

National Park Service  
U.S. Department of the Interior

Gulf Islands National Seashore  
Ocean Springs, Mississippi



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**I.S.L.A.N.D.**

A Self-Guided Environmental  
Educational Program for  
West Ship Island, Mississippi

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# West Ship Island

## Leader Pre-Visit Guide

“The art of teaching is  
the art of assisting  
discovery.”

-Mark van Doren



## I.S.L.A.N.D. Educational Program for West Ship Island

I.S.L.A.N.D. is designed for teachers, scout leaders, and any other leaders who are bringing groups of children to West Ship Island.

The program has three components:

- lessons, activities, and materials to be used before visiting the island
- a six part activity package for use on the island during the visit
- exercises to be completed post-visit for review



I.S.L.A.N.D. serves multiple purposes:

- an introduction to the **geography** and **ecology** of barrier islands
- a specific knowledge and experience of West Ship Island
- an interactive and educational **opportunity for children to explore**
- and an opportunity to introduce the concept of **conservation**.

Groups and individuals planning a visit to West Ship Island will need to know the following information:

- West Ship Island is a part of Gulf Islands National Seashore, Mississippi district, and is managed by the National Park Service.
- **All plants and animals on West Ship Island are protected by law.** This means that visitors to the island are encouraged to observe, study, and appreciate, but picking, collecting, and otherwise disturbing live plants and animals are forbidden.
- Fishing is the only exception. In accordance with state and federal regulations, fishing is permitted outside the designated swimming beach.
- Shells may be collected for non commercial purposes. Hermit crabs are abundant along the seashore, so be certain a shell is uninhabited before collecting.
- **Access to West Ship Island is by boat only.**

The easiest way to access West Ship Island is via the Ship Island Excursions ferry in Gulfport, Mississippi. A National Park Service concessionaire, the ferry normally operates from March through October, but occasionally private trips may be arranged. For details on schedules and fares, see Ship Island Excursions website at [www.mshipisland.com](http://www.mshipisland.com) or contact the ferry ticket office at (228) 864-1014.

## I.S.L.A.N.D. Outline

### Pre-Visit

Four lessons are provided to introduce the geography and weather of barrier islands. Leaders may reproduce the lesson and activity pages in the numbers required. Upper level students should be able to read the materials and complete the activities with little assistance. Younger pupils will require some formal instruction.

### On The Island

Six activities make up the field visit portion of the I.S.L.A.N.D. program. The six activities may be completed in sequence by a class working together as a single unit. However, to promote learning, and allow for easier crowd control and direction, it is recommended that the unit is divided into six sub groups and then rotated through the six activities. Each group begins with a different activity and progresses to the next in sequence until all groups have finished all six. The six activity stations correspond to the I.S.L.A.N.D. acronym: **I**sland, **S**eashore, **L**andscape, **A**nimals, **N**utrients, and **D**ebris.

The length of time devoted to each activity is highly flexible. A minimum of ten minutes per activity is recommended. Also, when planning a schedule remember to allow for time to switch from one activity to the next. Assign one or more adult volunteers to stay at each station while the groups cycle through the program. For the leader, a police or coach-style whistle is perfect for announcing switch times.

The best place on West Ship Island to carry out the program is on the Mississippi Sound beach. This is the shoreline that extends east and west of the ferryboat pier. Any section of this beach could be chosen to set up all six activity stations. Each station should have its own area to allow for exploration and focus. Stations positioned too close together tend to be a distraction for both groups.

### Post-Visit

Activity pages are provided for review after the trip has been concluded. You may also have each student design or color a cover page. Then, all the lessons and activity pages can be assembled into a book to take home. It is recommended to have a sharing session after the visit to allow the students to share stories and discoveries. This is also an opportunity to reiterate the importance of the barrier islands. Students should begin to understand that protecting barrier islands, and other important lands, is a job we all share.



## West Ship Island: General Information

Facilities on West Ship Island include a fishing pier, snack and souvenir shop, restrooms, drinking fountains, shaded picnic pavilions, cold water showers, and boardwalk.

Fort Massachusetts, a Third System U.S. seacoast fortification is located near the ferry dock. Tours are given daily to the public, and special group tours may be arranged by calling Gulf Islands National Seashore at 228-875-9057, extension 4100.

West Ship Island is an appealing place to visit in mild weather; however, it is inhospitable when atmospheric conditions are severe. It is advisable to plan your trip for spring or autumn, when temperatures are moderate. A back-up rain date should be considered as well.

By ferry, the trip to or from the island is about 11 miles and takes between fifty and seventy minutes. Dolphin and seabird sightings are frequent.

### WHAT TO BRING:

- an abundant supply of sunscreen
- sunglasses
- sun hats
- insect repellent
- a first aid kit
- beach shoes or old sneakers
- binoculars
- magnifying lenses
- a camera to capture highlights from your visit
- snacks, drinks, and lunches
- Student Materials (per student)

- one or more writing utensils  
(crayons are not recommended due to heat)
- a drawing board to write, draw, and record findings  
(directions for preparing a simple drawing board is included on the next page)
- one nametag (six different colors needed)



### BEFORE YOU GO:

To make the most of your field trip, we advise that you recruit a small group of volunteers to assist you in carrying out the I.S.L.A.N.D. activities. Meet with your volunteers in advance to acquaint them with the program and assign roles.



## Assembling the Drawing Boards

The I.S.L.A.N.D. activities for the field visit to the island are centered upon observation and documentation. Students will need a sturdy writing surface for each station. You may choose to have the students prepare their own drawing boards completely to help generate interest in the trip before it takes place.

*Safety note: Cardboard is difficult to cut with child safety scissors. It is recommended that you purchase pre-cut cardboard or have the cardboard prepared beforehand.*

### MATERIALS NEEDED:

- an abundant supply of cardboard ( empty printer paper boxes are excellent )
- heavy duty scissors or box cutter
- printed Student Field Visit Packets (one packet per student)
- paper fasteners of some type ( binder clips, brads, staples)
- markers or other decorative elements

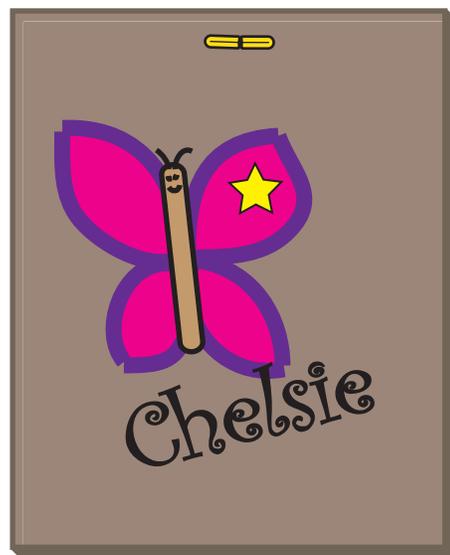
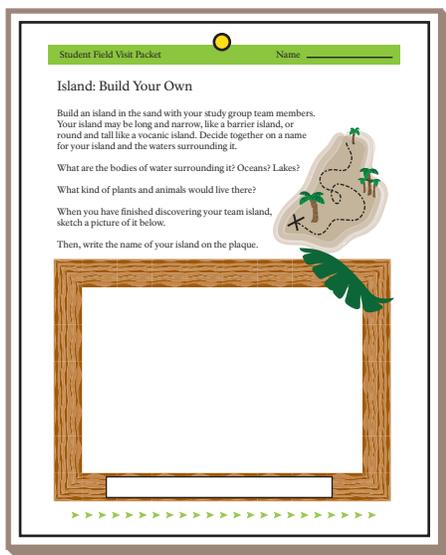
### DIRECTIONS:

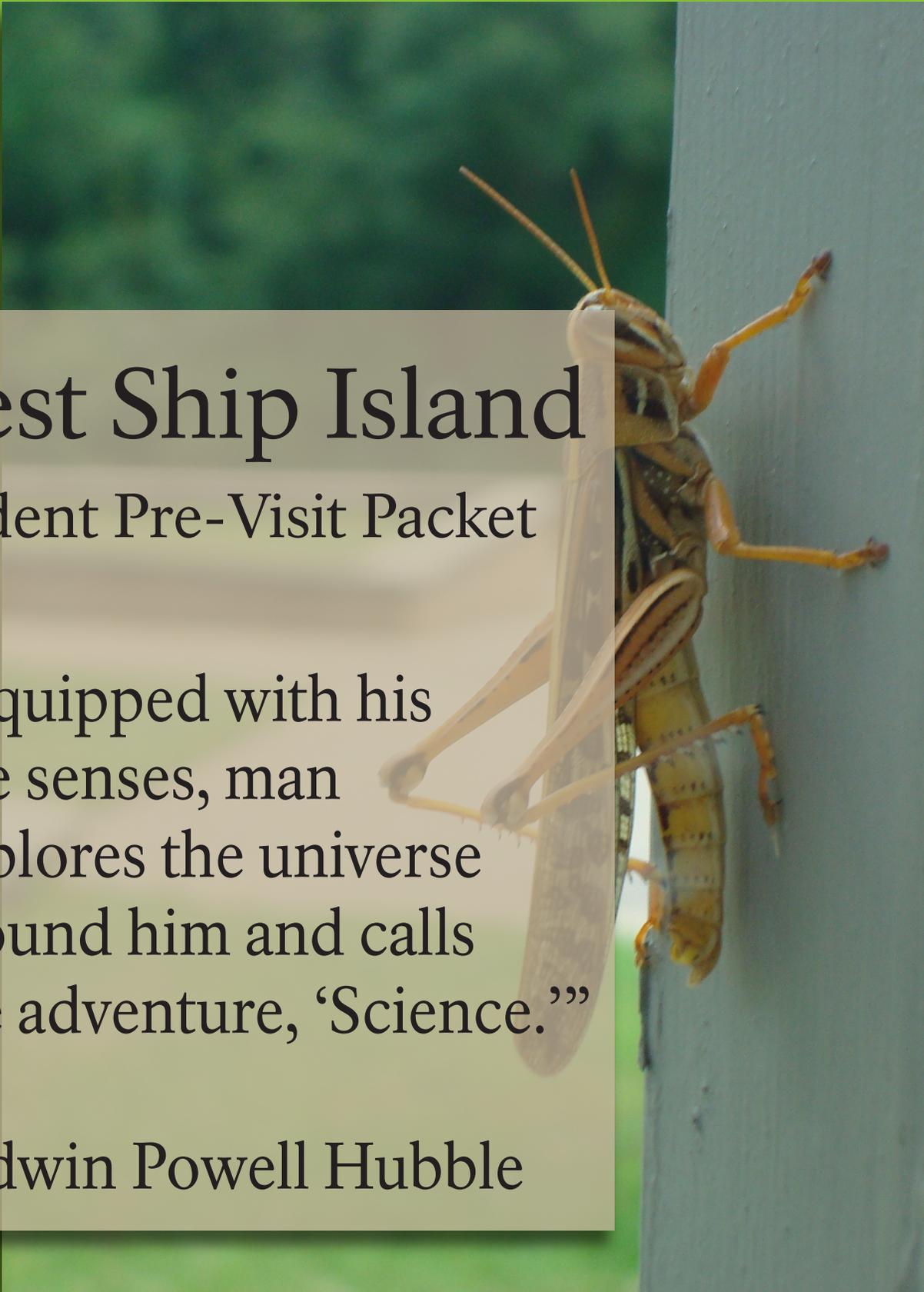
1. Cut pieces of stiff cardboard to 8.5 by 11 inches or larger.
2. Attach a complete set of six worksheets to each board using paper fasteners.
3. Have the students label their boards with their name.
4. *Optional:* Allow the students to decorate the back of the drawing boards.

EXAMPLE:

*Front*

*Back*



A close-up photograph of a grasshopper with yellow and brown stripes on its body, climbing a grey, textured wall. The grasshopper's long hind legs are extended, and its antennae are visible. The background is a blurred green, suggesting foliage.

# West Ship Island

## Student Pre-Visit Packet

“Equipped with his five senses, man explores the universe around him and calls the adventure, ‘Science.’”

-Edwin Powell Hubble

Name \_\_\_\_\_

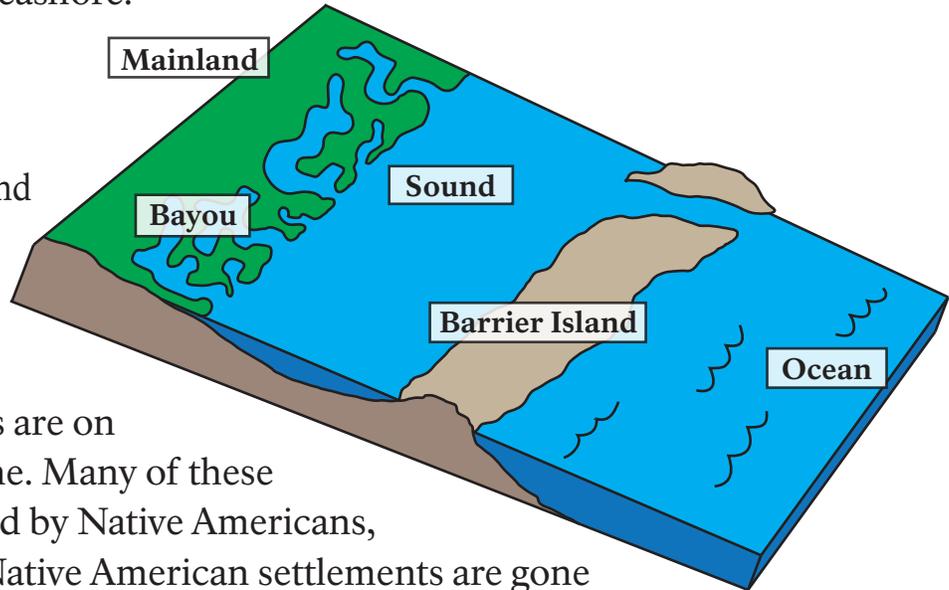


# The Geography of the Mississippi Coast

The Mississippi coast is protected by barrier islands. There are four barrier islands along the Mississippi coast that are part of the Gulf Islands National Seashore.

These islands are:

- Cat Island
- East and West Ship Island
- Horn Island
- and Petit Bois Island.



Several cities and towns are on the Mississippi coast line. Many of these cities were first occupied by Native Americans, or Indians. Today, the Native American settlements are gone but new cities have sprung up in their place. The Mississippi visitor center for the Gulf Islands National Seashore is at the Davis Bayou in Ocean Springs.

To the **east** of Ocean Springs are Gautier (pronounced Go-Shay) and Pascagoula. To the **west** of Ocean Springs are Biloxi, Gulfport, Long Beach, and Pass Christian.



The body of water **north** of the barrier islands is called the *Mississippi Sound*. The body of water **south** of the barrier islands is called the *Gulf of Mexico*.

These cities, and the people who live there, are all protected from storms and high waves by the barrier islands. When high waves and strong storms move toward the coast from the Gulf of Mexico, they strike the barrier islands first and lose much of their force. Without these islands, these cities would be in much greater danger.



## The Winds of the Mississippi Coast

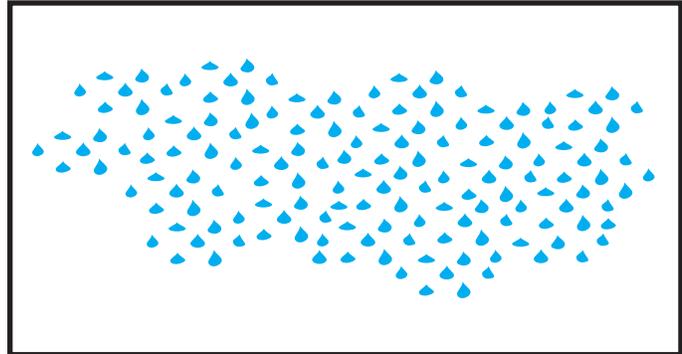
Sunshine is another way of saying “solar energy”. The energy from the sun is responsible for creating all of our winds and weather. Winds always blow from cooler to warmer places. This is how “land breezes” and “sea breezes” are created. Land breezes and sea breezes happen because land heats up and cools off faster than the ocean.



During the daytime the air over the land warms up faster than the air over the ocean. The air over the land becomes warmer than the air over the ocean. Wind blows from the cooler ocean air, to the warmer land air, and this is called a “*sea breeze*.”

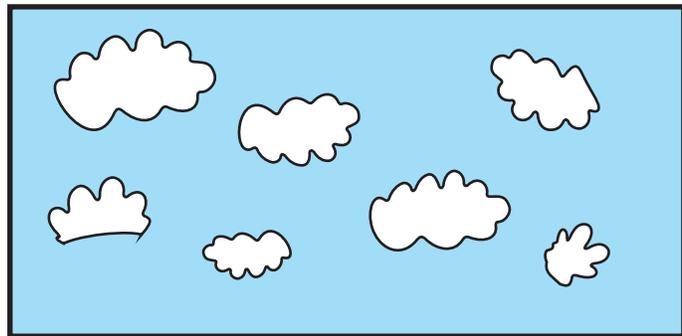
After the sun sets, the air over the land cools off more quickly. Then, the air over the ocean becomes warmer than the air over the land. Wind blows from the cooler land air, to the warmer ocean air, and this is called a “*land breeze*.”

## The Clouds of the Mississippi Coast



All clouds are made up of great numbers of tiny **water droplets**. Clouds are not made up of water vapor. Water vapor is invisible.

Clouds come in many shapes and sizes. The small, puffy clouds that drift across the sky on sunny days are called cumulus clouds. Since cumulus clouds do not produce rain, they are often called “fair weather clouds.”



When big fluffy clouds bump into each other, they generate static electricity. This electricity may build up and become lightning. Lightning is always dangerous. More people are killed by lightning each year than by the bites of poisonous snakes.



The more you learn about weather, the better you will enjoy your visits to barrier islands. Remember that high humidity (lots of water vapor in the air) will make a summer day feel very, very hot. High heat can be dangerous, so wear a hat, spend some time in the shade, and drink lots of water to keep cool. Always wear sunscreen on the islands. You can still get a sunburn on cloudy days!

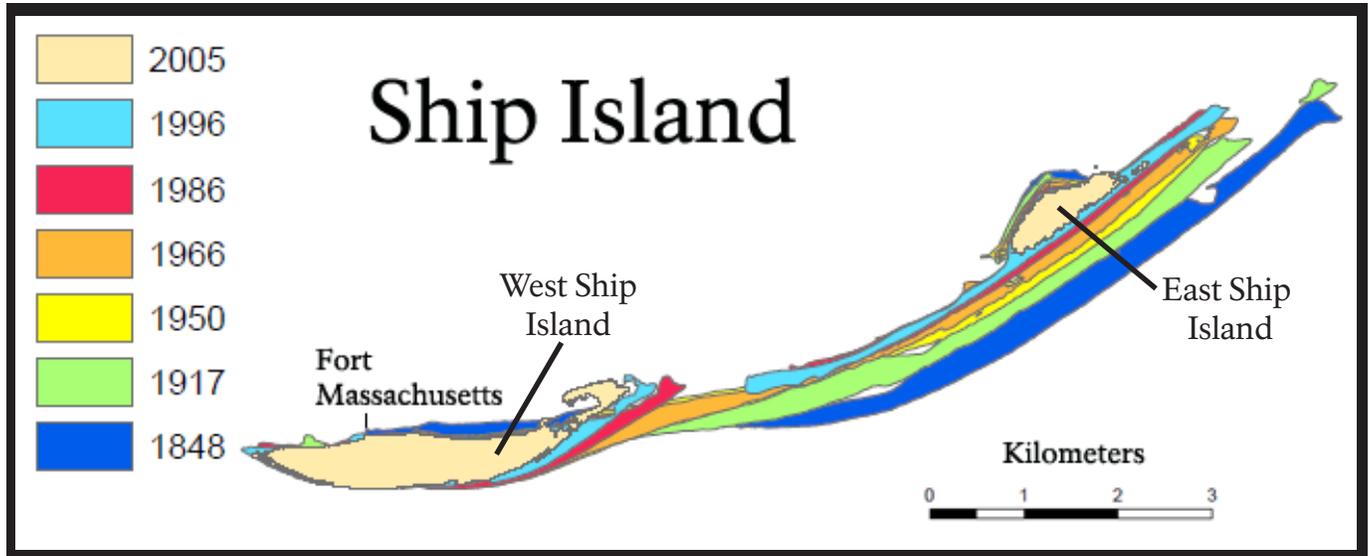


## The Storms of the Mississippi Coast

High winds, thick clouds, lightning, and rain are all features of storms. When the winds of a storm blow with great speed (between thirty and seventy miles per hour), the storm is called a “**tropical storm.**” When the winds of a storm blow faster than seventy miles per hour, the storm is called a “**hurricane.**”

Hurricanes are very dangerous storms that cause a lot of damage. All hurricanes begin as tropical storms. They form in summer and early autumn when the ocean temperature is the hottest.

West Ship Island, or any other barrier island, would be a dangerous place to be during tropical a storm or hurricane. Rain may fall suddenly and heavily. There isn’t much shelter on the island so there are few places to escape the wind or lightning. In 1969, one of the most violent storms to ever strike the Gulf coast was **Hurricane Camille**. When Hurrican Camille hit Ship Island, it cut the island in two pieces.



Barrier islands help protect the mainland from storms. Most storms become less powerful after passing the barrier islands. If the barrier islands weren’t there, then tropical storms and hurricanes would strike coastal cities, such as Gulfport, Biloxi, and Ocean Springs, with full force. This would cause greater structural damage and danger to the citizens in these cities.







# Weather or Not

Read the following statements and decide whether these weather statements are True or False. If the statement is false, correct the statement so that it is true.



\_\_\_\_\_ Most hurricanes form in December or January.



\_\_\_\_\_ Water vapor is invisible.



\_\_\_\_\_ Ship Island was cut into two pieces by Hurricane Ivan.



\_\_\_\_\_ Lightning is always dangerous.



\_\_\_\_\_ You can't get a sunburn if the sky is cloudy.



\_\_\_\_\_ A cloud is made up of many, many water droplets.

\_\_\_\_\_ Cumulus clouds are sometimes called "fair weather clouds."



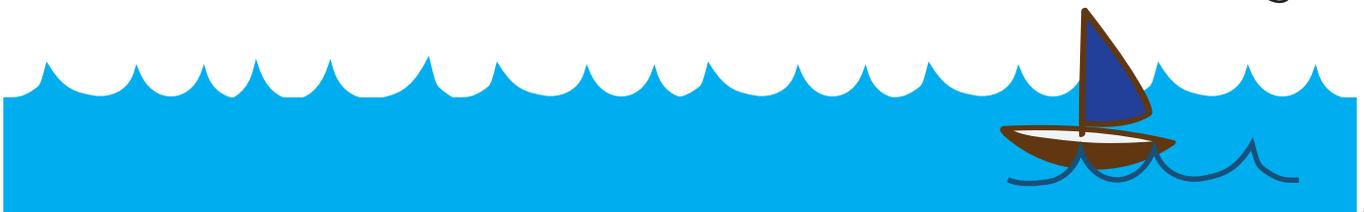
\_\_\_\_\_ Land breezes only happen early in the morning.

\_\_\_\_\_ On a hot day, high humidity makes the temperature feel cooler than it actually is.

\_\_\_\_\_ A sea breeze blows from the sea to the land.



\_\_\_\_\_ Land heats up and cools off more slowly than the ocean.



# Weather or Not

Read the following statements and decide whether these weather statements are True or False. If the statement is false, correct the statement so that is true.



False Most hurricanes form in ~~December or January.~~  
*summer or early autumn*



True Water vapor is invisible.



False Ship Island was cut into two pieces by Hurricane ~~Ivan.~~  
*Camille*



True Lightning is always dangerous.



False You ~~can't~~ <sup>can</sup> get a sunburn if the sky is cloudy.



True A cloud is made up of many, many water droplets.



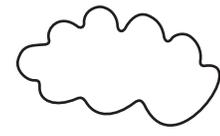
True Cumulus clouds are sometimes called "fair weather clouds."



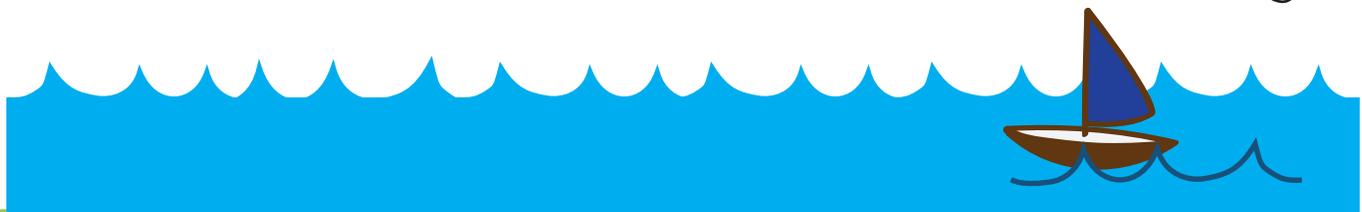
False Land breezes only happen ~~early in the morning.~~ *after the sun sets.*

False On a hot day, high humidity makes the temperature feel ~~cooler~~ <sup>hotter</sup> than it actually is.

True A sea breeze blows from the sea to the land.



False Land heats up and cools off ~~more slowly~~ *faster* than the ocean.



# West Ship Island

## Leader Field Visit Guide

“One mark of a great educator is the ability to lead students out to new places where even the educator has never been”

-Thomas Groome



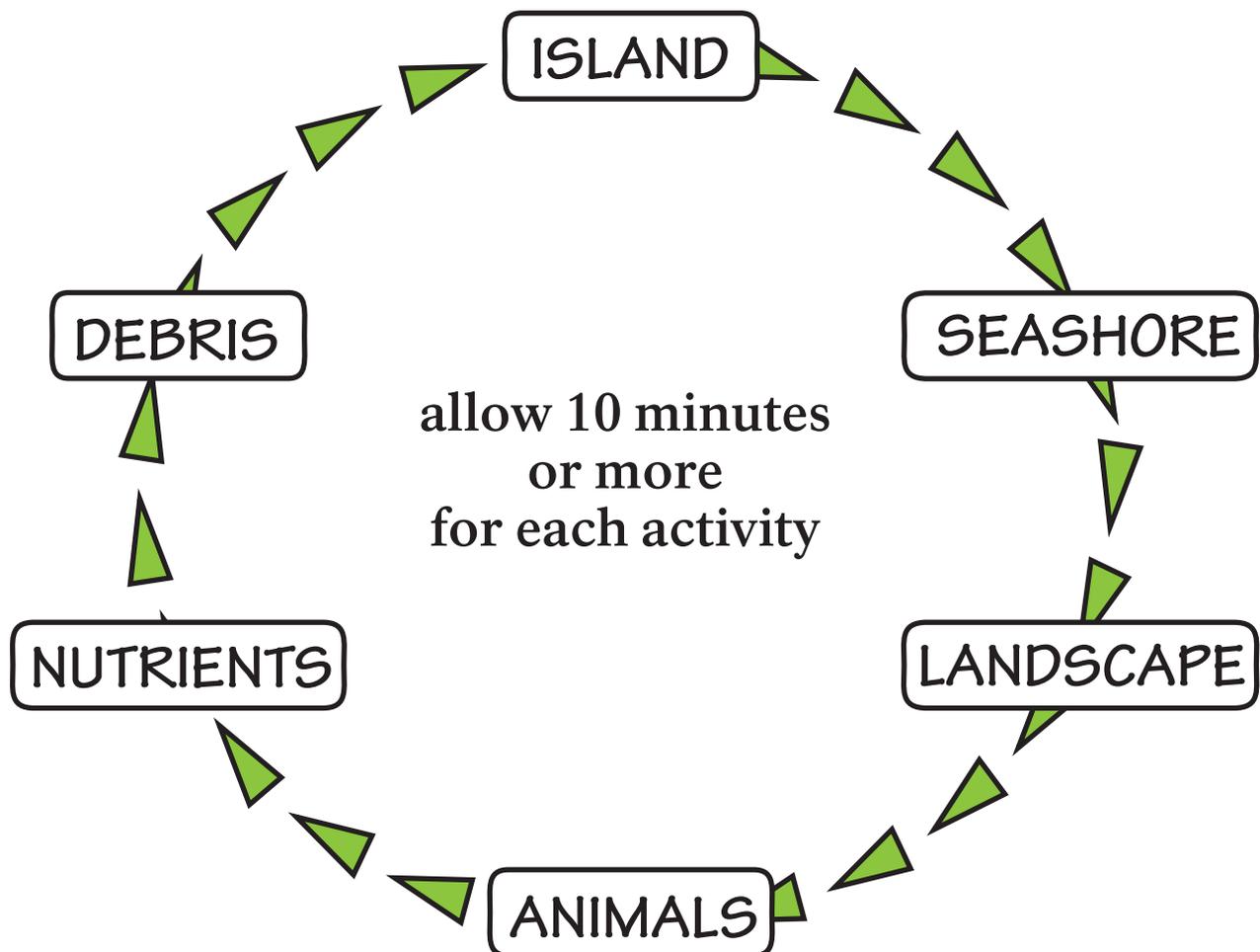
## I.S.L.A.N.D. Format: On the Island

### Round Robin Format

The class, or group unit, should be divided into the following sub-groups.

- The Island Investigators, with white nametags
- The Seashore Scientists, with yellow nametags
- The Landscape Learners, with brown nametags
- The Animal Analysts, with orange nametags
- The Nutrient Naturalists, with green nametags
- The Debris Detectives, with blue nametags

Each group will begin at the station that shares the same name and will know they have completed the full rotation when they return there.



## Teachers' Pages: Overview of Activity Stations

### **ISLAND** Build Your Own Island

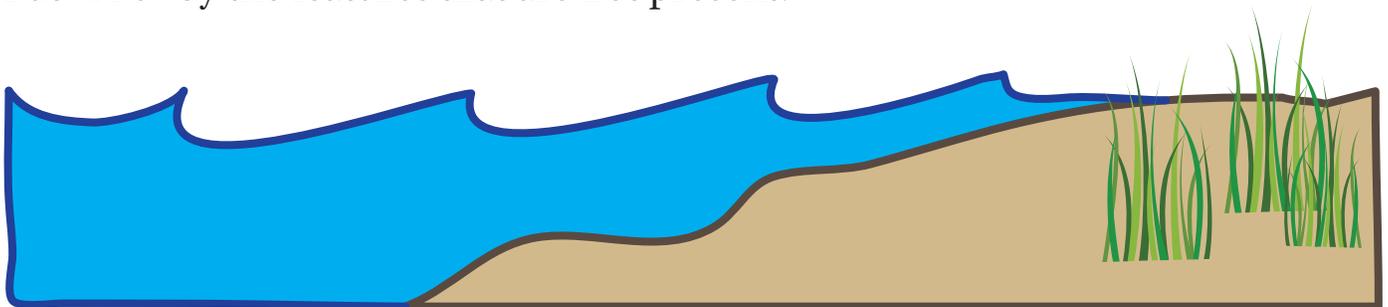
Invite students to work together to build an island in the sand. Create it as you would a sand castle. Allow the team to decide the size and shape of the island, the height, and its position in relation to the mainland. Give the island a name and name the waters that surround it. Have the children sketch a map of the island on their worksheets.

### **SEASHORE** Seek and Find

From the waterline to the high tide line, and beyond, explore the section of the beach that surrounds your activity station. Like beachcombers, hunt for interesting things and have students record discoveries on their worksheets. Discuss the great variety of plants and animals - both aquatic and terrestrial - that can be found along seashores.

### **LANDSCAPE** Inventory Checklist

The landscape of a barrier island is unique and constantly changing. Explore the landscape around your station and observe its features. Do you find sand dunes or mountains? Waterfalls or lagoons? Paved roads or board walks? Where did the materials come from to make-up this island? Have the students record the inventory of landscape features that can be found with a checkmark. Put "X's" by the features that are not present.



## Teachers' Pages: Overview of Activity Stations

### **ANIMALS** Dr. Frankenstein's Well-Adapted Monsters

Animals adapt to environmental conditions in a myriad of ways. First, discuss the conditions on West Ship Island:

- the presence or absence of fresh water vs. salt water
- the exposure to sun and storms
- the vegetation and other food resources.

The students now have the opportunity to create their own animals. They can choose to combine the body parts of real animals, or make up imaginary ones. Remind the students to choose parts appropriately for the creature to survive in this harsh environment. Have the students sketch their weird, wild, well adapted animals on their worksheets.

### **NUTRIENTS** What's For Dinner?

Where do island animals get their energy? What do they eat for dinner?

Discuss the animals shown on the What's For Dinner? worksheet and consider what they eat. Observe the hermit crabs along the shoreline and watch the gulls overhead. Introduce the idea that animals are linked in food chains.

Plants feed plant-eating animals,

plant-eating animals feed meat-eating animals,

small meat-eating animals feed bigger animals, etc.

Have the students connect the animals in a food web with arrows.

### **DEBRIS** Hazard Trap Hunt

This is one scavenger hunt that students *should* be able to find one or more of each item on the worksheet. When items are found, have students sketch or describe them in the boxes provided. Discuss the ways that debris can harm wildlife. Suggest positive actions that students and their families can do to keep coastal waters and beaches clean.

*Safety note: Discarded fishing line is another dangerous threat to wildlife.*

*It was excluded from the scavenger hunt due to the risk of concealed fish hooks.*





# West Ship Island

## Student Field Visit Packet

“Conservation is  
humanity caring  
for the future.”

-Nancy Newhall

Name \_\_\_\_\_



## Island: Build Your Own

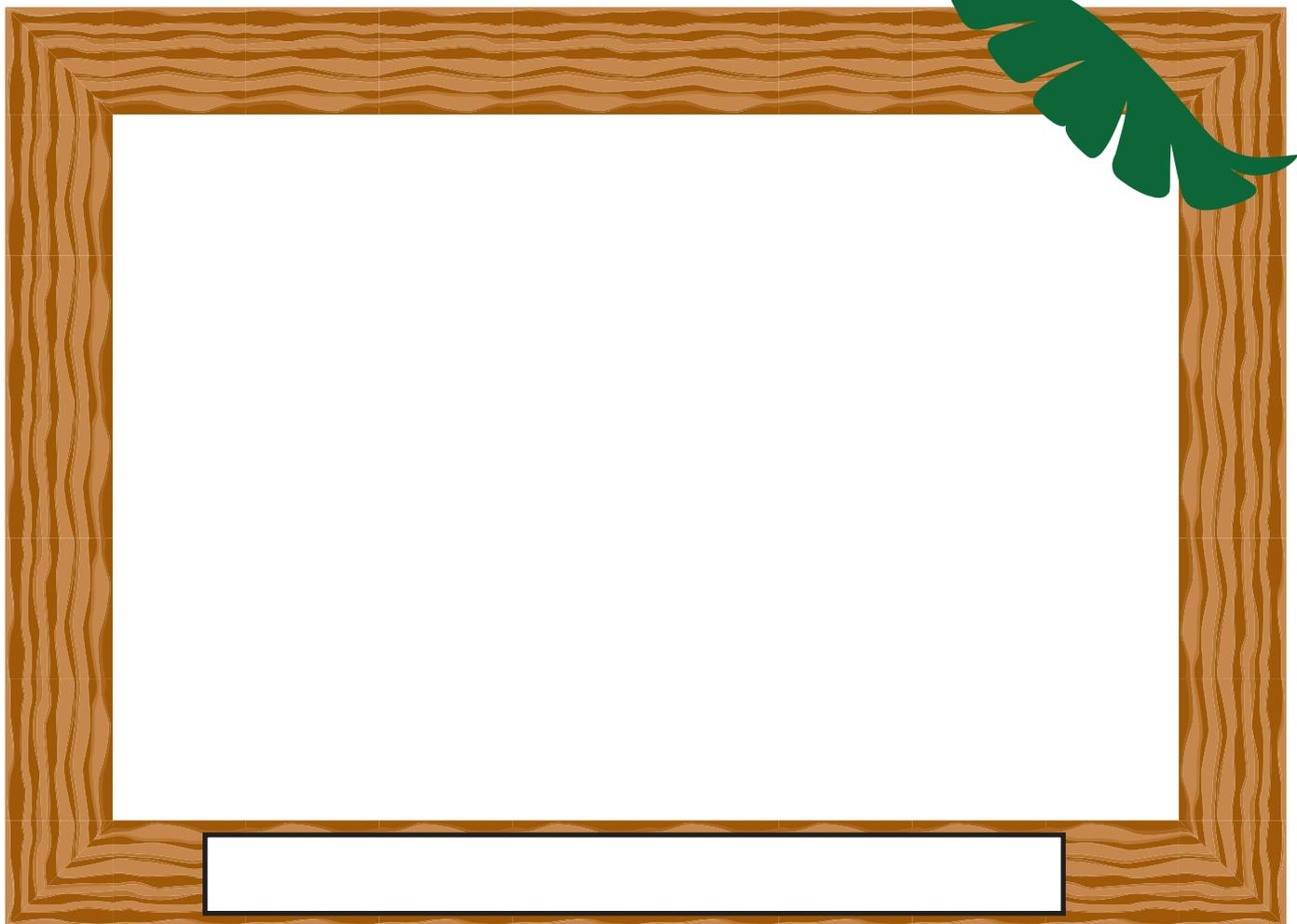
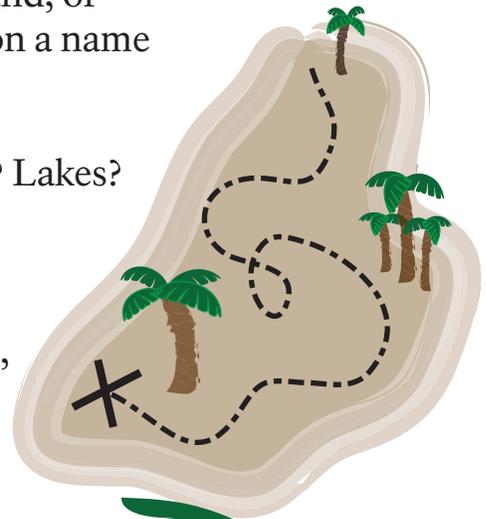
Build an island in the sand with your study group team members. Your island may be long and narrow, like a barrier island, or round and tall like a volcanic island. Decide together on a name for your island and the waters surrounding it.

What are the bodies of water surrounding it? Oceans? Lakes?

What kind of plants and animals would live there?

When you have finished discovering your team island, sketch a picture of it below.

Then, write the name of your island on the plaque.



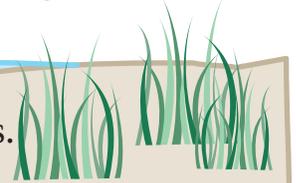
## Seashore: Seek and Find

A seashore is a place where two worlds meet.

*The world of the sea* is full of living things like seaweeds, snails, clams, crabs, mussels, shrimp, sponges, bony fishes, jellyfish, sharks, sea turtles, dolphins, and many other creatures.

*The world of the land* is interesting too. You might find lichens, mosses, ferns, wildflowers, frogs, toads, salamanders, snakes, lizards, turtles, alligators, birds, or mammals here.

At the seashore you can find plants and animals from both worlds. There are so many different kinds of plants and animals here!



Use your detective skills to find evidence of plants and animals on West Ship Island and circle them below. How many can you find?

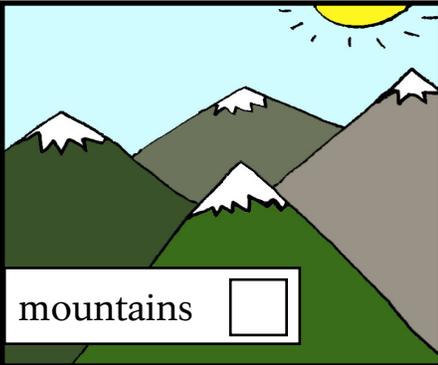
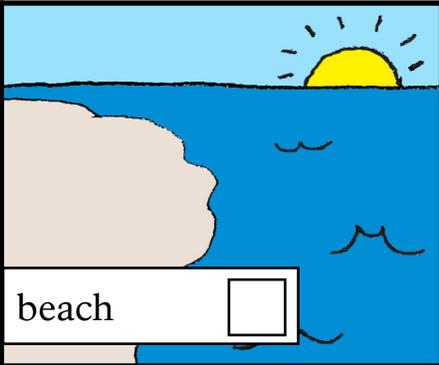
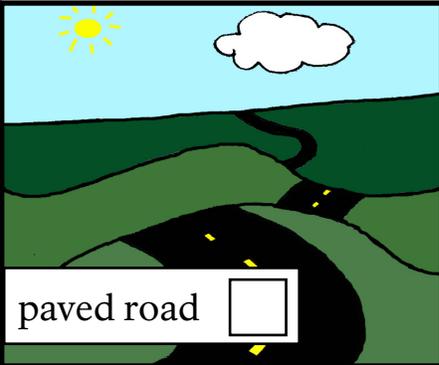
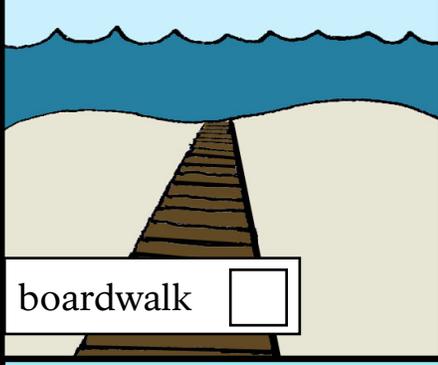
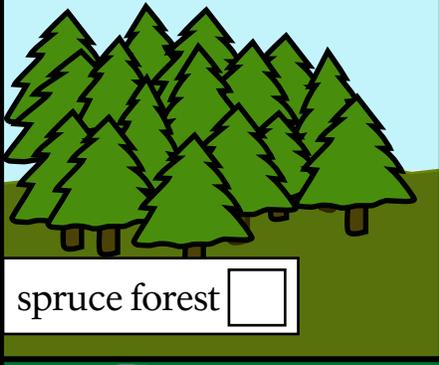
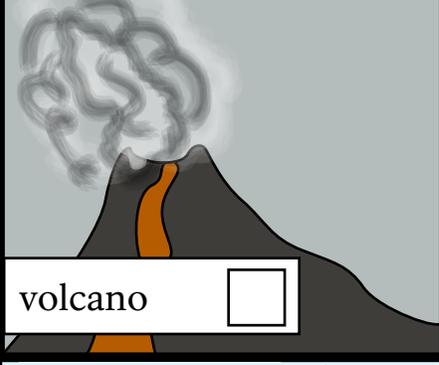
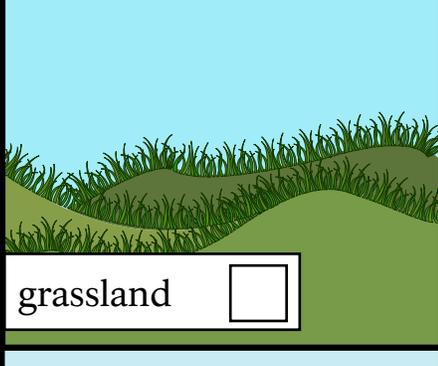
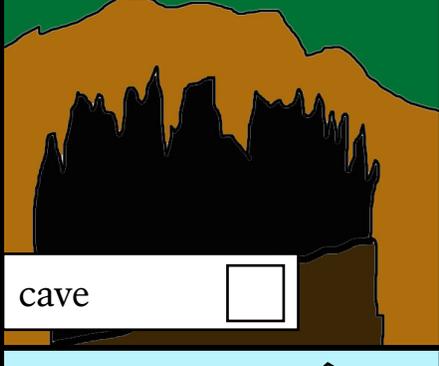
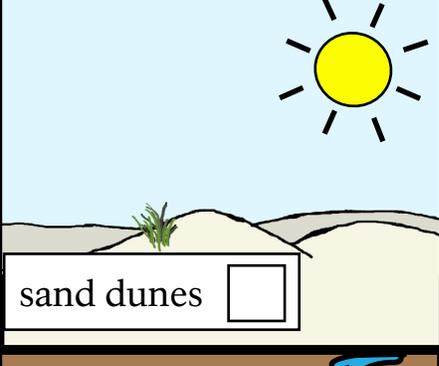
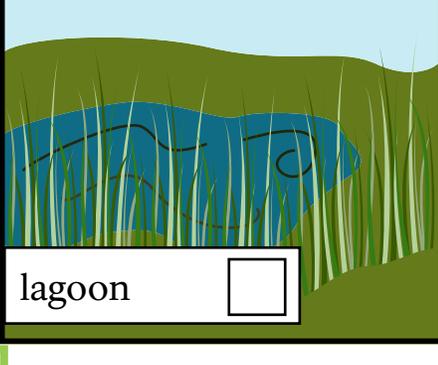
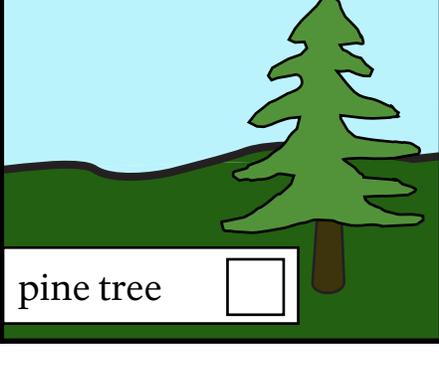
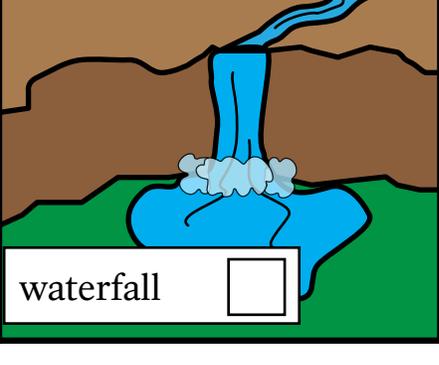
*Remember that living plants and animals are protected. Do not collect or disturb the plants or animals.*

snake	toad	feather	pelican	flower
seaweed	snail	sand piper	osprey	grass
driftwood	turtle	gull	bush	eagle
jellyfish	egg	empty shell	tern	frigatebird
sponge	egg case	human being	tree	butterfly
sand dollar	songbird	seed	beetle	_____
barnacle	hermit crab	footprint	heron	_____
clam	bone	stem	dolphin	_____
mussel	mouse	root	ant	_____
raccoon	fish	leaf	spider	_____



# Landscape: Inventory Checklist

The landscape of a barrier island is very different from other kinds of landscapes. Look over the checklist below and put a check mark by the landscape features you have found on West Ship Island. Put an "X" on the features you could not find.

 <p>mountains <input type="checkbox"/></p>	 <p>beach <input type="checkbox"/></p>	 <p>paved road <input type="checkbox"/></p>
 <p>boardwalk <input type="checkbox"/></p>	 <p>spruce forest <input type="checkbox"/></p>	 <p>volcano <input type="checkbox"/></p>
 <p>grassland <input type="checkbox"/></p>	 <p>cave <input type="checkbox"/></p>	 <p>sand dunes <input type="checkbox"/></p>
 <p>lagoon <input type="checkbox"/></p>	 <p>pine tree <input type="checkbox"/></p>	 <p>waterfall <input type="checkbox"/></p>



# Animals: Dr. Frankenstein's Well-Adapted Monsters

Create your own animal to live on a barrier island. You can put together body parts of real animals or make up imaginary ones. Design your own wild, weird, well-adapted monster.



fur scales  
webbed feet fins  
short legs



claws  
big ears  
rattle  
long bill  
six legs



sharp teeth  
wings  
long legs  
small eyes  
camouflage



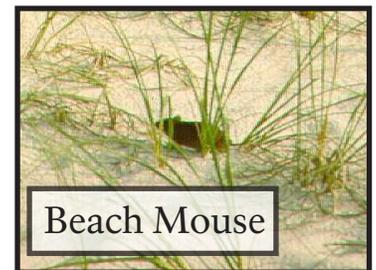
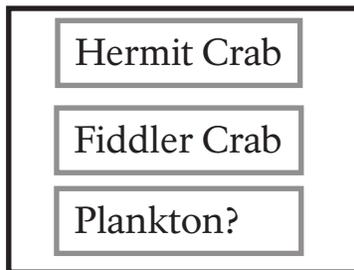
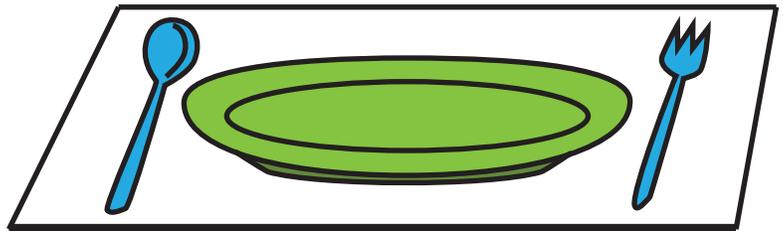
shell  
big eyes  
feathers  
fangs  
long body



# Nutrients: What's For Dinner?

All animals need energy. Plants make their own food from the sun's energy. Animals cannot make their own food so they must eat food to get their energy. Plants and animals are connected in food webs. Draw arrows from each animal to what that animal might eat for dinner. Some animals eat more than one type of food.

Then, draw something *you* might eat for dinner!



**Detritus** is an important part of the food web. This is decaying plant and animal matter.



# Debris: Hazard Trap Hunt

Humans often have a negative impact on the habitats of animals. Litter is a problem with many consequences. Look for the following items on the beach. Should these items be here? What ways can these things harm wildlife? Sketch or describe the items you find in the boxes below.

piece of styrofoam

paper scrap

bottle cap

plastic bottle

plastic bag

drinking straw

piece of rope

beverage can

food wrapper

cigarette butt



# West Ship Island

## Leader Post-Visit Guide

"Treat the earth well: it was not given to you by your parents, it was loaned to you by your children. We do not inherit the Earth from our Ancestors, we borrow it from our children."

-Ancient Native American Proverb



## I.S.L.A.N.D. Conclusion Discussions

After returning to the mainland, assemble your group for a sharing session. This is an opportunity for children to take ownership of their discoveries in sharing them with the class. Invite children to discuss their impressions of the island and to consider how these differed from their expectations before the trip.

Ask if any of the children have visited any other islands, such as the Hawaiian Islands. Discuss how the terrain and wildlife might differ from West Ship Island.

Depending on how your visit on the island went, it may be beneficial to give students some additional time to finish activities or drawings from the island.

Two additional activity pages have been provided to assist in review of concepts. Important concepts to review include:

- the geography and weather of the Mississippi coast
- food chains and nutrient cycles
- conservation and protection of land and wildlife

As mentioned in the I.S.L.A.N.D. Outline, you may choose to let the students design a cover page and assemble all the worksheets into a booklet to take home. This is an

excellent way to create a momento for the students to take home and continue sharing their adventure.



It is the goal of programs like this to allow students to explore outside and learn about the many different types of life. We do this with the hope of raising the next generation with an appreciation for and desire to protect important lands like barrier islands and wetlands.



# West Ship Island

Student Post-Visit Packet

“Unless someone  
like you cares a  
whole awful lot,  
Nothing is going to  
get better. It's not.”

- Dr. Seuss

Name \_\_\_\_\_



# I.S.L.A.N.D. Crossword Review

Use the clues below to fill in the crossword. How many answers can you remember?

1		2			3			4				5
							9					
8												
10									6			
					11							
12		7										
									13			
	14											

**DOWN:**

- Gulfport is a coastal city in \_\_\_\_\_.
- The water lying between the barrier islands and the MS coast is known as the Mississippi \_\_\_\_\_.
- Union and Confederate troops fought each other during the conflict called the \_\_\_\_\_.

4. Barrier islands help protect the mainland from \_\_\_\_\_.

5. Gulf Islands National Seashore is managed by the National Park \_\_\_\_\_.

6. The bottlenose \_\_\_\_\_ is Mississippi's state water mammal.

7. A \_\_\_\_\_ is caused by the gravitational pull of the moon.

**ACROSS:**

1. Fort \_\_\_\_\_ is built of bricks and mortar.

8. The barrier islands are made of \_\_\_\_\_ with dunes created by wind.

9. \_\_\_\_\_ Island is directly east of Ship Island.

10. In 1969, Hurricane Camille cut what island into two pieces?

11. Name the barrier island animal with a black mask, a long striped tail, and thick fur.

12. \_\_\_\_\_ Island is the furthest east of MS's barrier islands.

13. Most plants are safe to touch; poison \_\_\_\_\_ is not.

14. A nickname of the Confederate soldiers was the \_\_\_\_\_.



# I.S.L.A.N.D. Crossword Review Key

Use the clues below to fill in the crossword. How many answers can you remember?

<sup>1</sup> M	A	<sup>2</sup> S	S	A	<sup>3</sup> C	H	U	<sup>4</sup> S	E	T	T	<sup>5</sup> S
I		O			I			T				E
S		U			V		<sup>9</sup> H	O	R	N		R
<sup>8</sup> S	A	N	D		I			R				V
I		D			L			M				I
S					W			S				C
<sup>10</sup> S	H	I	P		A					<sup>6</sup> D		E
I					<sup>11</sup> R	A	C	C	O	O	N	
P										L		
<sup>12</sup> P	E	<sup>7</sup> T	I	T	B	O	I	S		P		
I		I								H		
		D								<sup>13</sup> I	V	Y
	<sup>14</sup> R	E	B	E	L	S				N		

**DOWN:**

- Gulfport is a coastal city in \_\_\_\_\_.
- The water lying between the barrier islands and the MS coast is known as the Mississippi \_\_\_\_\_.
- Union and Confederate troops fought each other during the conflict called the \_\_\_\_\_.
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**ACROSS:**

- Fort \_\_\_\_\_ is built of bricks and mortar.
- The barrier islands are made of \_\_\_\_\_ with dunes created by wind.
- \_\_\_\_\_ Island is directly east of Ship Island.
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- \_\_\_\_\_ Island is the furthest east of MS's barrier islands.
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- A nickname of the Confederate soldiers was the \_\_\_\_\_.

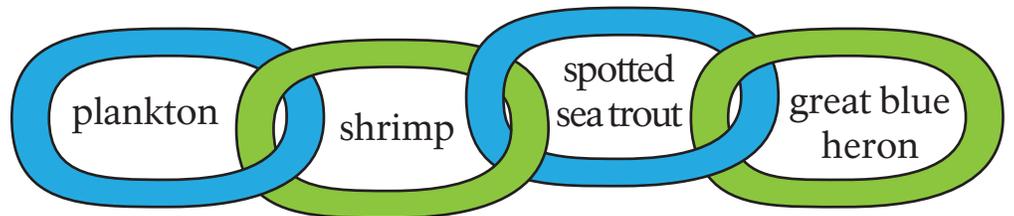


# Food Chain Practice

For each of the four animal groups below, place the animals in the correct order to represent a food chain. Then, draw chain links around each word to link them together. An example has been completed for you.

## Example:

great blue heron  
shrimp  
plankton  
spotted sea trout



1

detritus  
banded water snake  
alligator  
mullet

2

grass shrimp  
fiddler crab  
red wolf  
raccoon

3

common nighthawk  
mosquito  
dragonfly  
barn owl

4

human being  
chicken  
menhaden  
plankton

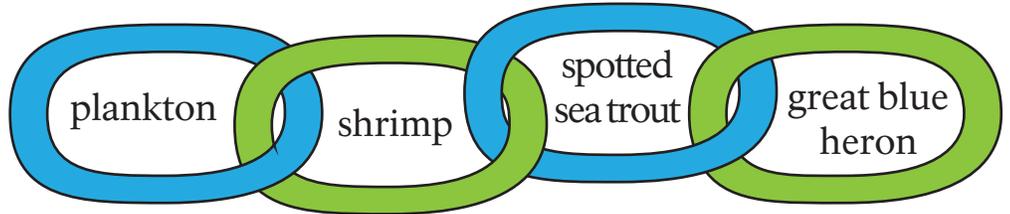


# Food Chain Practice Key

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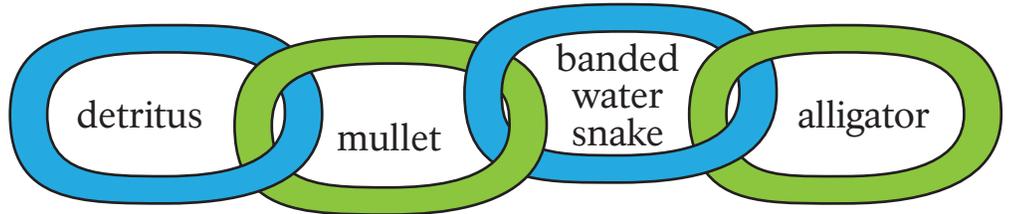
## Example:

great blue heron  
shrimp  
plankton  
spotted sea trout



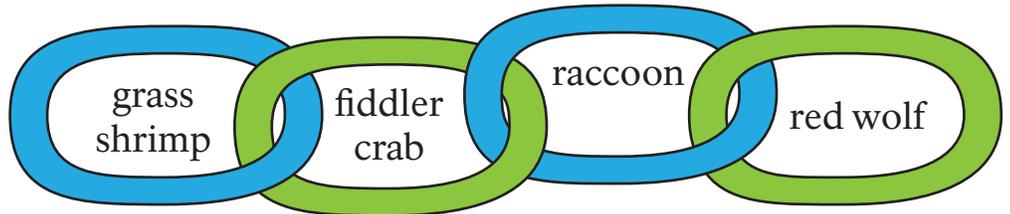
1

detritus  
banded water snake  
alligator  
mullet



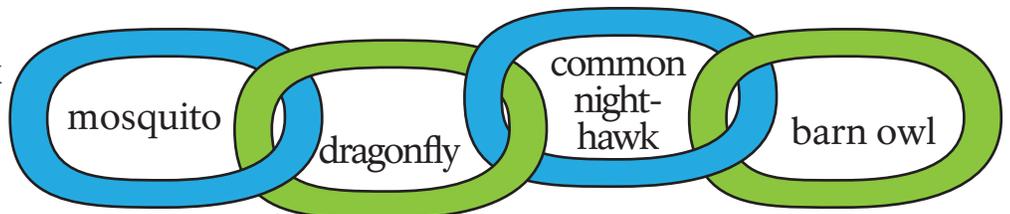
2

grass shrimp  
fiddler crab  
red wolf  
raccoon



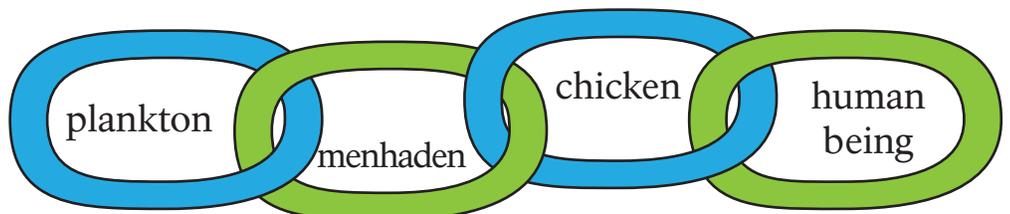
3

common nighthawk  
mosquito  
dragonfly  
barn owl



4

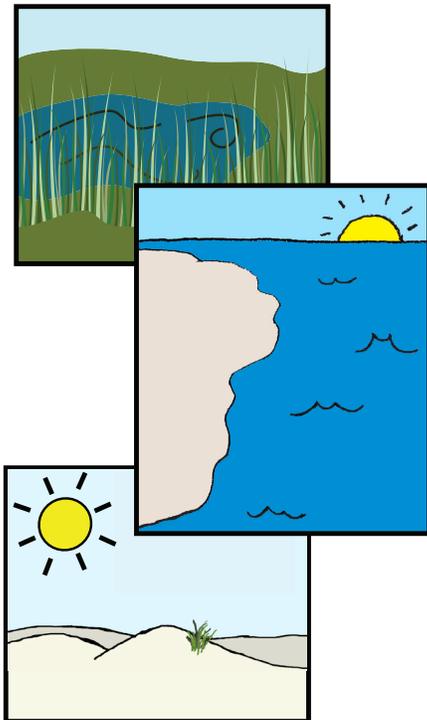
human being  
chicken  
menhaden  
plankton



National Park Service  
U.S. Department of the Interior



Gulf Islands National Seashore  
3500 Park Road  
Ocean Springs, MS 39564-9709



*To sustain an environment  
suitable for man, we must  
fight on a thousand  
battlegrounds. Despite all  
of our wealth and knowledge,  
**we cannot create a  
redwood forest, a wild river,  
or a gleaming seashore.***

*-Lyndon B. Johnson (1908-1973)  
36th President of the United States*