



South Carolina Science Standards: Kindergarten

Standards:

Living things need air, water, and resources from the land in order to live and grow. Animals and plants live in places that have the things that they need to survive. Animals rely on food they obtain from plants and other animals, and plants require water and light.

Top 5 Vocab Terms:

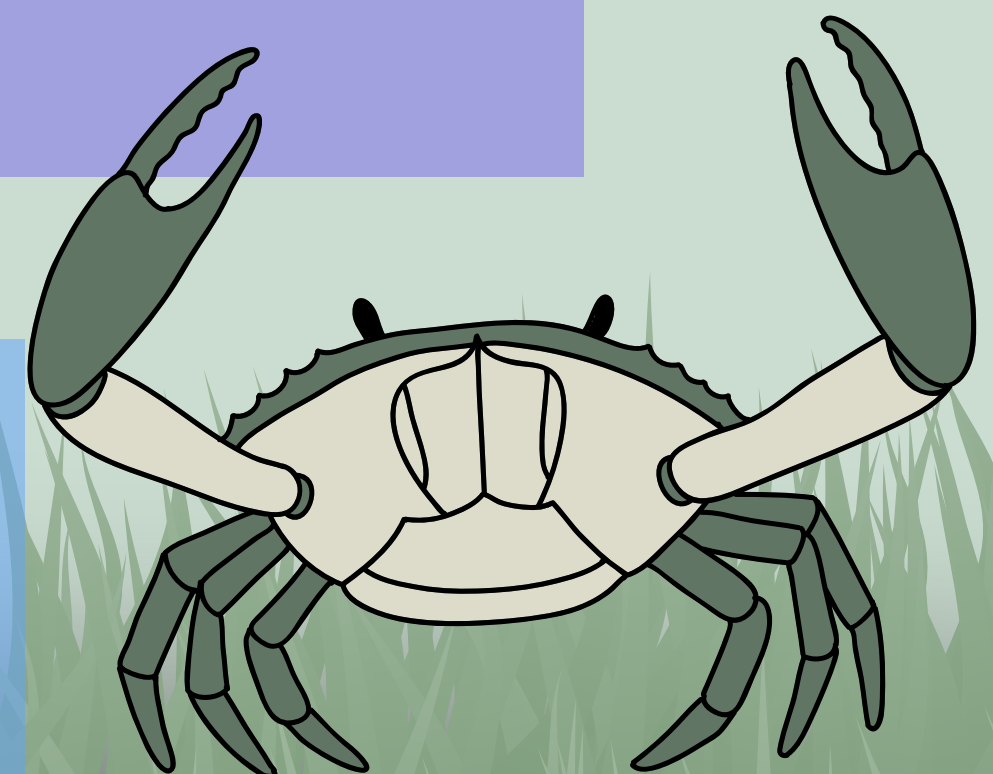
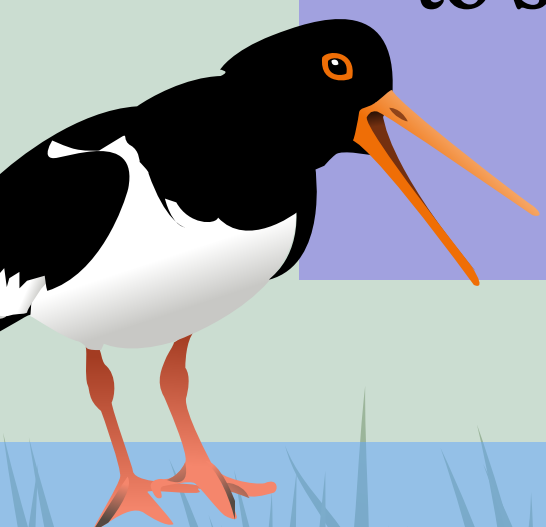
1. Survive
2. Ocean
3. Life Cycle
4. Environment
5. Resources

Here's what we do in the field:

Throughout the field trip, students will observe the variety of animals and plants we see and work together to figure out what each needs to live and grow. As we move through each ecosystem the naturalist will point out the unique adaptations plants and animals have to change with their environment in order to survive. Students will identify the animal with the naturalist and discuss all the things it needs to survive (air, water, shelter, food).

Human Dimensions/Application:

Things that people do to live comfortably can affect the world around them, but they can make choices that reduce their impacts on the land, water, air, and other living things.





South Carolina Science Standards: First Grade

Standards:

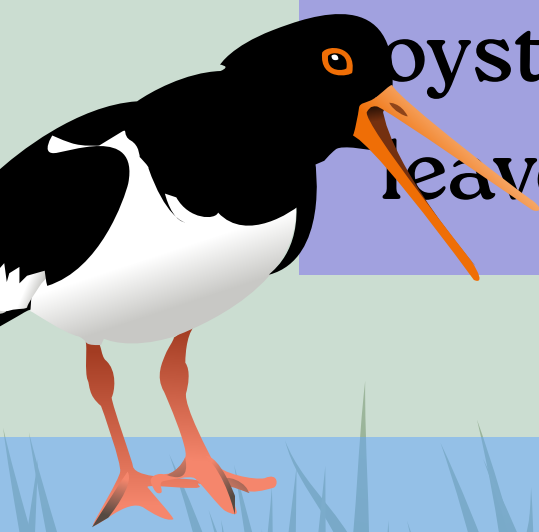
Animals use different parts of their body to meet their needs. Their body parts help them receive important information needed for growth and survival. Adult animals and plants can have young, and many engage in behaviors that help their offspring to survive.

Top 5 Vocab Terms:

1. Mimic
2. Pattern
3. Behavior
4. Parent
5. Offspring

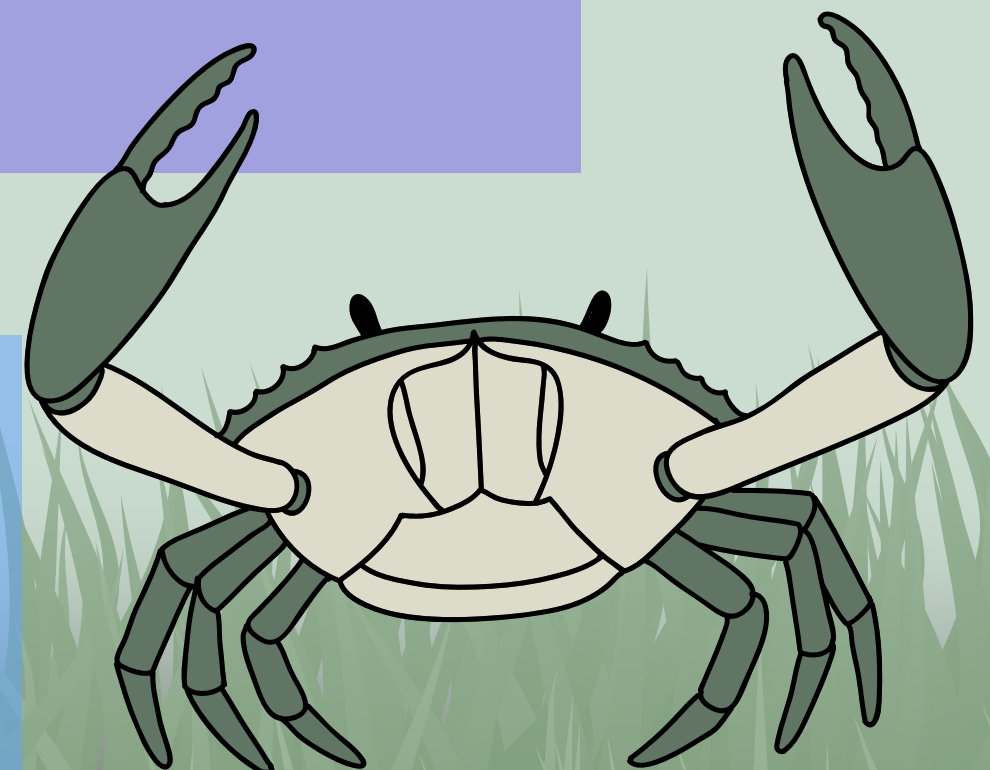
Here's what we do in the field:

Throughout the field trip, students will identify animals with their off-spring on the boat and island, learning how to tell the two apart even though they are very similar. Example: Adult pelicans vs. juvenile pelicans, adult alligator vs a hatchling gator. Students will observe the variety of animals and learn about the ways their different body parts or structures are built to help them survive. Example: The way different birds catch their food (egret, pelican, osprey, oystercatcher). Example: Parts of an oak tree (roots, stem, leaves, branches, seed).



Human Dimensions/Application:

Things that people do to live comfortably can affect the world around them, but they can make choices that reduce their impacts on the land, water, air, and other living things.





South Carolina Science Standards: Second Grade

Standards:

Plants depend on air, water, minerals, and light to grow. Plants rely on different settings to meet their unique needs for nutrition, growth, and seed dispersal. Many plants rely on animals to pollinate or move their seeds around. Wind and water can change the shape of the land. Some natural events happen very quickly; some occur very slowly, over several generations.

Top 5 Vocab Terms:

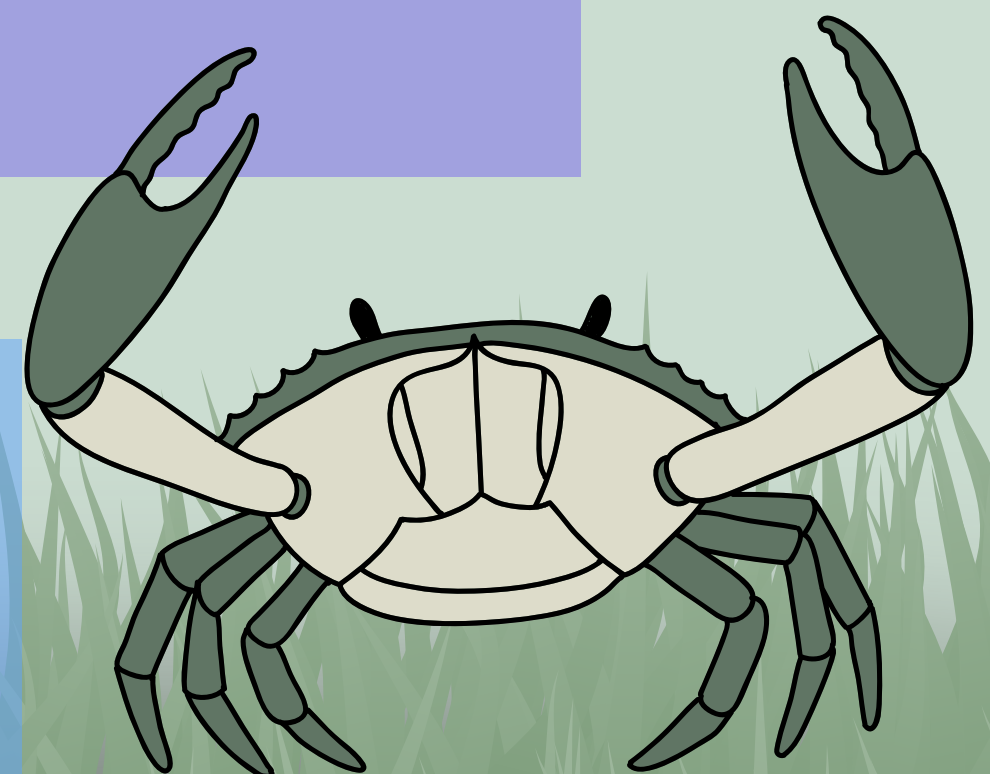
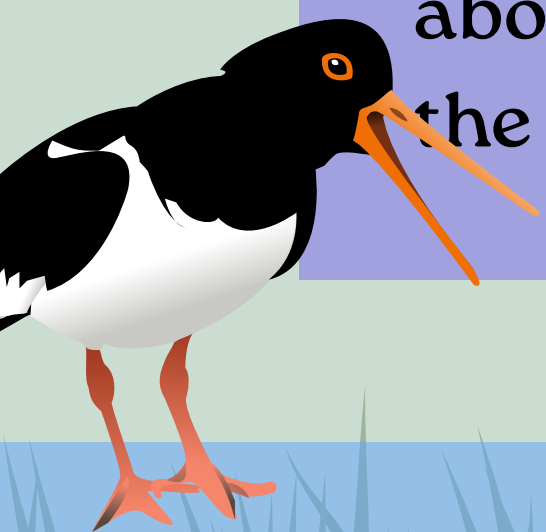
1. Nutrients
2. Pollination
3. Erosion
4. Deposition
5. Weathering

Here's what we do in the field:

Throughout the field trip, students will learn about a variety of plants throughout the trip and investigate what that plant needs to grow based on the habitat it lives in. Students will compare plants and animals in the salt marsh estuary, maritime forest, fresh water ponds, and beach to see how diversity and patterns are different within each ecosystem. Students will learn about barrier islands and how they change overtime. The time in which changes are made can vary due to the weather that year. Students will learn about the impacts they have on animals and plants that live around the lowcountry and how they can reduce those impacts.

Human Dimensions/Application:

Things that people do to live comfortably can affect the world around them, but they can make choices that reduce their impacts on the land, water, air, and other living things.





South Carolina Science Standards: Third Grade

Standards:

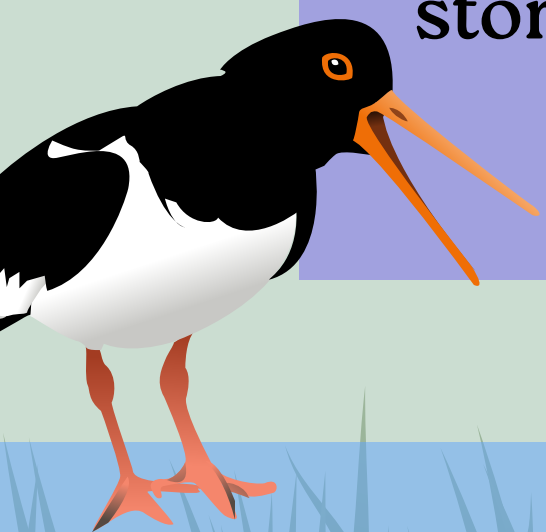
Some characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. Adaptation can lead to organisms that are better suited for their environment.

Top 5 Vocab Terms:

1. Organism
2. Reproduction
3. Adaptation
4. Migration
5. Impact

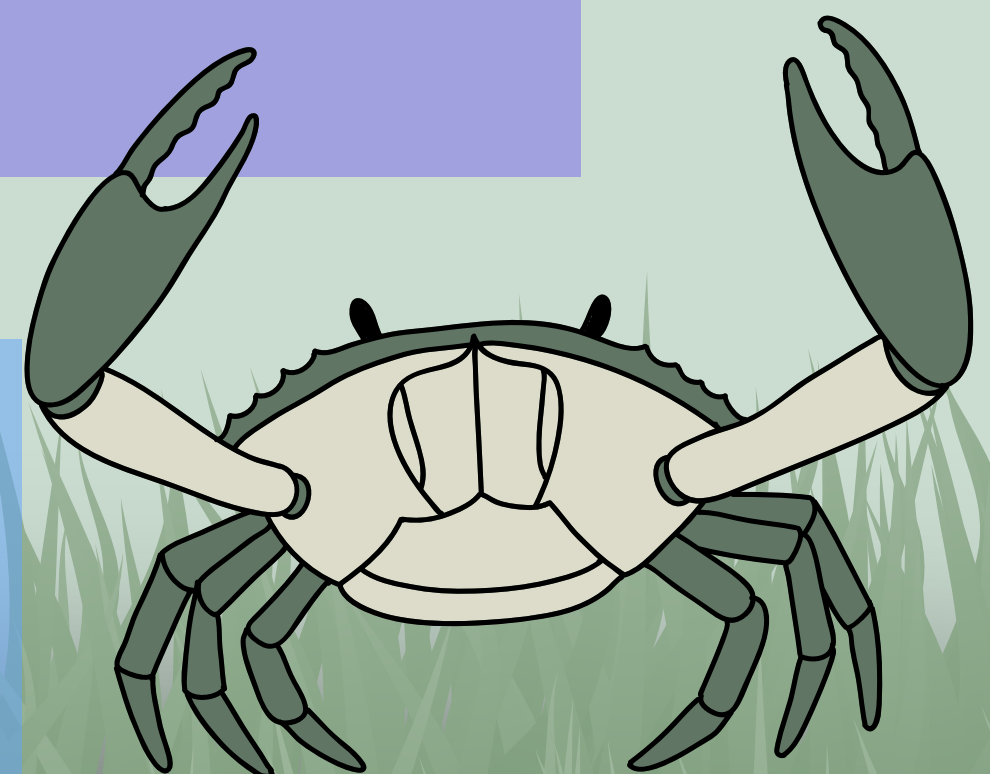
Here's what we do in the field:

Throughout the field trip students will learn about a variety of topics that are related to their standards. We will discuss the 4 categories of coastal birds and the adaptations they have that help them hunt for food, mate, and survive. We will discuss the adaptations species in the salt marsh have that help them thrive in that ecosystem (ex: feeding techniques of dolphins). We will also discuss the impact hurricanes have on our barrier islands and the conservation efforts that are made to lessen the impact of these storms.



Human Dimensions/Application:

A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts.





South Carolina Science Standards: Fourth Grade

Standards:

Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. Living things affect the physical characteristics of their regions.

Top 5 Vocab Terms:

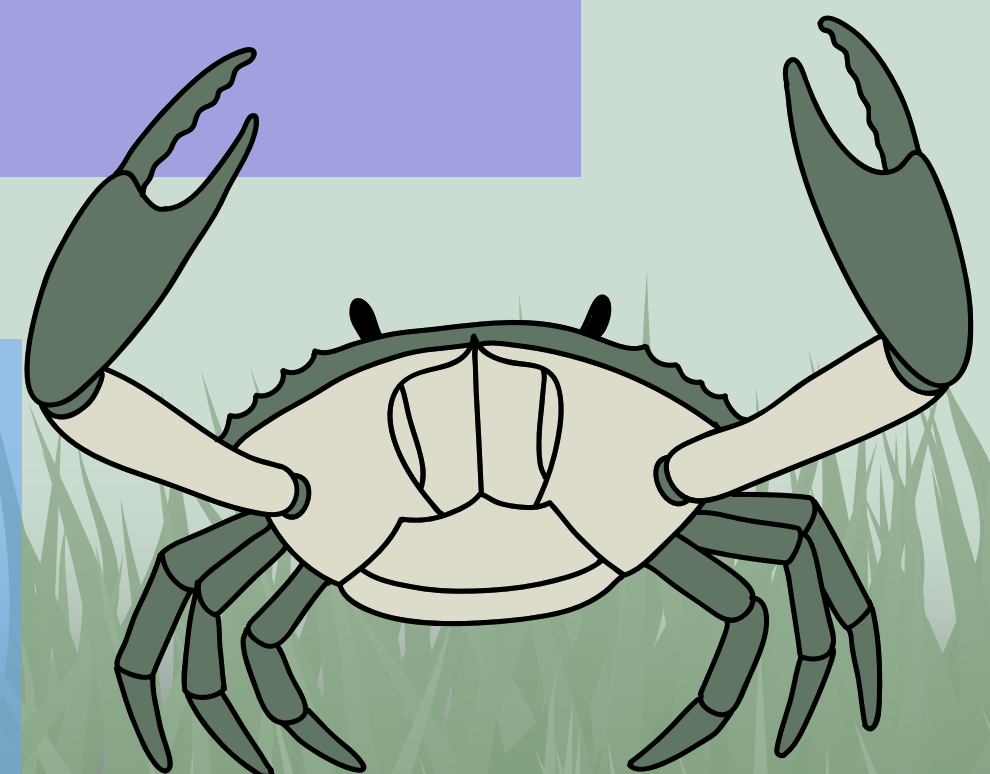
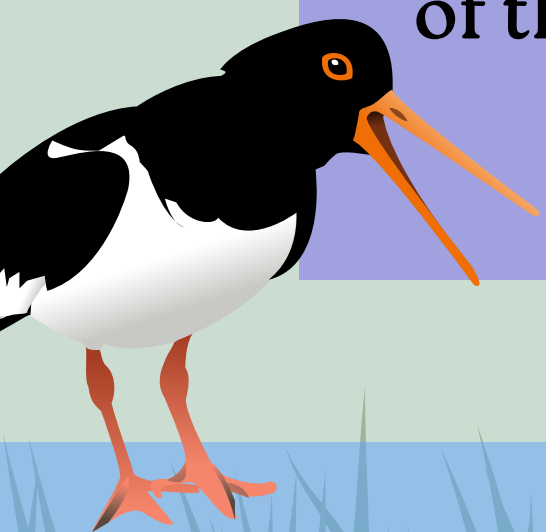
1. Vertebrate
2. Invertebrate
3. Hurricane
4. Camouflage
5. Flowering/Non-Flowering Plants

Here's what we do in the field:

Throughout the field trip, Students will learn about the functions of spartina grass and the adaptations and functions it has that enable it to thrive in the salt marsh estuary. As we cruise through the marsh our naturalist will point out various animals and their functions that help them survive and thrive in the salt marsh. Additionally, students will learn about hurricanes and the effect they have on the coast and our barrier islands. They will learn about the conservation efforts made to lessen the physical impacts of these storms on the coast and barrier islands.

Human Dimensions/Application:

A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts.





South Carolina Science Standards: Fifth Grade

Standards:

Plants acquire their material for growth chiefly from air and water. Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem.

Top 5 Vocab Terms:

1. Herbivore
2. Carnivore
3. Omnivore
4. Endotherm
5. Ectotherm

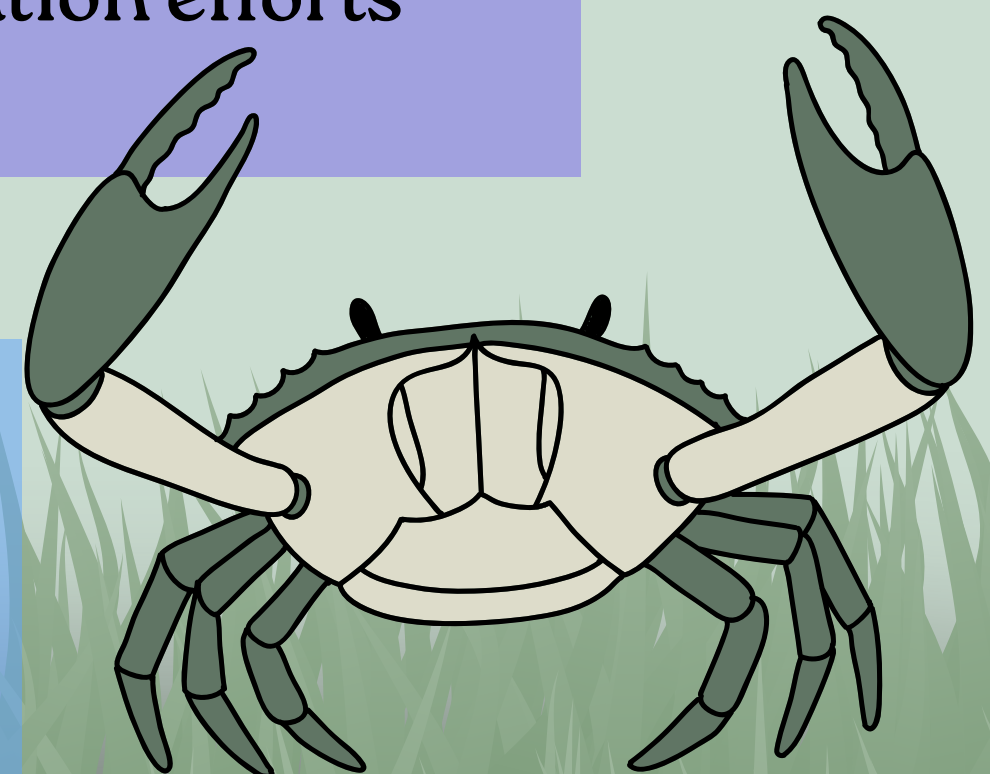
Here's what we do in the field:

Throughout the field trip students will learn about the food chains and food web that is present in the ecosystems we are exploring. As we cruise through these ecosystems our naturalist will identify the animals we see and describe where they fit in the food chain. We will discuss the importance of every organisms role in the ecosystem and the negative impact if a new species were introduced or if an existing species were to be taken out. Additionally, students will learn about the negative impacts humans have had on these ecosystems through development and various actions. They will also learn about the conservation efforts being made to lessen these impacts.



Human Dimensions/Application:

Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments.





South Carolina Science Standards: Sixth Grade

Standards:

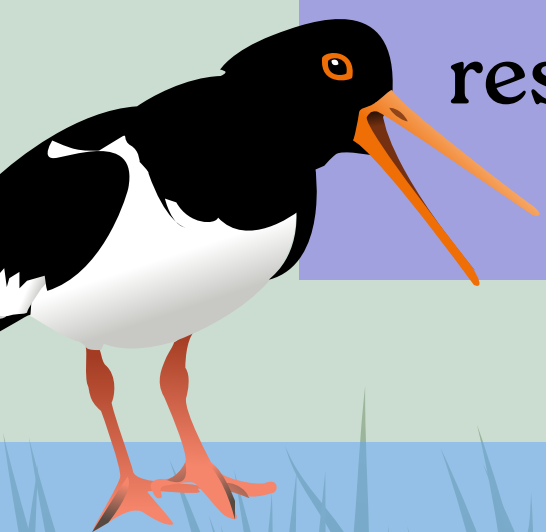
Water's movements—both on the land and underground—cause weathering and erosion, which change the land's surface features and create underground formations. Water continually cycles among land, ocean, and atmosphere via transpiration, evaporation, condensation and crystallization, and precipitation, as well as downhill flows on land.

Top 5 Vocab Terms:

1. Autotrophs
2. Scientific Name
3. Stimuli
4. Symbiotic
5. Carbon Dioxide

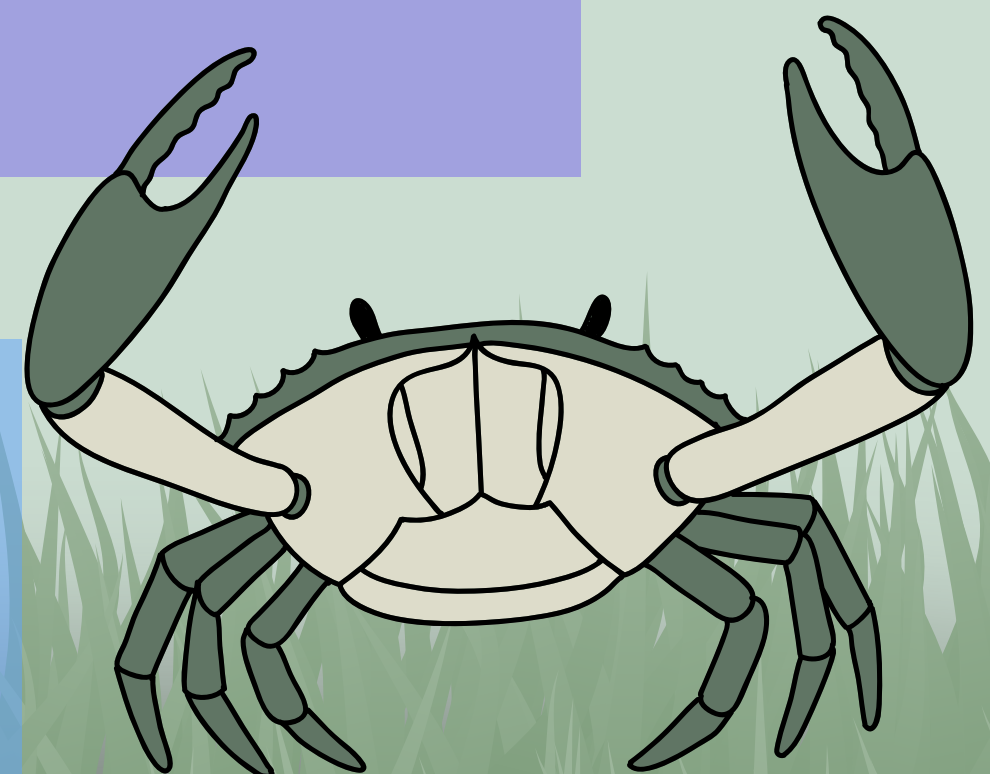
Here's what we do in the field:

Throughout the field trip, students will learn about the effects of water movement as they relate to weathering and erosion as well as local efforts being made to mitigate weathering and erosion on the South Carolina coast. Students will make connections between local weather patterns and climate change. Students will also learn about dredging projects and the ways this method can be used to renourish eroding beaches and provide critical habitat for resident and migratory wildlife.



Human Dimensions/Application:

The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns.





COASTAL EXPEDITIONS

South Carolina Science Standards: Seventh Grade

Standards:

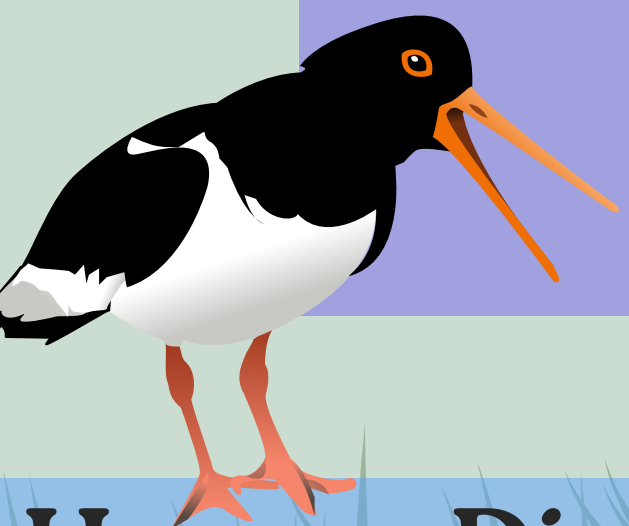
Organisms are dependent on their environmental interactions both with other living things and with nonliving factors. In any ecosystem, organisms, and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction. Growth of organisms and population increases are limited by access to resources.

Top 5 Vocab Terms:

1. Ecosystem
2. Photosynthesis
3. Abiotic/Biotic Factors
4. Food Web
5. Biodiversity

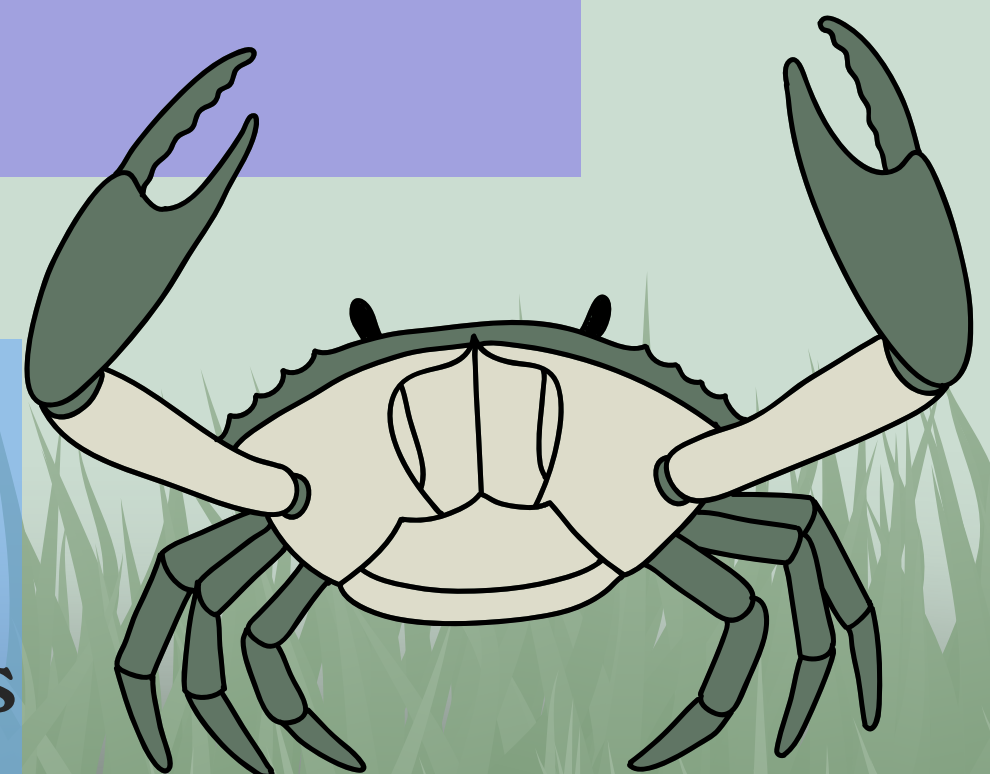
Here's what we do in the field:

Throughout the field trip, students will learn about phytoplankton and zooplankton and how they benefit from and benefit the ecosystem. Students will learn about the food web present in the salt marsh ecosystem and where each animal belongs in it and how they impact the ecosystem as a whole.



Human Dimensions/Application:

Changes in biodiversity can influence humans' resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling.





South Carolina Science Standards: Eighth Grade

Standards:

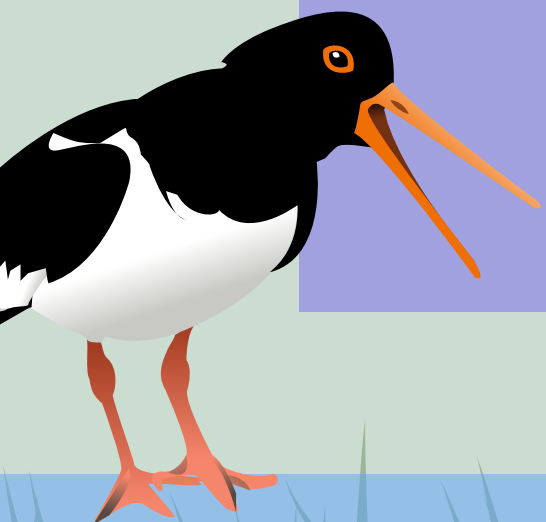
Animals engage in characteristic behaviors that increase the odds of reproduction. Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction. The model of the solar system can explain tides (including spring and neap tides).

Top 5 Vocab Terms:

1. Spring/Neap Tides
2. Gravity
3. Migration
4. Behavior
5. Moon Phases

Here's what we do in the field:

Throughout the field trip, students will learn about the various species that migrate to the salt marsh and their reason for doing so. They will also learn about the behaviors these species engage in that help them reproduce. Additionally, they will learn about the diurnal tidal cycle the salt marsh operates on and how the moon phases can affect these cycles (king tide, etc.).



Human Dimensions/Application:

Migratory birds rely on South Carolina's beaches for their nesting behaviors. Humans need to ensure there are protected spaces on our coasts for birds to perform their natural behaviors without disturbances.

