



Coastal Dune Lakes Field Trip

Field Site Locations:

- Walton County
 - Grayton Beach State Park
357 Main Park Rd, Santa Rosa Beach, FL 32459
- Walton/Bay County
 - Camp Helen State Park
23937 Panama City Beach Pkwy, Panama City Beach, FL 32413

Note: Designed to be completed from shore.

Grade Level: K-12

Objectives: This field trip will focus on exploring the coastal dune lakes and their communities. Within the habitat(s) selected, schools/classes will select up to 4-6 activities (depending on group size and time the school has available at the field site) from the tables below.

The focus will be for students to be able to describe the major physical, biological, and ecological features of each habitat visited during the field trip and discuss their solutions to human impacts. The discussion and salient points taught will be based on the grade level of the class (see Activity Descriptions by grade in tables below).

Background: The coastal dune lakes in Walton/Bay Counties are economically and ecologically important ecosystems in this region. They are unique in the world, and they provide a critical ecosystem that supports a vast array of birds, reptiles, amphibians, fresh/estuarine fish, and other marine life. Providing local students an opportunity to see, understand, and experience the animals and habitats firsthand will help build memorable experiences that can help teachers drive home key points and help students develop an appreciation of the importance of these marine ecosystems.

Procedure: After splitting the class(es) into smaller working groups (<15), students will watch and/or participate (depending on age) as staff undertake the various sampling activities and lessons described below. E&FCA team members will explain the sampling and assist the group in processing the samples, as well as lead the students through the identification of organisms caught and their role in the habitat. Physical characteristics of the water and substrate will be compared to areas without the habitat present to contrast both the number and diversity of the organisms.

A typical field trip will be composed of:

1. Introduction and safety rules.
2. Site orientation and schedule.
3. Assemble groups and escort them to stations (To save time, TEACHERS please divide students into groups prior to arriving at the Field Site Location).
4. Students will rotate through 4-5 Activity Stations (depending on group size)
5. After students have rotated through all stations, they will either depart for school or have lunch on site (brought by school and/or students).

Available On Site: Restroom Facilities, water (to refill participants' water bottles), and in some cases shade (tents over stations), pavilions and picnic tables

Materials: clip boards and handouts, Seine net, dip nets, buckets, dissecting trays, aquaria, sediment corer, sieves, water quality testing kits, DO meter, salinity meter, pH meter, ID cards (plant, invertebrate, fish), UW drone (as applicable) and screen.

Activity Time: ~2 hours, depending on the number of activities; choices of activities determined by teachers, depending on lesson integration with classroom curriculum and location available for field trip. Time at each station is determined by the number of stations and the age of the student (typically 20 to 35 minutes).

Florida Standards: see Activity Descriptions in tables below.

K through 2nd Grade: Coastal Dune Lakes Trip

Station (Foundational)	Description	Standards
Explore the Dune Lakes (<i>wet activity – closed toe shoes needed</i>)	Staff will conduct seine netting and direct students in dip netting in the coastal dune lake. Specimens will be collected and put into touch tank and observation tanks and staff will help identify and characterize the critters living in this important habitat.	SC.K.N.1.1-2; SC.K.L.14.3; SC.1.N.1.1-4; SC.2.N.1.1-6; SC.1.L.14.1; SC.1.L.17.1; SC.2.L.17.1-2
Discovering Coastal Dune Lakes “Tea-Colored Treasures”	Discover what makes a coastal dune lake so unique, how they connect to the ocean, and why the water looks like sweet tea. Students will then draw their own coastal dune lake.	SC.K.A.1.4; SC.K.P.8.1; SC.1.E.6.1; SC.1.L.14.1; SC.2.L.17.2
Critters the eye can’t see	Using field microscopes and large picture guides, participants will look at the critters caught in plankton nets by the staff to learn about these important critters.	SC.1.N.1.1-4; SC.2.N.1.1-6; SC.1.L.14.1-3; SC.2.E.6.1-3; SC.1.E.6.1-3; SC.2.P.8.5; SC.1.L.17.1; SC.2.L.17.1-2; SC.2.L.16.1
Nature Hike	Using binoculars to identify the birds and guides to identify the animal tracks, we will find out who lives in and around the coastal dune lakes.	SC.K.N.1.1-2; SC.K.L.14.3; SC.1.N.1.1-4; SC.2.N.1.1-6; SC.1.L.14.1; SC.2.L.14.1; SC.1.L.17.1; SC.2.L.17.1-2

Note: For this age group, samples will be collected by staff and placed in touch tanks, aquaria or dissecting trays for observation and participant study. Some entry to the water is required to observe seine netting and to try dip netting for samples.

3rd through 5th Grade: Coastal Dune Lakes Trip

Station (Foundational)	Description	Standards
Explore the Dune Lakes (wet activity – closed toe shoes needed)	Staff will conduct seine netting and direct students in dip netting in the coastal dune lake. Specimens will be collected and put into touch tank and observation tanks and staff will help identify and characterize the critters living in this important habitat	SC.3.L.15.1; SC.4.N.1.1; SC.4.N.1.6; SC.4.N.1.7; SC.5.L.17.1; SC.4.L.17.4
Station (Select 3)	Description	Standards
Be the Marine Scientist: Water Quality Field Investigations	Ever wonder why coastal dune lakes have the color of sweet tea? Learn the scientific methods of field work, you will learn about the impact water quality (physical and chemical) has on this important habitat.	SC.3.N.1.1; SC.3.N.1.3; SC.3.N.1.6; SC.3.N.1.7; SC.4.N.1.1; SC.5.N.2.1
Critters the eye can't see	Using microscopes and large picture guides, participants will look at the critters caught in plankton nets by the staff to learn about these important critters.	SC.3.L.15.1; SC.4.N.1.1; SC.4.N.1.6; SC.4.N.1.7; SC.5.L.17.1; SC.4.L.17.4
Nature Hike	Using binoculars to identify the birds and guides to identify the animal tracks, we will find out who lives in and around the coastal dune lakes.	SC.3.L.15.1; SC.4.N.1.1; SC.4.N.1.6; SC.4.N.1.7; SC.5.L.17.1; SC.4.L.17.4
Casting 101/Fishing	Participants will learn the basics and how to cast. Depending on skill/age, students will fish the habitat to see what they can catch with staff assistance and guidance.	SC.3.N.1.1-3, 5-7; SC.4.N.1.1-3, 5-7; SC.5.N.1.2; SC.5.N.2.1; SC.3.L.15.1; SC.3.L.17.1; SC.4.L.16.2; SC.4.L.17.2-4; SC.5.L.17.1

Note: For this age group, samples will be collected by staff and placed in touch tanks, aquaria or dissecting trays for observation and participant study. Some entry to the water is required to observe seine netting and to try dip netting for samples.

6th through 8th Grade: Coastal Dune Lakes Trip

Station (Foundational)	Description	Standards
Explore the Dune Lakes (wet activity – closed toe shoes needed)	Using seine nets and dip nets, participants will work with staff to catch and examine the critters that live in coastal dune lakes.	SC.6.L.15.1; SC.7.L.17.1; SC.7.L.17.2; SC.7.L.17.3
Station (Select 3)	Description	Standards
Be the Marine Scientist: Water Quality Field Investigations	Ever wonder why coastal dune lakes have the color of sweet tea? Learn the scientific methods of field work, you will learn about the impact water quality (physical and chemical) has on this important habitat.	SC.6.N.1.5; SC.7.N.1.1
Critters the eye can't see	Using field microscopes and large picture guides, participants will look at the critters caught in plankton nets by the staff to learn about these important critters.	SC.8.L.18.1; SC.6.L.15.1; SC.7.L.17.1; SC.7.L.17.2; SC.7.L.17.3
Fishing	Participants will fish the habitat to see what they can catch with staff assistance and guidance.	SC.6.L.15.1; SC.6.L.14.3; SC.7.L.17.1; SC.7.L.17.2; SC.7.L.17.3; SC.8.N.4.1
Blue Robotics UW ROV exploration *Coming Soon – Anticipated Available Date - October 2025 (small groups required)	Students will be given a chance to learn how to operate the ROV in shallow water using the controller to operate the propulsion, cameras, and echosounder. Monitors will allow the group to watch as ROV operation is demonstrated for them, and some students will be given a chance to operate the ROV, time permitting.	SC.6.L.15.1; SC.7.L.17.2; SC.7.L.17.3 SC.8.N.4.1
Watershed Concepts *Coming Soon – Anticipated Available Date - October 2025	Students will be introduced to the concept of watersheds, and explore the sources and impacts of pollution, using a watershed model in the field.	SC.6.N.1.5; SC.7.L.17.3; SS.7.G.5.1; SC.8.N.4.1

9th through 12th Grade: Coastal Dune Lakes Trip

Station (Foundational)	Description	Standards
Explore the Dune Lakes (wet activity – closed toe shoes needed)	Using seine nets and dip nets, participants will work with staff to catch and examine the critters that live in coastal dune lakes.	SC.912.L.15.6; SC.912.L.17.1; SC.912.L.17.2; SC.912.L.17.6
Station (Select 3)	Description	Standards
Be the Marine Scientist: Water Quality Field Investigations	Ever wonder why coastal dune lakes have the color of sweet tea? Learn the scientific methods of field work, you will learn about the impact water quality (physical and chemical) has on this important habitat.	SC.912.L.17.3; SC.912.L.17.7; SC.912.L.17.13; SC.912.L.17.16; SC.912.N.1.6
Critters the eye can't see	Using field microscopes and large picture guides, participants will look at the critters caught in plankton nets by the staff to learn about these important critters.	SC.912.L.15.6; SC.912.L.17.1; SC.912.L.17.2; SC.912.L.17.6
Fishing	Participants will fish the habitat to see what they can catch with staff assistance and guidance.	SC.912.L.15.3; SC.912.L.17.16; SC.912.L.17.20
Blue Robotics UW ROV exploration *Coming Soon – Anticipated Available Date - October 2025 (small groups required)	Students will be shown how to operate the ROV, and some students will be given a chance to learn how to operate the ROV and navigate to a bait box offshore to view the fish/crustaceans that are attracted to the bait box. Navigation using the echosounder and internal compass will teach the students how to operate the ROV without seeing it underwater.	SC.912.L.15.3; SC.912.L.17.16; SC.912.L.17.20
Watershed Concepts *Coming Soon – Anticipated Available Date - October 2025	Students will be introduced to the concept of watersheds, and explore the sources and impacts of pollution, using a watershed model in the field.	SC.912.L.17.12; SC.912.L.17.13; SC.912.L.17.16; SC.912.L.17.20