



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Contact parksended@broward.org; jpipoly@broward.org

Anne Kolb Nature Center

751 Sheridan St., Hollywood, FL 33019
954-357-5161; WestLakePark@Broward.org
Fees for Anne Kolb programs: \$3/student/hour

Mangrove Masterpiece (Grades K-5)

The plants and animals of the mangrove estuary will be explored in this three-part program. Students will board a U.S. Coast Guard-inspected covered boat for a narrated tour of the tidal creeks and open waters of West Lake. The tour boat is subject to availability. Call for details. This is a Broward County School Board-approved water-related field trip. A guided tour of the nature center's exhibit hall uses video, static and interactive displays, aquaria, and hands-on demonstrations to introduce students to the mangrove ecosystem. Grade-specific concepts and objectives will be highlighted during your choice of three naturalist-led trail tours. Three hours. For 10 to 84 participants (youths and adults).

Specialized versions of Mangrove Masterpiece:

- A. **Masterful Mangroves** (Grades K-5) – Focus on the importance of mangrove trees to wildlife and people.
- B. **Shells & Claws** (Grades K-5) – Investigate the many mollusks and crustaceans thriving in our mangrove habitat.
- C. **Mangrove Café** (Fourth and Fifth Grades) – Explore species diversity, energy flow, and the connectedness among living things observed in the mangrove ecosystem.

Florida Standards

Science:

Grade K: SC.K.L.14.3, SC.K.P.12.1, SC.K.N.1.5

Grade 1: SC.1.E.6.1, SC.1.E.6.2, SC.1.E.6.3, SC.1.L.14.1, SC.1.L.14.2, SC.1.L.14.3, SC.1.L.16.1, SC.1.L.17.1, SC.1.N.1.1, SC.1.N.1.2, SC.1.N.1.4

Grade 2: SC.2.E.6.2, SC.2.E.7.1, SC.2.E.7.4, SC.2.E.7.5, SC.2.L.16.1, SC.2.L.17.1, SC.2.L.17.2, SC.2.N.1.1, SC.2.N.1.3, SC.2.N.1.5, SC.2.N.1.6

Grade 3: SC.3.L.14.1, SC.3.L.14.2, SC.3.L.15.1, SC.3.L.15.2, SC.3.L.17.1, SC.3.L.17.2, SC.3.N.1.1, SC.3.N.1.4, SC.3.N.1.6

Grade 4: SC.4.E.6.3, SC.4.E.6.4, SC.4.E.6.5, SC.4.E.6.6, SC.4.L.16.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.16.4, SC.4.L.17.1, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4, SC.4.N.1.7, SC.4.N.2.1, SC.4.P.10.4



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Grade 5: SC.5.E.7.2, SC.5.L.14.2, SC.5.L.15.1, SC.5.L.17.1, SC.5.N.1.3, SC.5.N.2.1, SC.5.10.1, SC.5.P.10.2

FEE: \$3 for each individual activity/student/hour (Exhibit Hall Tour, Boat Tour, and Guided Nature Walk); Total \$9/student

Mangrove Encounter (Grades 6-12)

West Lake Park preserves a coastal mangrove estuary of more than 1,500 acres. This field trip provides students with an opportunity to experience the physical conditions and biological resources of this ecosystem. Shifting tides and fluctuating salinity create a variable environment. Nutrient-rich water and protection from wave action and predators create a haven for wildlife. A narrated boat tour, guided exhibit hall tour, and a staff naturalist-led trail tour are components of this program. The tour boat is approved for water-related field trips with Broward County Schools. The tour boat is subject to availability. Call for details. Three hours. For 10 to 84 participants (youths and adults).

Florida Standards

Science:

Grade 6: SC.6.E.6.1, SC.6.E.6.2, SC.6.E.6.2, SC.6.E.7.3, SC.6.E.7.7, SC.6.L.15.1

Grade 7: SC.7. E. 6.6, SC.7. L. 15.2, SC.7. L. 15.3, SC.7. L. 17.1, SC.7. L. 17.2, SC.7. L. 17.3

Grade 8: SC.8. E. 5.9, SC.8. L. 18.1, SC.8. L. 18.2, SC.8. L. 18.4, SC.8. N. 4.1, SC.8. N. 4.2

Grades 9-12: SC.9.12. L. 17.2, SC.9.12. L. 17.3, SC.9.12. L. 17.4, SC.9.12. L. 17.6, SC.9.12. L. 17.7, SC.9.12. L. 17.8, SC.9.12. L. 17.9, SC.9.12. L. 17.11, SC.9.12. E. 7.8

Plankton-a-Plenty (Grades K-12)

Discover some of West Lake's smallest flora and fauna: marine plankton, microscopic organisms crucial to the estuary and ocean food chains. Collect plankton on a trail hike, learn about planktivores (plankton eaters), and marvel at strange creatures under the microscope. Includes a narrated boat tour and a guided exhibit hall tour. The tour boat is approved for water-related field trips with Broward County Schools. The tour boat is subject to availability. Call for details. Three hours. For 10 to 28 participants (youths and adults).

Florida Standards

Science:

Grade K: SC.K.L.14.3, SC.K.P.12.1, SC.K.N.1.5

Grade 1: SC.1.E.6.1, SC.1.E.6.2, SC.1.E.6.3, SC.1.L.14.1, SC.1.L.14.2, SC.1.L.14.3, SC.1.L.16.1, SC.1.L.17.1, SC.1.N.1.1, SC.1.N.1.2, SC.1.N.1.4

Grade 2: SC.2.E.6.2, SC.2.E.7.1, SC.2.E.7.4, SC.2.E.7.5, SC.2.L.16.1, SC.2.L.17.1, SC.2.L.17.2,

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- SC.2.N.1.1, SC.2.N.1.3, SC.2.N.1.5, SC.2.N.1.6
- Grade 3: SC.3.L.14.1, SC.3.L.14.2, SC.3.L.15.1, SC.3.L.15.2, SC.3.L.17.1, SC.3.L.17.2, SC.3.N.1.1, SC.3.N.1.4, SC.3.N.1.6
- Grade 4: SC.4.E.6.3, SC.4.E.6.4, SC.4.E.6.5, SC.4.E.6.6, SC.4.L.16.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.16.4, SC.4.L.17.1, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4, SC.4.N.1.7, SC.4.N.2.1, SC.4.P.10.4
- Grade 5: SC.5.E.7.2, SC.5.L.14.2, SC.5.L.15.1, SC.5.L.17.1, SC.5.N.1.3, SC.5.N.2.1, SC.5.10.1, SC.5.P.10.2
- Grade 6: SC.6. E.6.1, SC.6. E.6.2, SC.6. E.6.2, SC.6. E.7.3, SC.6.E.7.7, SC.6. L.15.1
- Grade 7: SC.7.E.6.6, SC.7.L.15.2, SC.7.L.15.3, SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3
- Grade 8: SC.8.E.5.9, SC.8.L.18.1, SC.8.L.18.2, SC.8.L.18.4, SC.8.N.4.1, SC.8.N.4.2
- Grades 9-12: SC.912.L.17.2, SC.912.L.17.3, SC.912.L.17.4, SC.912.L.17.6, SC.912.L.17.7, SC.912.L.17.8, SC.912.L.17.9, SC.912.L.17.11, SC.912.E.7.8

Tidal Field Study (Grades 4 -12)

Tides are the rhythm of life in a mangrove estuary. This program includes a narrated boat tour and a guided exhibit hall tour, as well as a participatory field study. Students will be involved in seining, collecting plankton, and sampling sediments. Be prepared for an exciting outdoor experience in wet, muddy conditions. The tour boat is approved for water-related field trips with Broward County Schools. The tour boat is subject to availability. Call for details. Four hours. For 10 to 35 participants.

Note: Schedule is dependent on the tides, limiting available dates for this program.

Florida Standards

Science:

- Grade 4: SC.4.E.6.3, SC.4.E.6.4, SC.4.E.6.5, SC.4.E.6.6, SC.4.L.16.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.16.4, SC.4.L.17.1, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4, SC.4.N.1.7, SC.4.N.2.1, SC.4.P.10.4
- Grade 5: SC.5.E.7.2, SC.5.L.14.2, SC.5.L.15.1, SC.5.L.17.1, SC.5.N.1.3, SC.5.N.2.1, SC.5.10.1, SC.5.P.10.2
- Grade 6: SC.6. E.6.1, SC.6. E.6.2, SC.6. E.6.2, SC.6. E.7.3, SC.6. E.7.7, SC.6. L.15.1
- Grade 7: SC.7.E.6.6, SC.7.L.15.2, SC.7.L.15.3, SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3
- Grade 8: SC.8.E.5.9, SC.8.L.18.1, SC.8.L.18.2, SC.8.L.18.4, SC.8.N.4.1, SC.8.N.4.2
- Grades 9-12: SC.912.L.17.2, SC.912.L.17.3, SC.912.L.17.4, Sc.912.L.17.6, SC.912.L.17.7, SC.912.L.17.8, SC.912.L.17.9, SC.912.L.17.11, SC.912.E.7.8



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Marine Environmental Education Center (MEEC-Nova Southeastern University/Anne Kolb) at the Carpenter House Joint Field Trips

Carpenter House, 4414 N. Surf Rd, Hollywood, FL 33019
954-357-5174; WestLakePark@Broward.org

Booking Procedure:

- Contact Anne Kolb Nature Center with your head count two weeks in advance of your trip.
- Provide payment to each organization separately by organization check, cash, or credit card.
- When using an organization check:
 - Make one check out to the Anne Kolb Nature Center. \$5/student/hour.
 - Make one check out to Nova Southeastern University HCNSO with MEEC in the subject line. \$5/student/hour.
 - **Personal checks are not accepted.**

Coastal Connections (Grades K-8; high school trips available on request)

Journey from the Anne Kolb Nature Center mangrove estuary to the Marine Environmental Education Center (MEEC) at the Carpenter House on the barrier beach island to explore the environmental connections of our coastal habitats and the special plants and animals that live there. Students will explore the nature center with a mangrove-themed hike along one of our boardwalk trails, then depart for the MEEC to explore the dune ecology and meet our resident green sea turtle, Captain. One hour at Anne Kolb, one hour at the MEEC, Tuesday-Friday. Grades: K-8 (high school trips available upon request). For up to 60 participants.

Times/Length: Start at Anne Kolb at 9:30-10:30 a.m., travel to MEEC for program 11 a.m.-noon. (Start times are flexible.) Tuesday-Friday. One hour at Anne Kolb, one hour at MEEC.

Program Content:

Anne Kolb: Mangrove ecology, tides, animals and plants of the mangrove estuary, and our connection with the ocean.

MEEC: Dune ecology, reefs, sea turtle species nesting in Broward, sea turtle feeding, and Captain's story.

Florida Standards – Anne Kolb Nature Center

Science:

Grade K: SC.K.L.14.3, SC.K.P.12.1, SC.K.N.1.5

Grade 1: SC.1.E.5.3, SC.1.L.14.1, SC.1.L.14.2, SC.1.L.17.1, SC.1.N.1.4



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Grade 2: SC.2.E.6.2, SC.2.E.7.1, SC.2.E.7.4, SC.2.E.7.5, SC.2.L.16.1, SC.2.L.17.1, SC.2.L.17.2, SC.2.N.1.3, SC.2.N.1.5
Grade 3: SC.3.L.14.1, SC.3.L.14.2, SC.3.L.15.2, SC.3.L.17.1, SC.3.L.17.2, SC.3.N.1.1, SC.3.N.1.6
Grade 4: SC.4.E.6.4, SC.4.E.6.5, SC.4.L.16.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.17.1, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4, SC.4.N.2.1
Grade 5: SC.5.E.7.2, SC.5.L.14.2, SC.5.L.15.1, SC.5.L.17.1, SC.5.N.2.1
Grade 6: SC.6.E.6.1, SC.6.E.6.2, SC.6.E.7.2, SC.6.E.7.7
Grade 7: SC.7.E.6.6, SC.7.L.15.2, SC.7.L.15.3, SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3
Grade 8: SC.8.L.18.1, SC.8.L.18.2, SC.8.L.18.4, SC.8.N.4.1, SC.8.N.4.2
Grades 9-12: SC.912.L.17.2, SC.912.L.17.3, SC.912.L.17.4, SC.912.L.17.8, SC.912.L.17.9, SC.912.L.17.11, SC.912.L.17.20, SC.912.E.7.8

New Generation Science Standards – Marine Environmental Education Center (MEEC)

Science:

Grade K: LSI-1, ESS2-2, ESS3-1
Grade 1: LSI-1, PS4-3, LSI-2, ESS1-1
Grade 2: LS4-1, ESS1-1, ESS2-2, ESS2-1, ESS2-3
Grade 3: LS2-1, LS4-3, LS4-4, LSI-1, LS4-2, LS3-2, ESS3-1
Grade 4: PS4-1, LSI-1, LSI-2, ESS2-1
Grade 5: PS3-1, LSI-1, LS2-1
Grades 6-8: LS2-2, LS2-5, LSI-5, ESS2-3, ESS2-4

Pollution Solutions (Adaptable K-12)

Everyone can collaborate to keep our environment clean. Hop aboard the tour boat at Anne Kolb Nature Center and learn about the pressures of pollution on our coastal environment. Upon your return, walk to our observation tower to view the local surroundings that influence our environment. Then continue your pollution expedition with a visit to the Marine Environmental Education Center (MEEC) at the Carpenter House to see how pollution affects our ocean and its inhabitants.

The tour boat at Anne Kolb operates on a tide-dependent schedule. A guided nature tour or exhibit hall tour can be substituted for the boat tour. The tour boat is subject to availability. Call for details. The tour boat is approved for water-related field trips with Broward County Schools for groups up to 28.

Times/Length: Start at Anne Kolb at 9:30-10:30 a.m., travel to MEEC for program 11 a.m. - noon. (Start times are flexible.) Tuesday-Friday. One hour at Anne Kolb Nature Center, one hour at MEEC.

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Florida Standards – Anne Kolb Nature Center

Science:

Grade K: SC.K.L.14.3, SC.K.P.12.1, SC.K.N.1.5

Grade 1: SC.1.E.6.1, SC.1.E.6.2, SC.1.E.6.3, SC.1.L.14.1, SC.1.L.14.2, SC.1.L.14.3, SC.1.L.16.1, SC.1.L.17.1, SC.1.N.1.1, SC.1.N.1.2, SC.1.N.1.4

Grade 2: SC.2.E.6.2, SC.2.E.7.1, SC.2.E.7.4, SC.2.E.7.5, SC.2.L.16.1, SC.2.L.17.1, SC.2.L.17.2, SC.2.N.1.1, SC.2.N.1.3, SC.2.N.1.5, SC.2.N.1.6

Grade 3: SC.3.L.14.1, SC.3.L.14.2, SC.3.L.15.1, SC.3.L.15.2, SC.3.L.17.1, SC.3.L.17.2, SC.3.N.1.1, SC.3.N.1.4, SC.3.N.1.6

Grade 4: SC.4.E.6.3, SC.4.E.6.4, SC.4.E.6.5, SC.4.E.6.6, SC.4.L.16.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.16.4, SC.4.L.17.1, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4, SC.4.N.1.7, SC.4.N.2.1, SC.4.P.10.4

Grade 5: SC.5.E.7.2, SC.5.L.14.2, SC.5.L.15.1, SC.5.L.17.1, SC.5.N.1.3, SC.5.N.2.1, SC.5.10.1, SC.5.P.10.2

Grade 6: SC.6.E.6.1, SC.6.E.6.2, SC.6.E.6.2, SC.6.E.7.3, SC.6.E.7.7, SC.6.L.15.1

Grade 7: SC.7.E.6.6, SC.7.L.15.2, SC.7.L.15.3, SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3

Grade 8: SC.8.E.5.9, SC.8.L.18.1, SC.8.L.18.2, SC.8.L.18.4, SC.8.N.4.1, SC.8.N.4.2

Grades 9-12: SC.912.L.17.2, SC.912.L.17.8, SC.912.L.17.11, SC.912.L.17.14, SC.912.L.17.16, SC.912.L.17.17, SC.912.L.17.20

Next Generation Science Standards – Marine Environmental Education Center (MEEC)

Grade K: ESS3-3, ESS3-1, ESS2-2

Grade 1: PS4-3

Grade 2: PSI-3, PSI-4, PSI-1

Grade 3: LS4-4, LS3-2, LSI-1, LS4-2

Grade 4: ESS3-1, ESS3-2, LSI-1, LSI-2

Grade 5: ESS2-1, ESS3-1, LSI-1, LS2-1

MS Grades 6-8: LS2-2, LSI-5, PSI-3, LS2-5, LS4-5, ESS3-4, ESS3-3

Program Content:

Anne Kolb: Pollution and human impact on the estuary and its inhabitants, recycling and pollution prevention, habitat protection.

MEEC: Marine debris and how it affects marine creatures, sea turtle rehab, reduce/refuse/reuse, sea turtle feeding, and Captain's story.

Plan Your Eco-Adventure at Anne Kolb Nature Center/MEEC

- Contact Anne Kolb Nature Center at 954-357-5161, ext. 0 to schedule a program.
- We will confirm your date and follow up with an email reservation and more information.
- Fill out the MEEC waiver and bring it with you on your trip date.



**Broward County Parks and Recreation
STEAM/Environmental Education Programs 2021**

Fern Forest Nature Center

201 Lyons Rd. South, Coconut Creek, FL 33063

954-357-5198; FernForest@Broward.org

Fees for all programs: \$4/student/hour

Living & Nonliving (Grades K-2)

Meet Fern Lady and Rachel Raccoon in a puppet show that explains how to tell what is living and what's nonliving. Through hands-on outdoor activities, students explore soil creatures and pond life. A trail walk through the forest helps reinforce the relationships between living and nonliving things in the natural environment. Two hours. For up to 60 participants.

Florida Standards

Science:

Grade K: SC. K. L. 14.3

Grade 1: SC.1.E.6.1, SC.1.L.14.1, SC.1.L.14.3, SC.1.L.17.1, SC.2.E.6.3

Social Studies:

Grade 1: SS.1.C.2.4

Insect Magic (Grades 1-3)

Hands-on exploration helps students discover the fascinating realm of the most common animals on earth and their kin. Learn about the many amazing adaptations and variations of insects and spiders, while discovering our unrecognized dependence on them as members of the food chain. A trail walk will provide an opportunity for an up-close and personal look at these small but important critters. Two hours. For up to 60 participants.

Florida Standards

Science:

Grade 1: SC.1.L.14.1, SC.1.L.16.1, SC.1.N.1.1

Grade 2: SC.2.L.16.1; SC.2.N.1.1

Grade 3: SC.3.N.1.1

Grade 4: SC.4.N.1.1

Grade 5: SC.5.L.17.1

Social Studies:

Grade 1: SS.1.C.2.4



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A Circle of Life (Grades 2-4)

Students engage in activities, games, and explorations focusing on how plants and animals interrelate with one another and with their habitat. We will take a trail walk to identify different habitats and discuss the animals that live in them, the threats to their survival, and how to define an endangered species. Two hours. For up to 60 participants.

Florida Standards

Science:

Grade 1: SC.1.L.17.1

Grade 2: SC.2.E.6.2, SC.2.E.7.4, SC.2.L.16.1, SC.2.L.17.1, SC.2.L.17.2

Grade 3: SC.3.L.15.1, SC.3.L.15.2, SC.3.L.17.2

Grade 4: SC.4.L.16.1, SC.4.L.16.4, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4

Grade 5: SC.5.L.17.1

Social Studies:

Grade 2: SS.2.A.2.1

Exploring Florida's Wetlands (Grades 3-5)

Students will review the water cycle and discuss the importance of wetlands and how they are affected by humans, especially here in Florida. Hands-on explorations and a game highlight the distinctive features of wetland natural areas and their inhabitants. A hike on an aerial boardwalk will take us through a bald cypress swamp. Two hours. For up to 60 participants.

Florida Standards

Science:

Grade 4: SC.4.E.6.6,

Grade 5: SC.5.E.7.1, SC.5.E.7.2, SC.5.E.7.5SC.5.E.7.6, SC.5.L.17.1

Guided Nature Walks (Grades K-12)

Naturalist-led walks with specific themes are available. Select your theme when you make your reservation. You may also send us the Florida and/or New Generation Science or other Standards and we will be sure to cover them in the program. Possibilities include birds, butterflies, edible and poisonous plants, plant identification, and fern identification. One hour. For up to 40 participants.



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Florida Standards

Science:

Grade K: ; SC.K.L.14.3; SC.K.N.1.1

Grade 2: SC.2.L.16.1

Grade 3: SC.3.L.15.2; SC.3.L.14.1; SC.3.L.15.2

Grade 3-5: SC.35.CS-CP.1.4

Grade 4: SC.4.L.16.1

Grade 5: SC.5.L.17.1

Grade 6: SC.6.L.14.4

Grades 9-12: SC.912.L.14.8; SC.912.L.14.10; SC.912.L.14.53



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Long Key Natural Area & Nature Center

3501 S.W. 130th Ave., Davie, FL 33330
954-357-8791; LongKey@Broward.org

General field trip information for all programs

Number of participants: minimum of 10

Maximum: preschool – 10-20

Grade school – up to three classrooms per visit, total maximum of 75 participants

Fees: \$5/student/hour, \$7/student/two hours

Long Key Exhibit Hall & Movie Only (All Grades):

The nature center's exhibit hall features natural history exhibits such as a simulated archaeological dig pit; interactive, hands-on exhibits on the Native Americans of the region, vegetation, birds, and more; live animals, including a baby alligator; a scale model of the site; and a hand-carved bench made from an African mahogany tree planted on the property by pioneer families and uprooted by Hurricane Wilma. Included in the price of admission is the Everglades Theater, which presents a 10-minute video called "Long Key: An Island in the Everglades." An exhibit hall option is added to any of the programs listed below, or it can be conducted by itself. One hour.

Florida Standards

Language Arts:

K-12: LAFS.K12.R.1, LAFS.K12.R.3, LAFS.K12.R.4

K-8: LAFS.K-8.RI.4,

Grade K: LAFS.K.SL.1

Grade 1: LAFS.1.SL.1

Grade 2: LAFS.2.SL.1

Grade 3: LAFS.3.SL.1

Grade 4: LAFS.4.SL.1

Grade 5: LAFS.5.SL.1

Grade 6: LAFS.6.SL.1

Grade 7: LAFS.7.SL.1

Grade 8: LAFS.8.SL.1

Grade 9-10: LAFS.910.SL.1

Grade 11-12: LAFS.1112.SL.1

Special Skills:

K-12: SP.PK12.US.4.4

Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Science:

Grade K: SC.K.L.14
Grade 1: SC.1.L.14, SC.1.L.16, SC.1.L.17
Grade 2: SC.2.L.14, SC.2.L.15, SC.2.L.16, SC.2.L.17
Grade 3: SC.3.L.14, , SC.3.L.17
Grade 4: SC.4.L.16, SC.4.L.17
Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17
Grade 6: SC.6.L.14, SC.6.L.15
Grade 7: SC.7.L.15, SC.7.L.16, SC.7.L.17
Grade 8: SC.8.L.18
Grade 9-12: SC.912.L.17

Social Studies:

Grade K: SS.K.A.1-3
Grade 1: SS.1.A.1-3
Grade 2: SS.2.A.1-3
Grade 3: SS.3.A.1, SS.3.G.4
Grade 4: SS.4.A.1-6, SS.4.A.8-9
Grade 5: SS.5.A.1, SS.5.G.3
Grade 6: SS.6.G.1-6
Grade 7: SS.7.G.1-6
Grade 8: SS.8.A.1-2, SS.8.A.5, SS.8.G.1-6
Grade 9: SS.912.G.1-6

Visual Art:

Grade KVA.K.C.2, VA.K.H.1-2
Grade 1: VA.1.C.2, VA.1.H.1-2
Grade 2: VA.2.C.1, VA.2.H.1-2
Grade 3: VA.3.C.1, VA.3.H.1-2
Grade 4: VA.4.C.1, VA.4.H.1-2
Grade 5: VA.5.C.1, VA.5.H.1-2
Grade 6-8: VA.68.C.1, VA.68.H.1-2
Grade 9-12: VA.912.C.1, VA.912.H.1-2

An Island in the Everglades Nature Walk: (Grades Pre-K-12)

Hit the nature trails with a naturalist to learn about the archaeological, historical, and ecological significance of Long Key. This tour includes a brief overview of the site that touches on all aspects of Long Key's special character. Learn about the native flora and fauna and how they were used by the Native Americans who once lived here. Discuss the unique geologic



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formation of the "Island in the Everglades." Learn about the early inhabitants of the site and how they helped shape the island's character. Up to two hours.

Note: The park also offers in-depth hikes focusing a single aspect of the site. Choose from several different topic areas, including native vs. exotic species, birds and butterflies, geology and history, native plants and their uses, etc. Teachers should contact naturalists at least two weeks in advance to discuss details. It is useful to provide naturalist with Florida and/or New Generation Science Standards to be covered.

Florida Standards

Language Arts:

Grade K: LAFS.K.SL.1
Grade 1: LAFS.1.SL.1
Grade 2: LAFS.2.SL.1
Grade 3: LAFS.3.SL.1
Grade 4: LAFS.4.SL.1
Grade 5: LAFS.5.SL.1
Grade 6: LAFS.6.SL.1
Grade 7: LAFS.7.SL.1
Grade 8: LAFS.8.SL.1
Grade 9-10: LAFS.9|10.SL.1
Grade 11-12: LAFS.11|12.SL.1

Special Skills:

K-12: SP.PK|2.US.4.4, SP.PK|2.US.11

Science:

Grade K: SC.K.L.14,
Grade 1: SC.1.L.14, SC.1.L.16, SC.1.L.17
Grade 2: SC.2.L.14, SC.2.L.16, SC.2.L.17
Grade 3: SC.3.L.14, SC.3.L.15, SC.3.L.17
Grade 4: SC.4.L.16, SC.4.L.17,
Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17
Grade 6: SC.6.L.14, SC.6.L.15,
Grade 7: SC.7.L.15, SC.7.L.16, SC.7.L.17
Grade 9-12: SC.9|12.L.

Social Studies:

Grade K:SS.K.A.1, SS.K.A.2, SS.K.A.3, SS.K.G.1, SS.K.G.2, SS.K.G.3
Grade 1: SS.1.A.1, SS.1.A.2, SS.1.A.3
Grade 2: SS.2.A.1, SS.2.A.2, SS.2.A.3
Grade 3: SS.3.A.1, SS.3.G.4



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Grade 4: SS.4.A.1, SS.4.A.2, SS.4.A.3, SS.4.A.4, SS.4.A.6, SS.4.A.8, SS.4.A.9

Grade 5: SS.5.A.1, SS.5.G.3

Grade 6: SS.6.G.1-6

Grade 7: SS.7.G.1-6

Grade 8: SS.8.A.1, SS.8.G.1-6

Grade 9-12: SS.912.G.1-6

Earth Protectors (includes Exhibit Hall) (Grades 2-12)

What can be done to protect our dwindling natural resources? This program shows how proper management practices and preservation can benefit the environment. A trail walk will introduce students to these concepts, then let them put their knowledge into practice by working on conservation projects such as exotic plant removal and habitat restoration. Participants should wear old work clothes and closed-toe shoes and bring work gloves. Two and a half to three hours, including a 1.5-hour work project. **Free with completion of work project.**

Florida Standards

Language Arts:

Grade 2: LAFS.2.SL.1

Grade 3: LAFS.3.SL.1

Grade 4: LAFS.4.SL.1

Grade 5: LAFS.5.SL.1

Grade 6: LAFS.6.SL.1

Grade 7: LAFS.7.SL.1

Grade 8: LAFS.8.SL.1

Grade 9-10: LAFS.910.SL.1

Grade 10-11: LAFS.1112.SL.1

Special Skills:

Grades K-12: SP.PK12.US.4.4, SP.PK12.US.9, SP.PK12.US.11, SP.PK12.US.13

Career and Technical Education:

Grades 6-8: CTE-AFNR.68.ENVIRO.02, CTE-AFNR.68.ENVIRO.04, CTE-AFNR.68.ENVIRO.05,
CTE-AFNR.68.PLANT.02, CTE-AFNR.68.PLANT.05

Science:

Grade 2: SC.2.L.14, SC.2.L.16, SC.2.L.17

Grade 3: SC.3.L.14, SC.3.L.15, SC.3.L.17

Grade 4: SC.4.L.16, SC.4.L.17

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Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17

Grade 6: SC.6.L.14, SC.6.L.15

Grade 7: SC.7.L.15, SC.7.L.16, SC.7.L.17

Grade 8: SC.8.L.18

Grade 9-12: SC.912.L.17, SC.912.L.18

Social Studies:

Grade 2: SS.2.A.1-3

Grade 3: SS.3.A.1, SS.3.G.4

Grade 4: SS.4.A.1-4, SS.4.A.6, SS.4.A.8-9

Grade 5: SS.5.A.1, SS.5.G.3

Grade 6: SS.6.G.1-6

Grade 7: SS.7.G.1-6

Grade 8: SS.8.A.1-2, SS.8.A.5, SS.8.G.1-6

Grade 9-12: SS.912.G.1-6

Visual Art:

Grade 2: VA.2.C.1, VA.2.O.1, VA.2.H.1

Grade 3: VA.3.C.1, VA.3.O.1, VA.3.H.1

Grade 4: VA.4.C.1, VA.4.O.1, VA.4.H.1

Grade 5: VA.5.C.1, VA.5.O.1, VA.5.H.1

Grade 6-8: VA.68.C.1, VA.68.O.1, VA.68.H.1

Grade 9-12: VA.912.C.1, VA.912.O.1, VA.912.H.1

Turtle Talk (Grades Pre-K-1):

A Native American story about how the turtle's shell got cracked will inspire students to learn more about turtles and tortoises. The program includes hands-on activities, games, a craft project, and a reptile hunt to spot the nature center's turtles and other reptiles. One hour (Pre-K) to two hours.

Florida Standards

Language Arts:

Grade K: LAFS.K.SL.1

Grade 1: LAFS.1.SL.1

Special Skills:

Grade K-12: SP.PK12.US.4.4, SP.PK12.US.11



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Science:

Grade K: SC.K.L.14

Grade I: SC.I.L.14, SC.I.L.16, SC.I.L.17

Social Studies:

Grade K: SS.K.A.1-3

Grade I: SS.I.A.1-3

Theater:

Grade K: TH.K.S.1, TH.K.H.2, TH.K.H.3

Grade I: TH.I.S.1, TH.I.H.1, TH.I.H.2, TH.I.H.3

Visual Art:

Grade K: VA.K.S.1-3, VA.K.H.1, VA.K.H.2, VA.K.H.3, VA.K.F.1

Grade I: VA.I.S.1-3, VA.I.H.1, VA.I.H.2, VA.I.H.3, VA.I.F.1

Butterfly Flutterby (Grades Pre-K-I):

Molly the Monarch leads students through the life cycle of butterflies. This interactive puppet show will allow students to watch Molly as she hatches from her egg as a caterpillar, demonstrates a finicky appetite, molts her skin, forms a chrysalis, and emerges as a beautiful butterfly. The story ends with Molly searching for a new milkweed on which to lay her eggs, thus starting the cycle again. The program also includes hands-on activities and a take-home craft. One hour (Pre-K) to two hours.

Florida Standards

Language Arts:

Grade K: LAFS.K.SL.1

Grade I: LAFS.I.SL.1

Special Skills:

Grade K-12: SP.PK.12.US.4.4, SP.PK.12.US.11

Science:

Grade K: SC.K.L.14

Grade I: SC.I.L.14, SC.I.L.16, SC.I.L.17

Theater:

Grade K: TH.K.S.1

Grade I: TH.I.S.1



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Visual Art:

Grade K: VA.K.S.1-3, VA.K.F.1

Grade 1: VA.1.S.1-3, VA.1.F.1

Creepy Crawly (Grades 1-6):

Learn how to predict the weather using crickets. Find out why earthworms come out after it rains. Discover how a spider's silk could stop a speeding bullet. Students will learn how to recognize insects and how to tell the difference between moths and butterflies, as well as what other types of invertebrates live in Florida. The program includes hands-on activities, an "Insect Inspection" walk, and a science experiment. Two hours.

Florida Standards

Language Arts:

Grade 1: LAFS.1.SL.1

Grade 2: LAFS.2.SL.1

Grade 3: LAFS.3.SL.1

Grade 4: LAFS.4.SL.1

Grade 5: LAFS.5.SL.1

Grade 6: LAFS.6.SL.1

Special Skills:

Grade K-12 : SP.PK.12.US.4.4, SP.PK.12.US.1.1

Science:

Grade K: SC.K.L.14, SC.K.P.13, SC.K.N.1

Grade 1: SC.1.L.14, SC.1.L.16, SC.1.L.17, SC.1.P.13, SC.1.N.1

Grade 2: SC.2.L.14, SC.2.L.16, SC.2.L.17, SC.2.P.13, SC.2.N.1

Grade 3: SC.3.L.14, SC.3.L.15, SC.3.L.17, SC.3.N.1, SC.3.N.3

Grade 4: SC.4.L.16, SC.4.L.17, SC.4.P.12, SC.4.N.1, SC.4.N.2, SC.4.N.3

Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17, SC.5.P.13, SC.5.N.1, SC.5.N.2

Grade 6: SC.6.L.14, SC.6.L.15, SC.6.P.13, SC.6.N.1, SC.6.N.2, SC.6.N.3

Social Studies:

Grade K: SS.K.G.3

Grade 1: SS.1.G3

Grade 2: SS.2.G3

Grade 3: SS.3.G.3

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Reptiles & Amphibians (Grades 1-6):

Discover the difference between reptiles and amphibians. Find out how tadpoles become frogs. Learn to recognize the venomous reptiles that are found in Florida. Go on a reptile hunt to search for lizards and turtles found onsite. The program includes games, hands-on activities, and a craft project. Two hours.

Florida Standards

Language Arts:

Grade 1: LAFS.1.SL.1

Grade 2: LAFS.2.SL.1, LAFS.3.SL.1

Grade 4: LAFS.4.SL.1

Grade 5: LAFS.5.SL.1

Grade 6: LAFS.6.SL.1

Special Skills:

Grade K-12: SP.PK.12.US.4.4, SP.PK.12.US.1.1

Science:

Grade K: SC.K.L.14

Grade 1: SC.1.L.14, SC.1.L.16; SC.1.L.17

Grade 2: SC.2.L.14, SC.2.L.16, SC.2.L.17

Grade 3: SC.3.L.14, SC.3.L.15, SC.3.L.17

Grade 4: SC.4.L.16, SC.4.L.17

Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17

Grade 6: SC.6.L.14, SC.6.L.15

Visual Art:

Grade K: VA.K.S.1-3, VA.K.F.1

Grade 1: VA.1.S.1-3, VA.1.F.1

Grade 2: VA.2.S.1-3, VA.2.F.1

Grade 3: VA.3.S.1-3, VA.3.F.1

Grade 4: VA.4.S.1-3, VA.4.F.1

Grade 5: VA.5.S.1-3, VA.5.F.1

Grade 6-8: VA.68.S.1-3, VA.68.F.1

Walk Through Time (Grades 4-6):

From saber-toothed cats to the Battle of Pine Island, students will explore the exciting history of Long Key and the other islands that were once known as Sam Jones's Seven Islands. Learn

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about the geologic processes that formed this "Island in the Everglades," as well as the Tequesta and Seminole Native Americans who called the area home. Students will discover the ancient animals of Florida and learn how fossils are formed. The program includes games, hands-on activities, fossil explorations, shoebox archaeology, and much more. Two hours.

Florida Standards

Language Arts:

Grade 4: LAFS.4.L.3

Grade 5: LAFS.5.L.3

Grade 6: LAFS.6.L.3

Special Skills:

Grade PK-12: SP.PK12.US.4.4, SP.PK12.US.11, SP.PK12.US.13

Science:

Grade 4: SC.4.L.16, SC.4.L.17

Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17

Grade 6: SC.6.L.14, SC.6.L.15

Social Studies:

Grade 4: SS.4.A.1-4, SS.4.A.6, SS.4.A.8-9

Grade 5: SS.5.A.1, SS.5.G.3

Grade 6: SS.6.G.1-6

Visual Arts:

Grade 4: VA.4.C.1, VA.4.O.1, VA.4.H.1

Grade 5: VA.5.C.1, VA.5.O.1, VA.5.H.1

Grade 6-8: VA.68.C.1, VA.68.O.1, VA.68.H.1

Things With Wings (Grades 1-3):

Butterflies, bats, birds, and bugs! Students will learn about winged animals in nature. Children will discover how mother bats are able to find their young in a crowded cave and how owls can sneak up on their prey. They will learn to tell the difference between moths and butterflies, and how insects use their wings to do more than just fly. Activities may include games, hands-on projects, a guided butterfly count, and a take-home craft. Two hours.

Florida Standards

Language Arts:

Grade 1: AFS.1.SL.1



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Grade 2: LAFS.2.SL.1

Grade 3: LAFS.3.SL.1

Special Skills:

Grade PK-12: SP.PK.12.US.4.4, SP.PK.12.US.1.1, SP.PK.12.US.1.3

Science:

Grade 1: SC.1.L.14, SC.1.L.16, SC.1.L.17

Grade 2: SC.2.L.14, SC.2.L.16, SC.2.L.17

Grade 3: SC.3.L.14, SC.3.L.15, SC.3.L.17

Visual Art:

Grade 1: VA.1.S.1-3, VA.1.F.1

Grade 2: VA.2.S.1-3, VA.2.F.1

Grade 3: VA.3.S.1-3, VA.3.F.1

Super Scientists (Grades 1-5):

Explore careers in science through hands-on activities and experiments. Students will learn about geology and paleontology by studying fossils and rocks. Children can pretend to be physicists and learn about electricity and how to build simple electrical circuits. Young chemists will conduct activities in which they learn about chemical reactions and states of matter. Activities may include hands-on projects, science experiments, and a nature walk to conduct a wildlife census. Two hours.

Florida Standards

Language Arts:

Grade 1: LAFS.1.SL.1, LAFS.1.L.3

Grade 2: LAFS.2.SL.1, LAFS.2.L.3

Grade 3: LAFS.3.SL.1, LAFS.3.L.3

Grade 4: LAFS.4.SL.1, LAFS.4.L.3

Grade 5: LAFS.5.SL.1, LAFS.5.L.3

Special Skills:

Grade PK-12: SP.PK.12.US.4.4, SP.PK.12.US.1.1

Science:

Grade 1: SC.1.L.14, SC.1.L.16, SC.1.L.17, SC.1.P.8, SC.1.N.1

Grade 2: SC.2.L.14, SC.2.L.16, SC.2.L.17, SC.2.P.10, SC.2.P.8, SC.2.P.9, SC.2.N.1

Grade 3: SC.3.L.14, SC.3.L.15, SC.3.L.17, SC.3.P.10, SC.3.P.11, SC.3.P.8, SC.3.P.9, SC.3.N.1, SC.3.N.3



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Grade 4: SC.4.L.16, SC.4.L.17, SC.4.P.10, SC.4.P.11, SC.4.P.12, SC.4.P.8, SC.4.P.9, SC.4.N.1-3
Grade 5: SC.5.L.14, SC.5.L.15, SC.5.L.17, SC.5.P.10, SC.5.P.11, SC.5.P.8, SC.5.P.9, SC.5.N.1-2

Social Studies:

Grade 1: SS.1.A.1-3
Grade 2: SS.2.A.1-3
Grade 3: SS.3.A.1
Grade 4: SS.4.A.1-3, SS.4.A.8-9
Grade 5: SS.5.A.1

Visual Arts:

Grade 1: VA.1.S.1-3, VA.1.F.1
Grade 2: VA.2.S.1-3, VA.2.F.1
Grade 3: VA.3.S.1-3, VA.3.F.1
Grade 4: VA.4.S.1-3, VA.4.F.1
Grade 5: VA.5.S.1-3, VA.5.F.1



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Miramar Pineland Natural Area

3600 S. University Dr., Miramar, FL 33025
954-357-8776; MiramarPineland@Broward.org

General Field Trip Information for All Programs

- Available Monday through Thursday, 9 a.m.-noon.
- Number of participants: One classroom (up to 30) per visit.
- Pre- and post-program activities will be sent to each classroom teacher.
- Recess may be taken at our large playground.
- Lunch may be taken afterward at ADA-accessible Shelter #3. Fees:
- \$5-\$7/student/hour. Teachers/chaperones are free.

Pineland Exploration & Scavenger Hunt (Grade 6)

The scrubby flatwoods plant community, in the northern half of our 157-acre property, is one of the largest intact resources of its kind in the county. A slash pine-dominated ecosystem has a limited understory, grassy meadows, and bare sandy spots. It occupies a low ridge rising above the adjacent terrain. The southern half of the site is a remnant sandy slough from the Snake Creek drainage system. We explore and investigate the biological diversity and evolution of this community.

Participants will learn about select members of the domain *Eukarya*, representing three kingdoms (Plantae, Fungi and Animalia) that live in this pine flatwoods. Our focus will be within the Kingdom Plantae at the family level. Students will go on a scavenger hunt for plants belonging to three different families (pine, cocoplum and grass). Each student will document characteristics and make a crayon rubbing of the leaf/leaves on a Linnaean taxonomic form provided.

Techniques and technologies useful in land management for collecting and organizing data in the field will be discussed. At a specific location we will practice one of the vegetation sampling techniques which uses a three-foot square frame. We will record this new data and add it to previously collected data on the provided form. We will discuss patterns and changes in the data across time. Two hours.

Florida Standards

Science:

Grade 6: SC.6.E.6.2, SC.6.N.1.3, SC.6.N.2.2, SC.6.N.2.3, SC.6.L.15.1

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Pineland Exploration & Scavenger Hunt (Grade 7)

We will address climate change and species interdependence near the wetland shore. The southern half of Miramar Pineland is a remnant sandy slough from the Snake Creek drainage system and an adjacent dry prairie. Farming on the land resulted in the formation of a dry prairie and pineland transitional to a wetland. The site is currently a mix of wetland and dryland species.

We will explore the trophic levels of producers, consumers, and decomposers among the dynamic ecotonal areas. We focus on the roles of each species within each trophic level independently and examine how all contribute to the process of energy transfer in the food web. The entire ecosystem will be explored, and there will be a discussion of environmental resilience and variation within species. Species tolerance to wet or dry conditions, and species interaction, including competition, predation, parasitism, commensalism, and mutualism, will be discussed and specific cases highlighted. A printed worksheet/study guide describing species relationships will be distributed for further study. Factors limiting ecosystems will be discussed.

We will practice a scientific investigation (systematic observations) by collecting data in the field on a limiting factor at two different locations. At each location we use GPS and collect data at two different points, one wet and one dry. Each student is provided a form that includes previously collected data to which we will add the current data. We will analyze changes in the data across time (repetition), identify variables impacting data, and formulate hypotheses regarding trends we have perceived and discuss how they might be tested.

We build on students' understanding of interdependence and limiting factors within a particular ecosystem to discuss and recognize examples of native species whose genetic diversity within populations have allowed adaptations to arise within species to cope with environmental changes. The trophic pyramid for a given ecosystem is a scientific model that we may use to document change over time. We also show the importance of species resilience through their persistence in the drier areas intended for farmland created by the historic draining of wetlands. Two hours.

Florida Standards

Science:

Grade 7: SC.7.E.6.6, SC.7.L.15.1, SC.7.L.15.2, SC.7.L.15.3, SC.7.L.15.3, SC.7.L17.1, SC.7.L17.2, SC.7.L.17.3, SC.7.N.1.1, SC.7.N.1.3, SC.7.N.2.1, SC.7.N.3.2

Plants Grow From Soil to Sky (Grades K-1)

We discuss the concepts of living vs. nonliving elements of any ecosystem. Students learn the dynamic relationships among different aspects of nature through an exploratory walk on the

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Pineland Trail. They will learn that organisms share some traits and have other unique ones. All organisms need air, water, food, and space. Their external structures work with the internal ones to keep them alive, help them grow, and facilitate reproduction. We will discuss the major organs of plants, including stems, roots, shoots, leaves, and flowers. We understand our natural world through careful observation and recording and analysis of data. One hour.

Florida Standards

Science:

Kindergarten: SC.K.L.14.3, SC.K.N.11, SC.K.P.13

Grade 1: SC.1.L.14, SC.1.L.14.1, SC.1.L.14.2, SC.1.L.14.3, SC.1.L.17.1

Busy Bugs, Insects, & Spiders (Grades 1-2)

These small but mighty members of our ecosystem contribute in many vital beneficial ways to our web of life. In the past they were often hidden or forgotten; recently we have newsworthy updates concerning their importance. We look at the biota and nonliving elements of our ecosystem, how insects and spiders use the ecosystem's nonliving resources for shelter and its living ones for food and to feed young. We can see, hear, smell, and feel qualities of inanimate objects comprising the physical environment and understand how organisms, including these creepy crawlies, contribute to it. One hour.

Florida Standards

Science

Grade 1: SC.1.E.6.1, SC.1.L.14.1, SC.1.L.14.3

Winged Wonders (Grades 1-2)

Wings bring many different species of wildlife into the air. We observe, discuss, and act out the different ways that each type of wing works. We will explore number, shape, texture, size, weight, color, and motions among the different kinds of wings. We explore how birds, insects, bats, and bugs all use wings for their own special reasons. One hour.

Florida Standards

Science

Grade 1: SC.1.E.6.1, SC.1.L.14.1, SC.1.L.14.3, SC.1.P.12.1, SC.1.N.1.1, SC.1.N.1.2

Grade 2: SC.2.N.1.1, SC.2.E.6.2, SC.2.E.7.4, SC.2.L.16.1, SC.2.L.17.1, SC.2.L.17.2, SC.2.N.1.1, SC.2.L.14, SC.2.L.15, SC.2.L.16, SC.2.P.13



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Custom Guided Nature Walks

Choose a topic of interest to your class, send us the Florida and/or New Generation Science Standards to cover, and we will create a custom course for your students. Some examples are:

- Ecological life histories of foxes, bats, honeybees, hummingbirds, among others.
- Native plants of Broward County and their habitats.
- Invasive plants: growth and reproductive characteristics, removal, and restoration of the environment.
- Earth Day: history, traditions around the world, our natural heritage in South Florida.
- Water conservation and sustainability in Broward County.



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Secret Woods Nature Center

2701 W. State Rd. 84, Dania Beach, FL 33312

954-357-8886; SecretWoods@Broward.org

Fees: Vary by program, ranging from \$3 to \$12 per student

Hammock Hike & Seek (Grades Pre-K-5)

A naturalist will lead your group to explore the laurel oak hammock with hands-on activities along the way demonstrating adaptations to life in a hammock with a focus on our senses. We will observe animal signs, environmental conditions, and plant adaptations as we walk through uplands and over bridges where water flows to feed wetlands throughout the park. One hour.

Florida Standards

Science:

Grade K: SC.K.L.14.1; SC.K.L.14.3; SC.K.N.1.2

Grade 1: SC.1.L.14.1; SC.1.L.17.1; SC.1.L.14.3; SC.1.E.6.1

Grade 5: SC.5.L.17.1

Discovering New River Trail (Grades K-8)

A naturalist will lead your group on an exploration of the plant communities found along and influenced by the New River. Our trip begins in the hammock forest, where laurel oaks tower overhead. Traveling to the flood plain, your group will experience the brackish-water wetland dominated by pond apple and mangrove trees. After spending some time at the observation deck overlooking the South Fork of the New River, your group will return to view the Monarch Interpretive Center. One hour.

Florida Standards

Science:

Grade K: SC.K.L.14.3; SC.K.L.14.1; SC.K.N.1.2

Grade 1: SC.1.L.14.1; SC.1.L.17.1

Grade 2: SC.2.E.7.1

Grade 4: SC.4.L.17.1; SC.4.L.17.4

Grade 5: SC.5.E.7.5; SC.5.L.17.1

Grade 6: SC.6.E.6.2

Grade 7: SC.7.L.17.1; SC.7.L.17.3; SC.7.E.6.6

CTE-AFNR

CTE-AFNR.68.PLANT.04.06

Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Green & Growing (Grades 1-5, 6-8)

Take a hike and identify the many types of plants living at Secret Woods and learn the role the environment plays in determining plant and animal communities. We will discuss the various parts of plants and learn about their functions. Finally, we will do a hands-on exploration of different ways plants reproduce, and each participant will take home a Florida native plant for their yard. Three hours.

Florida Standards

Science:

Grade 1: SC.1.L.14.2; SC.1.L.17.1

Grade 2: SC.2.L.16.1

Grade 3: SC.3.L.14.1

Grade 4: SC.4.L.16.1; SC.4.L.16.4

Grade 5: SC.5.L.14.2

Grade 6: SC.6.L.14.4

Grade 8: SC.8.L.18.1

CTE AFNR:

Grade 6—8: CTE-AFNR.68.PLANT.03.02); CET-AFNR.68.PLANT.04.01); CTE-AFNR.68.PLANT.04.07)

Decomp Romp (Grades 1-5, 6-8)

Your adventure begins in the macroscopic world with a hike down the New River Trail to look for mushrooms, molds, lichens, and more. We will find insects that aid in decomposition and collect other specimens to bring back for investigation. Responses of organisms to changing seasons will be discussed. The adventure continues with an investigation of microscopic structures and life all around us. Join us for this look at the often misunderstood, but absolutely essential, group of species that are the world's decomposers. Two hours.

Florida Standards

Science:

Grade 1: SC.1.L.14.3; SC.1.L.17.1

Grade 2: SC.2.L.14.1; SC.2.L.17.1

Grade 3: SC.3.L.14.1; SC.3.L.17.1

Grade 4: SC.4.L.17.2; SC.4.L.17.4

Grade 5: SC.5.L.15.1

Grade 7: SC.7.L.17.1

Grade 8: SC.8.L.18.1

Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Aquatic Adventures (Grades K-8)

Your group will discover fun and interesting facts about water molecules, water properties, and the water cycle through an interactive presentation and hands-on experiments. You will learn about the origins and value of water in South Florida. Then we hike down the New River Trail for a hands-on study and discussion of the river's water quality and the importance of water conservation in South Florida. While at the river we will check traps and look for fish species that call the New River their home. On our return, you will hear the story of Gyotaku, a modern and ancient art of fish printing. Fish anatomy and physical adaptations are discussed before you make your own Gyotaku print. Three hours.

Florida Standards

Science:

Grade K: SC.K.N.1.5

Grade 1: SC.1.L.17.1

Grade 2: SC.2.L.17.1; SC.2.E.7.1

Grade 3: SC.3.L.15.1

Grade 4: SC.4.E.6.6

Grade 5: SC.5.L.15.1; SC.E.SC.5.E.7.2

Grade 6: SC.6.E.7.2

Grade 7: SC.7.E.6.6

Grade 9: SC.9.12.L.17.10

CTE-TECED

Grade 6—8: CTE-TECED.68.MARTEC.09.02

Wonderful Reptiles (Grades K-6):

The physical adaptations of the four classes of reptiles will be discussed while your group meets some of the native reptiles that call South Florida and Secret Woods their home. Following the reptile encounter, students will paint a wooden snake to take home and share the importance of these creatures in our world. One hour.

Florida Standards:

Science:

Grade K: SC.K.L.14.3

Grade 1: SC.1.L.16.1; SC.1.L.17.1

Grade 2: SC.2.L.16.1

Grade 3: SC.3.L.15.1

Grade 4: SC.4.L.16.2; SC.4.L.16.4; SC.4.L.17.4



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Grade 5 SC.5.L.15.1; SC.5.L.17.1

Grade 6: SC.6.L.15.1

Social Studies

Grade 2: SS.2.G.1.4; SC.2.E.6

Grade 3: SS.3.G.2.4

Fishy Prints (Grades K-6):

Hear the story of Gyotaku, a modern and ancient art of fish printing. Fish anatomy and physical adaptations are discussed before making your own Gyotaku print. One hour.

Florida Standards:

Science:

Grade K: SC.K.L.14.3

Grade 1: SC.1.E.5.3; SC.1.L.17.1

Grade 2: SC.2.L.16.1

Grade 3: SC.3.L.15.1

Grade 4: SC.4.L.16.4

Grade 5: SC.5.L.14.2

Grade 6: SC.6.L.15.1

Bountiful Butterflies (Grades K-6):

Join our staff to discover the life cycles of a butterfly and compare insect anatomy. Participants will make their own craft butterflies and take them on a walk through *Pollinator Pathway* to observe butterflies and the plants that attract them while looking for the different phases of these beautiful insects. One hour.

Florida Standards:

Science:

Grade K: SC.K.L.14.3

Grade 1: SC.1.E.5.3; SC.1.L.17.1

Grade 2: SC.2.L.16.1

Grade 3: SC.3.L.15.1

Grade 4: SC.4.L.16.4

Grade 5 SC.5.L.15.1; SC.5.L.17.1

Grade 6: SC.6.L.15.1

Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Wonders of Water (Grades K-8)

The water cycle and fun facts about water molecules are explored through demonstrations and hands-on activities that show the wow of water. One hour.

Florida Standards:

Science:

Grade K: SC.K.N.1.5

Grade 1: SC.1.E.6.2; SC.1.E.6.1

Grade 2: SC.2.L.17.1; SC.2.P.8.4

Grade 3: SC.3.E.5.2; SC.3.P.9.1

Grade 4: SC.4.E.6.6; SC.5.P.8.2; SC.4.N.1.6; SC.4.N.3.1

Grade 5: SC.5.E.7.1; SC.5.E.7.2

Grade 6: SC.6.E.7.2; SC.6.L.14.1

Grade 7: SC..E.6.6

Grade 8: SC.8.P.8.6

Rockin' in South Florida (Grades 4, 6-8):

Starting in the Swallowtail Center, your group will learn about the geology of Florida and the ways it has helped to form our environment. Hands-on experiences with natural samples of South Florida limestone and silica will give your group a chance to see what our state is made of. Additional specimens of minerals from around the world will be presented to give your group a taste of the diversity of mineral forms, including igneous, sedimentary, and metamorphic rocks, as well as descriptions of the natural processes that form them. We will then take a walk down the New River Trail and explore off the trail to view some examples of the natural geology of the park. Two hours.

Florida Standards:

Science:

Grade 1: SC.1.E.6.1

Grade 2: SC.2.E.6.1; SC.2.E.6.2; SC.2.E.6.3; SC.2.P.8.1

Grade 3: SC.3.P.8.3; SC.3.P.9.1

Grade 4: SC.4.E.6.1; SC.4.E.6.4; SC.4.E.6.6

Grade 5: SC.5.P.8.2; SC.5.P.9.1

Grade 6: SC.6.E.6.1; SC.6.E.6.2

Grade 7: SC.7.E.6.2

Grade 8: SC.8.P.8.9

Grade 9-12: SC.912.E.6.4



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

CTE-AFNR:

Grade 6—8: CTE-AFNR. 68.PLANT.03.03; CTE-AFNR.68.PLANT.05.09; CTE-AFNR.68.ENVIRO.04.03; CTE-AFNR.68.GEN; CTE-AFNR.68.PLANT.05.11

Social Studies:

Grade 1: SS.1.G.1.1
Grade 4: SS.4.G.1.2



Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Tradewinds Farm (Gardens) & Stables

3600 W. Sample Rd., Coconut Creek, FL 33073
954-357-8720; TradewindsPark@Broward.org

All programs are two hours long but can be adapted in consultation with teachers.
Fees: \$8/hour/student

Products of the Animal Industry (Grades 6-8)

Students will learn about the domestication of animals, the purposes of livestock animals, and how farmers and geneticists develop animal breeds suitable for producing food, fiber, and other byproducts. Also, identify animal byproducts and where they come from.

Florida Standards:

Science:

Grade 7: SC.7.L.16.4;

Grade 8: SC.8.N.4.1; SC.8.N.4.2

Health:

Grade 6: HE.6.C.2.9

Animal Nutrition & Digestion (Grades 6-8)

Does a cow really have four stomachs? How do farmers decide what to feed their animals? Learn the differences between ruminants and monogastrics, analyze nutrition labels, investigate animals' feed preferences, determine a healthy weight and diet of a horse, and help feed the livestock at the farm.

Florida Standards:

Science:

Grade 6: SC.6.L.14.5

Grade 7: SC.7.L.17.2

CTE-AFNR:

Grades 6-8: CTE-AFNR.68.ANIMAL.0401; CTE-AFNR.68.FOOD.02.02; CTE-AFNR.68.FOOD.04.06; CTE-AFNR.68.GENRL.08.07; CTE-AFNR.68.GENRL.09.03

Broward County Parks and Recreation STEAM/Environmental Education Programs 2021

Healthy Horses (Grade 6):

What can we learn about a horse's health from its vital signs? Perform a physical exam on one of the farm's horses. Investigate common horse health concerns and assist with routine preventive care and first aid on the farm.

Florida Standards:

Science:

Grade 6: SC.6.L.14.5; SC.6.L.14.6

Farm Invaders (Grades 6-7)

Learn how farmers work to combat parasites such as flies and mosquitos as a part of daily life on the farm. Study the parasite life cycle, get down and dirty with fecal exams, calculate dosages for preventive de-wormers, and participate in an integrated pest management scavenger hunt.

Florida Standards:

Science:

Grade 6: SC.6.L.14.6

Grade 7: SC.7.L.17.2

Math on the Farm (Grade 7)

Learn how farmers use math to keep their animals healthy and use math to answer real-life questions on the farm. How many cows can live in this pasture? How do height and weight determine the amount of grain we feed our horses and ponies? Calculate dosages for medication, learn the calculations involved in placing a feed order for the farm, and more.

Florida Standards

Mathematics:

Grade 7: MAFS.7.G.1.1; MAFS.7.EE.2.3; MAFS.7.G.2.6; MAFS.7.RP.1.1; MAFS.7.RP.1.2

Animal Behaviors (Grades 6-7)

Are pigs smarter than dogs? Is it safe to walk behind a horse? Study how animals communicate with one another and how we communicate with them through different training methods. Practice positive-reinforcement training and learn how to safely maneuver around horses. Learn about animal adaptations, traits, and genetics. What genes determine a horse's color? Why do pigs wallow in the mud? What is the difference between a beef cow and a milk cow?



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Students will examine various animals to see how they are adapted to their environment. Explore the concept of artificial selection and identify genotypes and phenotypes of animals on the farm.

Florida Standards

Science:

Grade 6: SC.6.L.15.1

Grade 7: SC.7.L.15.2; SC.7.L.15.3; SC.7.L.16.1; SC.7.L.16.2; SC.7.L.16.4

Special Skills:

Grade 12: SP.PK12.US.13.4

For further information, contact:

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