Gulf 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
- Bay County
  - St. Andrews State Park
    4607 State Park Lane, Panama City, FL 32408

Note: Designed to be completed from shore.

Grade Level: K-12

Objectives: This field trip will focus on exploring the nearshore habitats of the Gulf. 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 nearshore habitat of the Gulf provides an excellent opportunity to study the adaptations of animals to the nearshore environment, beaches and dunes, and the trophic structure of the habitat and how the food chain works to provide energy into the Gulf ecosystem. 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, touch tank, sediment corer, sieves, water quality testing kits, salinity meter, pH meter, ID cards (invertebrate, fish), UW drone (as applicable) and screen, turtle activity materials and posters, plastic pollution discussion board and sampling sieves, fishing poles and gear, and binoculars.

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: Gulf Trip

Station (Foundational)	Description	Standards
Explore the Gulf *(wet activity – **closed toe shoes needed**)*	Using seine and dip nets, participants will work with staff to catch and examine critters that live in the Gulf. Collected specimens will be put into the touch tank and staff will help with identification.	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
Station (Select 3)	**Description**	**Standards**
Ghost Crab Observations *(May-November)*	Staff will teach participants about the anatomy and behavior of the ghost crab and its role in the beach habitat while trying to catch some!	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
Sea Turtle Creations	In small groups, students will create a sea turtle in the sand, while learning about the different species and measuring out their different sizes for comparison.	SC.K.N.1.1; SC.K.N.1.5; SC.1.N.1.1-4; SC.1.L.14.1; SC.1.E.6.1; SC.1.L.17.1; SC.2.N.1.1-6; SC.2.P.8.1; SC.2.L.17.1-2; SC.2.L.16.1
Seashore Discovery Walk	Students will search for shells along the shoreline, as well as things that don't belong--like plastics. Staff will facilitate a group discussion about what they found and how we can all be good stewards.	SC.K.N.1.1; SC.1.N.1.1; SC.1.N.1.4; SC.2.N.1.1-6
Shoreline Critters in the Surf Zone	Using handheld sieves, students will discover coquina clams and mole crabs found along the shoreline and learn how these intertidal animals have adapted to survive the dynamic beach environment.	SC.K.N.1.1; SC.K.N.1.5; SC.K.L.14.3; SC.1.N.1.1-2; SC.1.E.6.1-2; SC.1.L.14.1; SC.2.N.1.1-6; 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: Gulf Trip

Station (Foundational)	Description	Standards
Explore the Gulf *(wet activity – **closed toe shoes needed**)*	Using seine and dip nets, participants will work with staff to catch and examine critters that live in the Gulf. Collected specimens will be put into the touch tank and staff will help with identification.	SC.3.L.15.1; SC.4.N.1.1; SC.4.N.1.6; SC.4.N.1.7; SC5.5.L.17.1; SC.4.L.17.4
Station (Select 3)	**Description**	**Standards**
Be the Marine Scientist: Water Quality Field Investigations	How healthy is the clear water of the Gulf? Learn the scientific methods of field work and 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
Ghost Crab Observations *(May-November)*	Staff will teach participants about the anatomy and behavior of the ghost crab and its role in the beach habitat while trying to catch some!	SC.3.N.1.1; SC.3.N.1.6; SC.4.N.1.1; SC.4.N.1.3; SC.5.L.17.1
Shoreline Critters in the Surf Zone *(can be combined with Ghost Crab Observations)*	Using handheld sieves, students will discover coquina clams and mole crabs found along the shoreline and learn how these intertidal animals have adapted to survive the dynamic beach environment.	SC.3.N.1.1; SC.3.N.1.6; SC.3.L.15.1; SC.3.L.17.1; SC.4.N.1.1; SC.4.N.1.3; SC.4.P.10.4; SC.5.N.1.1; SC.5.L.17.1
Turtle Hurdles	Students will play a game to simulate what sea turtles face coming ashore to nest and will learn about each species and conservation measures needed to protect them.	SC.3.L.15.1; SC.3.L.17.1; SC.4.N.1.1; SC.4.N.1.3; SC.5.L.17.1
Seashore Discovery Walk *(can be combined with Plastic Pollution)*	Students will search for seashells and more along the shoreline, using field guides. Staff will facilitate a group discussion about what they found.	SC.3.N.1.1-2; SC.4.N.1.1-5; SC.4.P.10.4; SC.5.N.1.1; SC.5.L.17.1
Plastic Pollution, does it ever go away?	Students will look for and collect plastic pollution along the shoreline; staff will facilitate a group discussion about plastic pollution/marine debris and how we can be stewards of our environment.	SC.3.N.1.1; SC.3.N.1.2; SC.3.N.1.6; SC.4.N.1.1-3; SC.4.L.17.4; SC.5.N.1.1; SC.5.N.1.
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: Gulf Trip

Station (Foundational)	Description	Standards
Explore the Gulf *(wet activity – **closed toe shoes needed**)*	Using seine and dip nets, participants will work with staff to catch and examine critters that live in the Gulf. Collected specimens will be put into the touch tank and staff will help with identification.	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	How healthy is the clear water of the Gulf? Learn the scientific methods of field work and about the impact water quality (physical and chemical) has on this important habitat.	SC.6.N.1.5; SC.7.N.1.1
Ghost Crab Observations *(May - November)*	Staff will teach participants about the anatomy and behavior of the ghost crab and its role in the beach habitat while trying to catch some!	SC.6.N.1.5; SC.7.N.1.1; SC.6.L.15.1; SC.7.L.17.1
Shoreline Critters in the Surf Zone *(can be combined with Ghost Crab Observations)*	Using handheld sieves, students will discover coquina clams and mole crabs found along the shoreline and learn how these intertidal animals have adapted to survive the dynamic beach environment.	SC.6.L.15.1; SC.7.L.17.1; SC.7.L.17.2; SC.7.L.17.3; SC.8.L.18.1
ID the Sea Turtle	Using a dichotomous key, participants will work together to identify the sea turtle species and learn about conservation measures.	SC.6.N.1.5; SC.6.L.15.1
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
Plastic Pollution, does it ever go away?	Students will look for and collect plastic pollution along the shoreline; staff will facilitate a group discussion about plastic pollution/marine debris and how we can be stewards of our environment.	SC.7.E.6.6; SC.8.N.1.1
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

9th through 12th Grade: Gulf Trip

Station (Foundational)	Description	Standards
Explore the Gulf *(wet activity – **closed toe shoes needed**)*	Using seine and dip nets, participants will catch and examine critters that live in the Gulf. Collected specimens will be put into the touch tank and staff will help with identification.	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	How healthy is the clear water of the Gulf? Learn the scientific methods of field work and 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
Ghost Crab Observations *(seasonal; Gulf side)*	Staff will teach participants about the anatomy and behavior of the ghost crab and its role in the beach habitat while trying to catch some!	SC.912.N.1.1; SC.912.N.1.6; SC.912.L.17.6
Mock Sea Turtle Nest Discovery	Participants will learn about local sea turtle species and conservation measures needed to protect them, while conducting a mock nest discovery.	SC.912.N.1.1; SC.912.L.17.16; SC.912.L.17.8; SC.912.L.17.13
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
Shoreline Critters in the Surf Zone *(can be combined with Ghost Crab Observations)*	Using handheld sieves, students will discover coquina clams and mole crabs found along the shoreline and learn how these intertidal animals have adapted to survive the dynamic beach environment.	SC.912.L.17.12; SC.912.L.15.6; SC.912.L.17.1; SC.912.L.17.2; SC.912.L.17.6
Plastic Pollution, does it ever go away?	Students will look for and collect plastic pollution along the shoreline; staff will facilitate a group discussion about plastic pollution/marine debris and how we can be stewards of our environment.	SC.912.L.17.16
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