models of fish native to the Eno and label the parts for a poster that participants may take home.

Complete the program by watching the Fantastic Fishes of the Eno Video prior to attending (see below).

Aligns to NC Education Standards

- 1st Grade Science (1.L.1 & 1.L.2)
- 2nd Grade Science (2.L.1)
- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)

FREE DIGITAL LEARNING PROGRAMS

ENO RIVER COLORING PAGES: suitable for all ages but recommended for ages 4-8

These downloadable color pages created by artist Joe Liles celebrate the diversity of life on the Eno River. Each page features flora or fauna including American Raccoon, Yellow Belly Slider, Pond Hawk Dragonfly, Pinxter Azalea, Eastern Swallowtail Butterfly, Eastern Fence Lizard, and more.

<http://www.enoriver.org/eno-coloring-pages/>

FANTASTIC FISHES OF THE ENO VIDEO: 27 minutes, all ages

Enjoy this YouTube video of the Association's Education Department on an adventure to capture and learn about some of the fascinating fish in the Eno River.

*A great pre-program for *Wishes for Fishes above*.*

<https://www.youtube.com/watch?v=xegrxHhsDWk&t=217s>

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.L.3)

OF ROCK AND WATER VIDEO: 28 minutes, all ages

Take a video tour with Association educators to this place unique within the Eno River Basin. We explore the ecology that has emerged in the abandoned Bacon Rock Quarry. It is a look at how the disturbances of man have been taken over by nature, fascinating creatures, and beautiful flowers. A bonus geology lesson included. <https://www.youtube.com/watch?v=VZd6ZmCNED0>

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 6th Grade Science (6.E.2.3)
- 8th Grade Science (8.E.2.2)
- High School Earth & Environmental Science (2.2.1)

REPTILE AND AMPHIBIAN SAFARI VIDEO: 21 minutes, all ages

Enjoy this fast-paced YouTube Video of Association Education Coordinator Dave Cook searching the forest and creeks of the Eno for our native reptiles and amphibians. He discusses the identification and life histories of his fascinating finds and demonstrates techniques for field surveys.

<https://www.youtube.com/watch?v=7oKzXyupK3Y&t=84s>

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.L.3)



GEOLOGY AND SOILS

BACON QUARRY GUIDED HIKE: at the Eno only, 3 ½ hours, ages 11+

In the northern part of Eno River State park is an abandoned rock quarry. Opening up the ground exposed stories of the geology that formed the land. It is a 5.8-mile hike to the quarry and back with a half mile off trail, through open forest. Along with the geology we will talk about the historical operations and show the ecology formed as nature reclaims the disturbance.

Aligns to NC Education Standards

- 6th Grade Science (6.E.2.3)
- 8th Grade Science (8.E.2.2)
- High School Biology (2.2.1, 2.2.2)
- High School Earth & Environmental Science (2.1.3, 2.2.1, 2.7.1, 2.7.3)

GEOLOGY TRAIL ADVENTURES: at the Eno only, ages 12+

See the geologic story of the Eno happening first-hand on a guided hike of the trails. Learn the forces at work that shape the river and form the basis of the hydrologic and biological systems and human history of this river basin.

Cox Mountain and Fanny's Ford: 5 miles, 3 hours

Buckquarter Creek and Holden Mill: 4.1 miles, 2 ½ hours

Cabelands and Eno Quarry: 2.4 miles, 1 ½ hours

West Point on the Eno: 2 miles, 1 hour 15 minutes

Aligns to NC Education Standards

- 8th Grade Science (8.E.2.2)
- High School Bio (2.2.1, 2.2.2)
- High School Earth & Environmental Science (2.1.3, 2.7.1, 2.7.3)

INVESTIGATING EROSION: outreach option with an outside area, 1 hour, ages 8-13

We need six-weeks' notice to prepare this program because we have to grow grass in a bottle for our erosion experiment. This is followed by a walk around the river or grounds documenting and drawing maps of soil erosion. Includes a lesson on how soil erosion affects water quality.

Aligns to NC Education Standards

- 3rd Grade Science (3.E.2.1)
- 4th Grade Science (4.E.2.3 & 4.L.1)
- 8th Grade Science (8.E.1.3 & 8.L.3)

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

MINERAL MEDLEY: outreach option, 1 hour, ages 9-15

Identify a variety of minerals by hardness, streak test, color, and shape, and magnetism. We relate these tests to minerals from Oconeechee Mountain.

Aligns to NC Education Standards

- 4th Grade Science (4.E.2.3)
- 6th Grade Science (6.E.2.3)
- 8th Grade Science (8.E.2.2)

FREE DIGITAL LEARNING PROGRAMS**OF ROCK AND WATER VIDEO: outreach only, 28 minutes, all ages**

Take a video tour with Association educators to this place unique within the Eno River Basin. We explore the geology in the abandoned Bacon Rock Quarry, what it tells us about the land, and why it led to quarrying. And we look at the ecology that has emerged once operations ceased.

<https://www.youtube.com/watch?v=VZd6ZmCNED0>

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 6th Grade Science (6.E.2.3)
- 8th Grade Science (8.E.2.2)
- High School Earth & Environmental Science (2.2.1)



WATER QUALITY, CHEMISTRY, AND RESOURCES

BUILD A BEAVER DAM: outreach option with an outside area, 45 minutes, ages 8-12

Participants use the materials a beaver has to try to construct a miniature dam that will hold water. Each participant gets to make their own dam. We discuss the reasons a beaver makes a dam and the impact on the habitat that makes them a keystone species. If we do this at the Eno we can add a 20 walk to see signs of beavers along the river.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)

ENVIROSCAPE: outreach option with an outside area, 30 minutes, ages 6-13

Using plastic landscape models, participants will build a community on the terrain, then add simulated fertilizers, sediment, and other man-made substances to see what happens with rain and runoff.

Program pairs well with Sediment: The “S” Word on page 11.

Aligns to NC Education Standards

- 1st Grade Science (1.E.2) and Social Studies (1.G.2)
- 2nd Grade Science (2.G.2)
- 4th Grade Science (4.L.1)
- 8th Grade Science (8.E.1.3 & 8.L.3)

GO WITH THE FLOW: at the Eno only, 1 hour, ages 8+, April – October

This is a shoes and hands wet activity. Water flow affects the life in the river. Participants learn a simple method for determining river flow. They will learn how river flow and water quality are affected by people and nature, and test out how barriers affect flow.

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.E.1.3 & 8.L.3)
- High School Bio (2.2.1, 2.2.2)
- High School Earth & Environmental Science (2.4.1, 2.4.2, 2.7.1, 2.7.2, 2.7.3)

INVESTIGATING EROSION: outreach option with an outside area, 1 hour, ages 8-13

See full listing in Geology & Soils Section, page 8.

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

MIND YOUR Ps AND Hs: outreach option, 45 minutes, ages 8-13

pH of the water is critical to what life survives and thrives in the Eno River. In this activity participants use litmus paper and pH test kits to discover and record the pH of river water and a range of household products. They will compare the results to ranges that support aquatic life. We discuss natural and human influences of river pH.

Aligns to NC Education Standards

- 3rd Grade Science (3.E.2.1)
- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.E.1.3 & 8.L.3)

PROJECT WET: outreach option, 1 hour 15 minutes, ages 8-13

Students play three games that illustrate movement and forms of water within the water cycle; illustrate how multiple users of water resources affect quality and quantity; examines the complexity of providing water to multiple users; learn the major components and movement of water in a water shed; compare variation in amounts of water flowing due to climate; and create a hydrograph.

Aligns to NC Education Standards

- 3rd Grade Science (3.E.2.1)
- 4th Grade Science (4.L.1)
- 5th Grade Science (5.L.2)
- 8th Grade Science (8.E.1.3)

SEDIMENT: THE “S” WORD: outreach option, 20 minutes, ages 6-13

Participants learn to measure sediment using Imhoff cones, how sediment affects aquatic life, origins of sediment in the Eno, possible ways to control sedimentation, and the most important cause of stream degradation in North Carolina.

Program pairs well with Enviroscope on page 10.

Aligns to NC Education Standards

- 1st Grade Science (1.E.2 & 1.L.1)
- 3rd Grade Science (3.E.2.1)
- 4th Grade Science (4.L.1)
- 8th Grade Science (8.E.1.3 & 8.L.3)

WATER BUGS: at the Eno only, 1 hour, ages 8+, April – October

See full listing in Wildlife Biology Section, page 4.



LOCAL HISTORY

BUCKQUARTER CREEK TRAIL GUIDED HIKE: at the Eno only, 2 hours, ages 7+

Early settlement of Piedmont North Carolina happened along the Eno River. This 1.5 mile hike stops at several early home, mill, and farm sites with stories of North Carolina and American history. We visit the restored Piper-Cox house, the decaying Anthony Cole place, and the sites of mills, fords, and colonial roads.

Aligns to NC Education Standards

- 3rd Grade Social Studies (3.H.1.1 & 3.G.1.3)
- 4th Grade Social Studies (4.H.1.1, 4.G.1.2, 4.G.1.4)
- 5th Grade Social Studies (5.H.1 & 5.G.1.2)
- 7th Grade Social Studies (7.G.1.1)
- High School Bio (2.2.1)
- High School Earth & Environmental Science (2.2.1)

THE EVER-FLOWING ENO: outreach option, 30 – 60 minutes, suitable for all ages but recommended for 16+

Former Eno River State Park Superintendent Dave Cook will entertain and educate your group with the Eno River Story from its origin to the present.

Aligns to NC Education Standards

- High School Bio (2.1.4, 2.2.1, 2.2.2)
- High School Earth & Environmental Sciences (2.7.3)

FANNY BREEZE HOMESITE HIKE: at the Eno only, 2 hours, ages 10+

From enslavement to freedom, in the 1800's Fanny Breeze became a much beloved person in the Eno River Valley, serving as a midwife to the entire community. She was a Black member of a White church congregation at a time that was rare, and she was key in founding a church for local Black neighbors. This guided hike takes you to her home place looking down on the Eno River. Here we hear stories of her life. It is 2.7 miles round trip on state park trails.

Also check out our Fanny Breeze & Beverly Scarlett videos on page 13.

Aligns to NC Education Standards

- 5th Grade Social Studies (5.H.1.1)
- 6th Grade Social Studies (6.H.2)
- 8th Grade Social Studies (8.H.2, 8.H.3, 8.C.1.3)

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

HOLDEN MILL HISTORY GUIDED HIKE at the Eno only, 3 ½ hours, ages 11+

This 5-mile hike includes a mile of off trail scrambling through the woods. We visit the ruins of the Holden Mill and the Holden Mill homeplace and farm. North Carolina history comes alive with stories of early settlement on the river and the Governor who emerged from the Holden family.

Aligns to NC Education Standards

- 8th Grade Social Studies (8.H.3 & 8.G.1.3)
- High School Bio (2.2.1)
- High School Earth & Environmental Science (2.2.1)

THE NOTORIOUS ENO: outreach option, 60 minutes, ages 16+

Best told around a campfire. Events of mystery & mayhem, danger, daring, disaster & death, and the supernatural that have happened on the Eno from the 1770's to the present. You know it as a peaceful respite, but lurking in the shadows...

Check out the Ghost of Cole Mill Video for an example of stories from this program on page 14.

RANGER TALES: outreach option, outreach option, 30 – 60 minutes, suitable for all ages but recommended for 14+

Former Eno River State Park Superintendent Dave Cook tells true stories from his 16 years as a ranger on the river. Get the inside scoop on the funny and tragic, the bizarre and the inspiring. Every day is an adventure when a ranger goes to work.

SAVING THE ENO: outreach option, 20 - 30 minutes, all ages

In the 1960's the Eno River was threatened with a dam. Hear about how a small band of neighbors rose up and convinced Durham not to build the dam and North Carolina to create a state park on the river. In the early years these ideas were not popular and local citizens fought hard, and sometimes fought dirty to stop the fledgling Eno River Association who then went on to fend more dire threats to the river.

Aligns to NC Education Standards

- 1st Grade Social Studies (1.G.2)
- 2nd Grade Social Studies (2.G.2)
- 3rd Grade Social Studies (3.G.1.3)
- 4th Grade Social Studies (4.G.1.2)
- 5th Grade Social Studies (5.G.1.2)
- 7th Grade Social Studies (7.G.1.1)
- High School Biology (2.2.2)

FREE DIGITAL LEARNING PROGRAMS

BEVERLY SCARLETT – A SHORT DOCUMENTARY VIDEO: outreach only, 5 minutes, all ages however parents should be prepared to explain the history of slavery to young viewers
Beverly Scarlett who has lived her whole life close to the Eno, traces her family back to the former slave Levi Scarlett and relates some of the African American experience in the Eno River valley. On YouTube at <https://www.youtube.com/watch?v=IWEh7HxVYtg>

A great companion to our Fanny Breeze Homestead Hike on page 12.

Aligns to NC Education Standards

- 2nd Grade Social Studies (2.C.1)
- 3rd Grade Social Studies (3.C.1)
- 5th Grade Social Studies (5.C.1.4)
- 8th Grade Social Studies (8.C.1.3)

A BREEZE ACROSS THE FORD VIDEO: outreach only, 26 minutes, all ages however parents should be prepared to explain the history of slavery to young viewers

From enslavement to freedom, in the 1800's Fanny Breeze became a much beloved person in the Eno River Valley, serving as a midwife to the entire community. She was a Black member of a White church congregation at a time that was rare, and she was key in founding a church for local Black neighbors. Association historians talk about her and take you to key places in her life in this YouTube video.

<https://www.youtube.com/watch?v=OFegEyDMMY0&t=96s>

A great companion to our Fanny Breeze Homestead Hike on page 12.

Aligns to NC Education Standards:

- 3rd Grade Social Studies (3.H.1.2)
- 4th Grade Social Studies (4.H.1.3)
- 8th Grade Social Studies (8.C.1.3)

ENO RIVER SUITE VIDEO: outreach only, 9 minutes, all ages

The history of the Eno River Valley told in stirring song and inspiring video. Written and performed by John Bachmann. On YouTube at <https://www.youtube.com/watch?v=72PyTROqdbU>

Aligns to NC Education Standards:

- 4th Grade Social Studies (4.G.1.1)

THE GHOST OF COLE MILL VIDEO: outreach only, 13 minutes, ages 10 and up

A tragic 1880 mill accident leads to ghostly sightings on the Eno. The story is told on the place where it happened. Includes some basic mill operation information. See it on YouTube at <https://www.youtube.com/watch?v=IlxAvPQtIGk>

If you like this spooky content, check out the Notorious Eno program option on page 13.



BOTANY

EXPLORING WETLANDS: at the Eno only, 1-2 hours, ages 14+

See full listing in Wildlife Biology Section, page 4.

TREE DETECTIVE: at the Eno only, 1 hour, ages 8-12, April - November

Participants use clues and specially designed guides to guess the aliases and real names of native trees on Eno River State Park. Encourages observation in learning tree characteristics that help with identification. Requires a ½ mile walk on park trails.

Aligns to NC Education Standards

- 3rd Grade Science (3.L.2)
- 6th Grade Science (6.L.1)

TREE HIKE: at the Eno only, 1 - 2 hours, ages 8+

Schedule an Eno River tree identification trail hike with our knowledgeable hike leaders. These can be tailored by time, length, season, location, and difficulty of trail and for looking for specific varieties of trees.

Aligns to NC Education Standards

- 3rd Grade Science (3.L.2)
- 6th Grade Science (6.L.1 & 6.L.2.3)
- 8th Grade Science (8.L.3)
- High School Biology (2.1.1, 2.1.3, 2.1.4, 2.2.1, 2.2.2)
- High School Earth & Environmental Sciences (2.7.1, 2.7.2, 2.7.3)

WILDFLOWER HIKE: at the Eno only, 1 - 3 hours, ages 7+, March – October

Schedule an Eno River wildflower trail hike with our knowledgeable hike leaders. These can be tailored by time, length, and difficulty of trail and for looking for specific varieties of flowers.

Aligns to NC Education Standards

- 3rd Grade Science (3.L.2)
- 6th Grade Science (6.L.1 & 6.L.2.3)
- 8th Grade Science (8.L.3)
- High School Biology (2.1.1, 2.1.3, 2.1.4, 2.2.1, 2.2.2)
- High School Earth & Environmental Sciences (2.7.1, 2.7.2, 2.7.3)

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.



EXPLORING THE ENO

BACON QUARRY GUIDED HIKE: at the Eno only, 3 ½ hours, ages 11+

See full listing in Geology & Soils Section, page 8.

ENO HIKES: at the Eno only, 45 minutes – 3 hours, ages 11+

Guided trail hikes from the Confluence Natural Area to the lower Eno game lands and everything in between. Go with our knowledgeable hike leaders who will show you the trails and spice it up with a variety of information about the valley's nature, management, history, and legend. Hikes can be as short as ½ mile and long as 5 miles.

ENO TOPICS: outreach options, 30-60 minutes, all ages

Schedule our education volunteers and staff to speak to your group about specific Eno topics:

Hiking trails, natural resource management, conservation efforts, camping, fishing, outdoor recreation, canoeing/kayaking, etc.

Aligns to NC Education Standards

- High School Earth & Environmental Science (2.8.4) – conservation efforts program

FREE DIGITAL LEARNING PROGRAMS

OCCONEECHEE MOUNTAIN REFLECTIONS VIDEO: outreach only, 18 minutes, all ages

A short introduction to Occoneechee Mountain by producer Ernie Sears. History, geology, nature, and people combine to make it the park we love today. See it on Vimeo at

<https://vimeo.com/377897997>

Aligns to NC Education Standards

- 3rd Grade Science (3.E.2.2)
- 4th Grade Science (4.E.2.3 & 4.L.1)
- 6th Grade Science (6.E.2.3)
- 8th Grade Science (8.E.2.2)
- High School Earth & Environmental Science (2.1.3, 2.2.1)

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

OF ROCK AND WATER VIDEO: outreach only, 28 minutes, all ages

Take a video tour with Association educators to this place unique within the Eno River Basin. We explore the geology in the abandoned Bacon Rock Quarry, what it tells us about the land, and why it led to quarrying. And we look at the ecology that has emerged once operations ceased.

<https://www.youtube.com/watch?v=VZd6ZmCNED0>

Aligns to NC Education Standards

- 4th Grade Science (4.L.1)
- 6th Grade Science (6.E.2.3)
- 8th Grade Science (8.E.2.2)
- High School Earth & Environmental Science (2.2.1)



YOUTH CONSERVATION AND STEWARDSHIP

Our education volunteers and staff lead groups of youth (ages 17 and under) volunteers under your supervision doing important conservation work on the Eno. This includes trail construction, exotic invasive plant removal, trash clean up, and more. Projects are varied by age appropriateness generally lasting 1-4 hours.

To schedule your group's program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

NC EDUCATION STANDARD COURSE OF STUDY

Many Eno River Association programs are aligned with [NC Education Standard Course of Study](#) curriculum, and can be used to enhance this course-work through experiential and hands-on learning. The quick reference guide for The North Carolina Standard Course of Study is a resource for teachers as they plan instruction to implement the North Carolina Standard Course of Study across multiple content areas. [Each grade-level guide can be accessed here.](#)

Below, we outline how our program curricula aligns to specific lessons. Our education team is also able to adapt program to meet curricula or topics outside of these standards. Please let us know during the booking processes what your needs are.

First Grade - Science

1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.

- Enviroscope
- Sediment: The “S” Word

1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.

- Wishes for Fishes
- Sediment: The “S” Word

1.L.2 Summarize the needs of living organisms for energy and growth.

- Wishes for Fishes

1.G.2 Understand how humans and the environment interact within the local community.

- Enviroscope
- Saving the Eno

Second Grade – Science

2.L.1 Understand animal life cycles

- Wishes for Fishes

2.G.2 Understand the effects of humans interacting with their environment.

- Enviroscope
- Saving the Eno

2.C.1 Understand how various cultures influence communities

- Beverley Scarlett – A Short Documentary Video

Third Grade - Science

3.E.2 Compare the structures of the Earth's surface using models or three-dimensional diagrams

3.E.2.1 Compare Earth's saltwater and freshwater features (including oceans, seas, rivers, lakes, ponds, streams, and glaciers)

- Investigating Erosion
- Mind your Ps and Hs
- Project WET
- Sediment: The "S" Word
- Water Bugs

3.E.2.2 Compare Earth's land features (including volcanoes, mountains, valleys, canyons, caverns, and islands) by using models, pictures, diagrams, and maps.

- Occoneechee Mountain Reflections Video

3.L.2 Understand how plants survive in their environments

- Tree Detective
- Tree Hike
- Wildflower Hike

Third Grade – Social Studies

3.H.1 Understand how events, individuals and ideas have influenced the history of local and regional communities.

3.H.1.1 Explain key historical events that occurred in the local community and regions over time.

- Buckquarter Creek Trail Guided Hike

3.H.1.2 Analyze the impact of contributions made by diverse historical figures in local communities and regions over time

- A Breeze Across the Ford Video

3.G.1 Understand the earth's patterns by using the 5 themes of geography: (location, place, human environment interaction, movement and regions).

3.G.1.3 Exemplify how people adapt to, change and protect the environment to meet their needs.

- Saving the Eno
- Buckquarter Creek Trail Guided Hike

3.C.1 Understand how diverse cultures are visible in local and regional communities.

- Beverley Scarlett – A Short Documentary Video

Fourth Grade - Science

4.E.2 Understand the use of fossils and changes in the surface of the earth as evidence of the history of Earth and its changing life forms

4.E.2.3 Give examples of how the surface of the earth changes due to slow processes such as erosion and weathering, and rapid processes such as landslides, volcanic eruptions, and earthquakes

- Investigating Erosion
- Mineral Medley
- Occoneechee Mountain Reflections Video

4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats

- Build a Beaver Dam
- Candid Critters
- Enviroscope
- Frogs of the Night
- Go with the Flow
- Insect Expedition
- Investigating Erosion
- Mind your Ps and Hs
- Project WET
- Project WILD
- Reptile and Amphibians Safari
- Sediment: The “S” Word
- Water Bugs
- Wishes for Fishes
- Fantastic Fishes of the Eno Video
- Oconeechee Mountain Reflections Video
- Of Rock and Water Video
- Reptile and Amphibian Safari Video

Fourth Grade – Social Studies

4.H.1 Analyze the chronology of key historical events in North Carolina history.

4.H.1.1 Summarize the change in cultures, everyday life and status of indigenous American Indian groups in North Carolina before and after European exploration

- Buckquarter Creek Trail Guided Hike

4.H.1.3 Explain how people, events and developments brought about changes to communities in various regions of North Carolina.

- A Breeze Across the Ford Video

4.G.1 Understand how human, environmental and technological factors affect the growth and development of North Carolina.

4.G.1.1 Summarize changes that have occurred in North Carolina since statehood (population growth, transportation, communication and land use).

- Eno River Suite Video

4.G.1.2 Explain the impact that human activity has on the availability of natural resources in North Carolina

- Saving the Eno

4.G.1.4 Explain the impact of technology (communication, transportation and inventions) on North Carolina’s citizens, past and present.

- Buckquarter Creek Trail Guided Hike

Fifth Grade - Science

5.L.2 Understand the interdependence of plants and animals with their ecosystem

- Build a Beaver Dam
- Candid Critters
- Frogs of the Night
- Go with the Flow
- Insect Expedition
- Mind your Ps and Hs
- Project WET
- Project WILD
- Reptiles and Amphibian Safari
- Water Bugs
- Wishes for Fishes
- Fantastic Fishes of the Eno Video
- Reptile and Amphibian Safari Video

To schedule your group’s program e-mail education@enoriver.org or call (919) 620-9099 extension 1204.

Fifth Grade – Social Studies

5.H.1 Analyze the chronology of key events in the United States.

5.H.1.1 Evaluate the relationships between European explorers (French, Spanish and English) and American Indian groups, based on accuracy of historical information (beliefs, fears and leadership).

- Buckquarter Creek Trail Guided Hike
- Fanny Breeze Homesite Hike

5.G.1 Understand how human activity has and continues to shape the United States.

5.G.1.2 Explain the positive and negative effects of human activity on the physical environment of the United States, past and present.

- Buckquarter Creek Trail Guided Hike
- Saving the Eno

5.C.1 Understand how increased diversity resulted from migration, settlement patterns and economic development in the United States

5.C.1.4 Understand how cultural narratives (legends, songs, ballads, games, folk tales and art forms) reflect the lifestyles, beliefs and struggles of diverse ethnic groups

- Beverley Scarlett – A Short Documentary Video

Sixth Grade - Science

6.E.2 Understand the structure of the earth and how interactions of constructive and destructive forces have resulted in changes in the surface of the Earth over time and the effects of the lithosphere on humans

6.E.2.3 Explain how the formation of soil is related to the parent rock type and the environment in which it develops

- Bacon Quarry Guided Hike
- Mineral Medley
- Occoneechee Mountain Reflections Video
- Of Rock and Water Video

6.L.1 Understand the structures, processes and behaviors of plants that enable them to survive and reproduce

- Tree Detective
- Tree Hike
- Wildflower Hike

6.L.2 Understand the flow of energy through ecosystems and the responses of populations to the biotic and abiotic factors in their environment

6.L.2.3 Summarize how the abiotic factors (such as temperature, water, sunlight, soil quality) of biomes (freshwater, marine, forest, grasslands, desert, Tundra) affect the ability of organisms to grow, survive and/or create their own food through photosynthesis

- Tree Hike
- Wildflower Hike

Sixth Grade – Social Studies

6.H.2 Understand the political, economic and/or social significance of historical events, issues, individuals and cultural groups.

- Fanny Breeze Homesite Hike

Seventh Grade – Social Studies

7.G.1 Understand how geography, demographic trends, and environmental conditions shape modern societies and regions.

7.G.1.1 Explain how environmental conditions and human response to those conditions influence modern societies and regions (e.g. natural barriers, scarcity of resources and factors that influence settlement).

- Buckquarter Creek Trail Guided Hike
- Saving the Eno

Eighth Grade - Science

8.E.1 Understand the hydrosphere and the impact of humans on local systems and the effects of the hydrosphere on humans

8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including: temperature, dissolved oxygen, pH, nitrates and phosphates, turbidity, bio-indicators

- Enviroscope
- Fantastic Fishes of the Eno Adventure
- Go with the Flow
- Investigating Erosion
- Mind your Ps and Hs
- Project WET
- Sediment: The “S” Word
- Water Bugs

8.E.2 Understand the history of Earth and its life forms based on evidence of change recorded in fossil records and landforms

8.E.2.2 Explain the use of fossils, ice cores, composition of sedimentary rocks, faults, and igneous rock formations found in rock layers as evidence of the history of the Earth and its changing life forms

- Bacon Quarry Guided Hike
- Geology Trail Adventures
- Mineral Medley
- Occonechee Mountain Reflections Video
- Of Rock and Water Video

8.L.3 Understand how organisms interact with and respond to the biotic and abiotic components of their environment

- Candid Critters
- Enviroscope
- Fantastic Fishes of the Eno Adventure
- Frogs of the Night
- Go with the Flow
- High-Tech Bat Survey
- Insect Expedition
- Investigating Erosion
- Mind your Ps and Hs
- Reptile and Amphibian Safari
- Sediment: The “S” Word
- Tree Hike
- Water Bugs
- Wildflower Hike
- Fantastic Fishes of the Eno Video
- Reptile and Amphibian Safari Video

Eighth Grade – Social Studies

8.H.2. Understand the ways in which conflict, compromise and negotiation have shaped North Carolina and the United States.

8.H.2.1 Explain the impact of economic, political, social, and military conflicts (e.g. war, slavery, states' rights and citizenship and immigration policies) on the development of North Carolina and the United States.

- Fanny Breeze Homesite Hike

8.H.3 Understand the factors that contribute to change and continuity in North Carolina and the United States.

- Fanny Breeze Homesite Hike
- Holden Mill History Guided Hike

8.G.1 Understand the geographic factors that influenced North Carolina and the United States.

8.G.1.3 Explain how human and environmental interaction affected quality of life and settlement patterns in North Carolina and the United States (e.g. environmental disasters, infrastructure development, coastal restoration and alternative sources of energy).

- Holden Mill History Guided Hike

8.C.1 Understand how different cultures influenced North Carolina and the United States.

8.C.1.3 Summarize the contributions of particular groups to the development of North Carolina and the United States (e.g. women, religious groups, and ethnic sectors such as American Indians, African Americans, and European immigrants)

- Fanny Breeze Homesite Hike
- Beverley Scarlett – A Short Documentary Video
- A Breeze Across the Ford Video

High School - Biology

Bio 2.1 Analyze the interdependence of living organisms within their environments

Bio 2.1.1 Analyze the flow of energy and cycling of matter (such as water, carbon, nitrogen, oxygen) through ecosystems relating the significance of each to maintaining the health and sustainability of an ecosystem

Bio 2.1.3 Explain various ways organisms interact with each other (including predation, competition, parasitism, mutualism) and with their environments resulting in stability within ecosystems

Bio 2.1.4 Explain why ecosystems can be relatively stable over hundreds or thousands of years, even though populations may fluctuate (emphasizing the availability of food, availability of shelter, number of predators and disease)

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|------------------------------------------------------|------------------------------------------------------|
| • Candid Critters (2.1.3 only) | • High-Tech Bat Survey (2.1.3 only) |
| • The Ever-Flowing Eno History (2.1.4 only) | • Reptiles and Amphibian Safari (2.1.3 & 2.1.4 only) |
| • Exploring Wetlands | • Tree Hike |
| • Fantastic Fishes of the Eno Adventure (2.1.3 only) | • Water Bugs (2.1.3 only) |
| • Frogs of the Night (2.1.3 only) | • Wildflower Hike |

Bio 2.2 Understand the impact of human activities on the environment (one generation affects the next)

Bio 2.2.1 Infer how human activities (including population growth, pollution, global warming, burning of fossil fuels, habitat destruction and introduction of nonnative species) may impact the environment

Bio 2.2.2 Explain how the use, protection and conservation of natural resources by humans impact the environment from one generation to the next

- Bacon Quarry Guided Hike
- Buckquarter Creek Trail Hike (2.2.1 only)
- The Ever-Flowing Eno
- Geology Trail Adventures
- Go with the Flow
- High-Tech Bat Survey (2.2.1 only)
- Holden Mill History Hike (2.2.1 only)
- Saving the Eno (2.2.2 only)
- Tree Hike
- Water Bugs
- Wildflower Hike

High School – Earth & Environmental Science

EEn. 2.1 Explain how processes and forces affect the lithosphere

EEn 2.1.3 Explain how natural actions such as weathering, erosion (wind, water, gravity) and soil formation affect Earth's surface

- Bacon Quarry Guided Hike
- Geology Trail Adventures
- Oconeechee Mountain Reflections Video

EEn. 2.2 Understand how human influences impact the lithosphere

EEn 2.2.1 Explain the consequences of human activities on the lithosphere (such as mining, deforestation, agriculture, overgrazing, urbanization, and land use) past and present

- Bacon Quarry Guided Hike
- Buckquarter Creek Trail Guided Hike
- Holden Mill History Guided Hike
- Oconeechee Mountain Reflections Video
- Of Rock and Water Video

EEn 2.4 Explain how humans use water

EEn. 2.4.1 Explain human influences on freshwater availability

EEn 2.4.2 Evaluate human influences on water quality in North Carolina's river basins, wetlands and tidal environments

- Exploring Wetlands
- Fantastic Fishes of the Eno Adventure
- Go with the Flow
- Water Bugs

EEn 2.7 Explain how the lithosphere, hydrosphere, and atmosphere individually and collectively affect the biosphere

EEn 2.7.1 Explain how the abiotic and biotic factors interact to create the various biomes in North Carolina

EEn 2.7.2 Explain why biodiversity is important to the biosphere

EEEn 2.7.3 Explain how human activities impact the biosphere

- Bacon Quarry Guided Hike (2.7.1 & 2.7.3 only)
- The Ever-Flowing Eno (2.7.3 only)
- Exploring Wetlands
- Fantastic Fishes of the Eno Adventure
- Frogs of the Night
- Geology Trail Adventures (2.7.1 & 2.7.3 only)
- Go with the Flow
- High-Tech Bat Survey
- Insect Expedition
- Reptile and Amphibian Safari
- Tree Hike
- Water Bugs
- Wildflower Hike

EEEn 2.8 Evaluate human behaviors in terms of how likely they are to ensure the ability to live sustainably on Earth

EEEn 2.8.4 Evaluate the concept of “reduce, reuse, recycle” in terms of impact on natural resources

- Eno Topics: Conservation Efforts (2.8.4)