## First Baptist Upper School

James Island Campus 2055 George Griffith Blvd. Charleston, SC



# CREATE

Christ Reveals, Educates, and Affirms Through the Environment

"But ask the animals, and they will teach you, or the birds in the sky, and they will tell you; or speak to the earth, and it will teach you, or let the fish in the sea inform you. Which of all these does not know that the hand of the LORD has done this? In His hand is the life of every creature and the breath of all mankind.

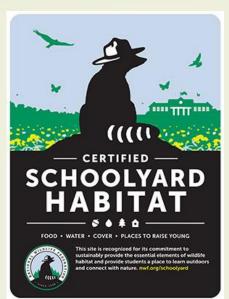
Job 12:7-10

# Schoolyard Wildlife Habitat

Since 1996, the National Wildlife Federation has worked to assist schools in the creation of Schoolyard Habitats®, which create and restore wildlife habitat on school grounds while providing outdoor classrooms for learning across the curriculum. There are currently over 5,000 schools and counting that have been certified through this program.



The Schoolyard Habitats® program was created to meet the growing interest and distinct needs of schools to assist school communities in the use of school grounds as learning sites for wildlife conservation and cross-curricular learning.



# The James Island Campus... An Opportunity to Create



After nearly 70 years at its downtown location, First Baptist School moved its high school students to a new campus on James Island.

The school acquired a **62 acre wooded track** on Riverland Drive, adjacent to the Stono River, and since 2013 has built a new athletic complex, performing arts center an 11,000-square-foot high school.

But the story does not end there! In fact, it's just beginning. A significant acreage of the campus contains open fields, a retention pond, and a mixed pine-hardwood forest that are being considered for the creation of a multi-faceted "outdoor classroom" through which teachers and students will enjoy enhanced learning opportunities through inter-curriculum use of this unique resource.





**62 acres** of <u>opportunities to</u> <u>create</u> a **one of a kind** educational resource for the students living in the Charleston area.



































































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Rocks? Why? From when? From where?

Scat? What animal?











Signs? Criters? What animal?

















## Who can use it?



- Every student and every teacher for every area of study
- Environmental sciences (biology, zoology, chemistry, ecology, limnology, hydrology, meteorology, geology)
- Mathematics & Physics (geometry, mapping, GPS, measuring, surveying, bio statistics)
- English & the Literary Arts (creative writing, poetry)
- Visual & Performing Arts (drawing, photography, dance)
- History (Land use from colonial period through the 20<sup>th</sup> century )
- Bible (creation evidence, parables, devotions, stewardship concepts)

# Creative Partnerships

Establish supportive partnerships with...









√ Coop Extension Service





- ✓ USCWMRD ✓ NOAA
- ✓ Etc. ✓ SFWS ✓ EPD
- ✓ SCWMRD ✓ SCS
- ✓ SC DHEC



✓ CofC

✓ TTC

✓ CSU

✓ CCU

Citadel

✓ Etc.





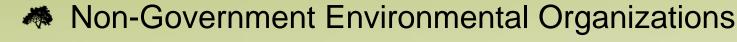






# Creative Partnerships





- ✓ NWF & SCWF
- ✓ Audubon Society
- ✓ SC Coastal Conservation League
- ✓ Center for Birds of Prey
- ✓ Charleston Museum
- ✓ Charleston Aquarium
- ✓ Charleston Area Beekeepers Association
- ✓ Lowcountry Master Gardener Association
- ✓ Nature Conservancy of South Carolina
- ✓ South Carolina Ducks Unlimited
- ✓ South Carolina Forestry Association
- ✓ South Carolina Association of Naturalists
- ✓ National Wild Turkey Federation
- ✓ Palmetto Conservation Foundation
- ✓ Etc.

















# Creative Partnerships

- Non-Government Organizations
  - ✓ SC Scouting Groups
  - ✓ SC Genealogical & Preservation Societies
  - ✓ SC Arts & Cultural Organizations
  - ✓ SC Battleground Preservation Trust
  - ✓ Archaeological Society of South Carolina













Project Wild - features 122 interdisciplinary activities, each designed to address specific grade levels and educational objectives. These activities are organized around major themes of wildlife populations; habitats, ecosystems and niches; changes and adaptations; interdependence; biodiversity; human dimensions and wildlife; wildlife issues and trends; and wildlife conservation.

ALL content is correlated to existing EE standards of the North American Association for Environmental Education's (NAAEE) Excellence in Environmental Education

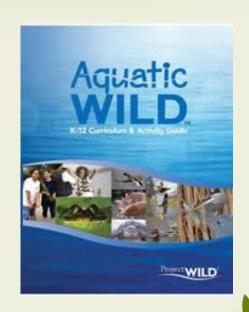
Workshops can be scheduled to train and certify teachers on how to incorporate these activities into their respective class curriculum.



Project Aquatic Wild - invites students to explore and understand the fascinating world of water, emphasizing the aquatic wildlife and habitats it supports. 60 engaging activities are organized around a conceptual framework with major themes connected to wildlife.

ALL content is correlated to existing EE standards of the North American Association for Environmental Education's (NAAEE) Excellence in Environmental Education

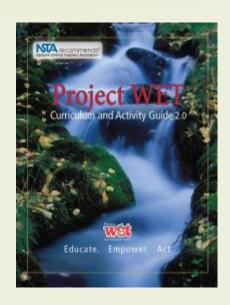
Workshops can be scheduled to train and certify teachers on how to incorporate these activities into their respective class curriculum.





Project Wet - Project WET's mission is to reach students, parents, teachers and community members with water education that promotes awareness of water and empowers community action to solve complex water issues.

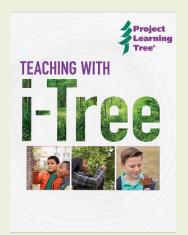
Each state has coordinators that provide local training and administration for the program. In South Carolina they provide training for formal and non-formal educators and facilitators through water education workshops, promote water education throughout the state, and provide materials and support to all those who participate.



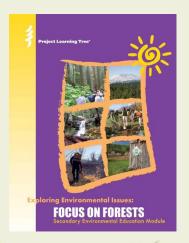


Project Learning Tree - Project Learning Tree is an award-winning environmental education program designed for teachers and other educators, parents, and community leaders working with youth from preschool through grade 12.

PLT State Coordinators will assist in scheduling workshops led by trained facilitators. Self-paced online courses, some tailored to your state with supplemental resources, are also available. Three High School programs include "Teaching with i-Tree", "GreenSchools", and "Focus on Forests".





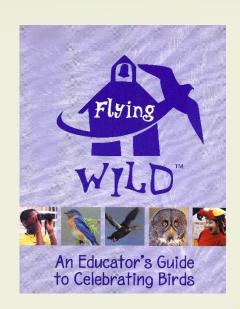


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Flying Wild - Through activities involving language arts, social science and math experiences, coupled with community outreach and service learning applications, Flying WILD offers a whole-school approach to environmental education using birds as the focus.

Flying WILD offers practical hands-on classroom and outdoor field investigation experiences connecting real-world experiences in bird biology, conservation, and natural history.

A Flying WILD Facilitator is available to provide professional development workshops for classroom teachers and other formal and nonformal educators.



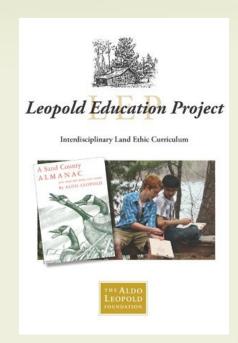




Leopold Education Project - Based on the essays in Aldo Leopold's A Sand County Almanac, the Leopold Education Project (LEP) is an interdisciplinary environmental education curriculum. Targeted mainly to middle school and high school students.

Its goal is to create an ecologically literate citizenry by heightening student awareness of the natural world; fine-tuning the skills necessary to read the landscape; and instilling a love, admiration, and respect for the land so that each individual may develop a personal land ethic.

The LEP curriculum is distributed by a volunteer network of State Coordinators, who organize workshops to train formal and non-formal educators throughout the country.



#### Possible Features

- Wildlife Observation Tower
- Amphitheater
- Pond Dock
- Weather Station
- Water Table Well
- Wood Duck Boxes
- Blue Bird & Wren Boxes
- Bat Houses
- Purple Martin House
- Hummingbird Feeders
- Suet Stations
- Orienteering Course

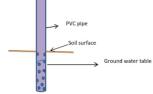


























#### Possible Features

- Butterfly Garden
- Bee Hives
- Wildlife Food Plot
- Animal Salt Lick
- Rock Pile
- Brush Shelters
- Bird Feeders
- Osprey Nest Platform
- Cover-boards
- Snags
- Log Habitats
- Pipe Shelters
- Night Insect Station





















#### Possible Features



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- Fruit Tree Orchard
- Cedar Tree Thickets
- Clover Fields
- Vineyard











## Tools & Supplies

- Pond Seines
- Plankton Net
- Water Test Kits
- Jon Boat
- Survey Equipment
- Butterfly/Insect Nets
- Binoculars
- Wildlife Motion Cameras
- Dip Nets/Water Nets
- Trails with Discovery Stations
- Soils Sampling Guide
- Animal Track Station



























## Tools & Supplies

- Reptile Bagger
- Mist Net
- Compasses
- Open Reel Tape
- M Increment Borer
- Flagging Tape
- Green House
- Drift Fence & Buckets
- Snake Chaps
- Waders























### Equipment

- Small Tractor
- Disk Harrow
- Seed Drill
- Bat-Wing Mower











# Colonial Connections...

#### James Island 1780





Scale ca. 1:45,000. Title from engraved copy issued by **William Faden in 1780**. Manuscript, pen-and-ink and watercolor. Has watermark. Relief shown by hachures. Depths shown by soundings. LC Maps of North America, 1750-1789, 1542 Available also through the Library of Congress Web site as a raster image. Vault AACR2: 100; 650/1; 651/2

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## Civil War Connections...

#### Confederate Defenses of Charleston



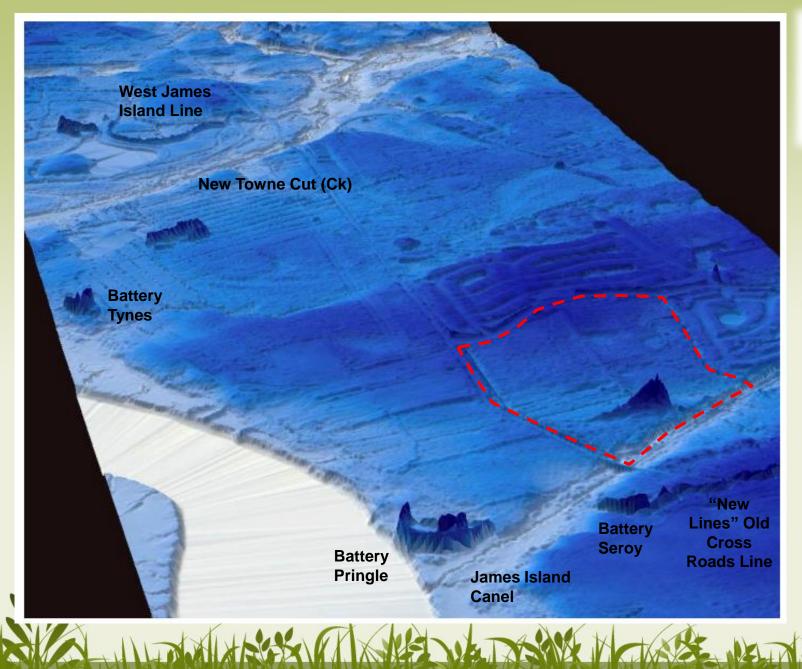
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Map of Charleston and its Defenses Compiled from Surveys of Portions of St. Andrew's and Christ Ch. Parishes by Lieut. John Johnson, C.S. Engr's, **Nov. 28, 1863** 

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Perhaps there will be an opportunity for students to learn about archeology via an on-site professionallyled excavation?







#### LIDAR Image 2014

Light Imaging, Detection, And Ranging – Creates a 3-D image for high resolution mapping.





#### LIDAR Image 2014

Lidar is a surveying method that measures distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor. This technology can be used to make digital 3-D representations of the target. Lidar can also help to create high-resolution digital elevation models (DEMs) of archaeological sites that can reveal microtopography that is otherwise hidden by vegetation. The intensity of the returned lidar signal can be used to detect features buried under flat vegetated surfaces such as fields, especially when mapping using the infrared spectrum.

#### Battery Pringle & Battery No. 5





Civil War earthworks of battery redoubts in close proximity to the James Island Campus.







Artifacts uncovered in areas adjacent to the Stono River..

## Old Home Sites?

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Historically, throughout the southern coastal plan, settlers would build their homes under and around Live oaks (*Quercus virginiana*) for the purpose of shade and protection from storms. These trees are known for their expansive branches and density of wood that imbues strength and longevity to the tree. The older the house and the longer its presence, these oaks would often grow to massive sizes. The home owner would simultaneously clear their property of other trees and thus reduce competition that further enhanced the growth of these majestic trees. Over time, the homes would be abandoned or fall into disrepair, leaving only the strong resilient oaks. Consequently, the presence of large old oak tree aggregates often indicates the site of an old home place and in the soils beneath it's branches can often be found remains of the structures and artifacts of its previous inhabitants.









# Do we have any "Old Home Sites"?



This satellite image was taken during the summer when the deciduous trees (hardwoods) show up as a lighter green and the pine trees show up as a darker green (outlined in green).

There may be some "old home sites" scattered amongst the hardwoods.

### Visual Arts in the Outdoors...

- **Outdoor Seating Design**
- Landscape Design
- **Outdoor Sculptures**
- **Environmental Art Installations**
- Painting & Drawing Classes
- **Outdoor Photography**



















# Performing Arts in the Outdoors...

- Outdoor Concerts
- Inspired Creative Compositions
- Outdoor Theater
- Design & Build a Gazebo for Performances







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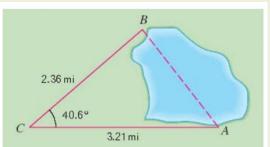


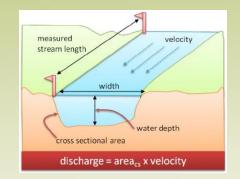


## Math in the Outdoors...

- Geometry
- Mapping/Surveying/GPS
- Environmental Math & Measuring
- Geographic Information Systems
- Biological Statistics
- Construction/Engineering
- Physics





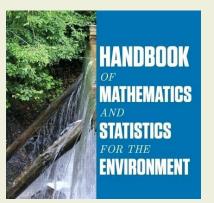














## Bible in the Outdoors...

- Teaching Stewardship
- Setting for Devotions
- Creation Studies/Evidences
- Parables of Jesus
- Building Community/Teamwork











