



The Living Beach

2018 - Driftwood Education Center



Class Description:

In this class students will explore the species diversity of the Georgia Coast. Students will learn about the plant and animal species that inhabit Georgia beaches and participate in games and activities.

This program can be tailored to and is appropriate for any grade level.

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Beach Ecology

Table of contents and outline:

I. Pre-class set-up

1. Bring sunglasses, sunscreen, and water
2. Be sure to prepare for the beach scavenger hunt
3. Bring a trash bag to collect litter

II. Introduction, overview, and assessment (5 mins)

1. What do your students know?
2. Class is in conjunction with Seine or BID
3. Tell students what will happen today

III. Species Diversity (80 mins)

1. Ecology and Ecosystems (5 mins)
2. Beach Scavenger Hunt (10-15 mins)
3. Species Diversity Game (time you allot)
4. Beach Creatures group activity (15 mins)
5. Plant and Animal Walk (25-45 min)
6. Optional Birding with ID sheets (time you give)
7. Games (time you allot)

All Concepts and Outcomes

IV. Conclusions and Wrap-up (5 mins)

1. What did you learn?
2. Human impact? Ecosystem interactions?

V. Games and Additional Information

1. Crab tag
2. Turtle Hurdles
3. Shark, fish, algae tag
4. Captain's Coming
5. Turtle Hurdles (Sharks and Minnows version)
6. Shark/Remora game
7. Red-tailed Hawks and Great Horned Owls
8. Horseshoe Crab Blood

Georgia Performance Standards:

7th and 8th Grade:

S7L1: Obtain, evaluate, and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.

MS-LS2-4: Obtain, evaluate, and communicate information to examine the interdependence of organisms with one another and their environment.

Concepts:

Focal points of this class are:

1. Georgia's coasts have a large diversity of organisms that depend on the tidal activity for survival.
2. Human impact is a threat to the plant and animal species that inhabit tidal zones.
3. Organisms have unique adaptations that help them survive in their environment.

Outcomes:

Upon completion of this class, students will be able to:

1. Identify several species of organisms that inhabit local beaches and explain their adaptations.
2. Realize the impact that their daily lifestyle has on local beach ecosystems.

South Carolina Standards:

4th Grade:

4.L.5: The student will demonstrate an understanding of how the structural characteristics and traits of plants and animals allow them to survive, grow, and reproduce.

5th Grade:

5.L4: The student will demonstrate an understanding of relationships among biotic and abiotic factors within terrestrial and aquatic ecosystems.

6th Grade:

6.L.4: The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive.

7th Grade:

7.EC.5: The student will demonstrate an understanding of how organisms interact with and respond to the biotic and abiotic components of their environments.

Florida Science Standards:

4th Grade:

SC.4.L.17.4: Recognize ways plants and animals, including humans, can impact the environment.

5th grade:

SC.5.L.17.1: Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

Next Generation Science Standards:

3-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

MS-LS2-4: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.