



Pee Dee Explorer



Science Standards



Pee Dee Explorer

About Pee Dee Explorer

What does it mean when someone says they are from the "Pee Dee" of South Carolina? A place is bigger than its physical geography. A "sense of place" weaves together our experiences with the land, its culture and lifestyle.

[Pee Dee Explorer](#) features over six hours of video vignettes that characterize the natural, cultural, and agricultural landscapes of the Pee Dee region of South Carolina. The Pee Dee Explorer website is divided into chapters that provide various contexts for telling the story of the region. Each chapter contains a collection of video stories and accompanying text, based on well-known and "off the beaten path" landmarks found in the Pee Dee.

South Carolina Science Standards

GRADE 1

Plants

Standard 1-2: The student will demonstrate an understanding of the special characteristics and needs of plants that allow them to survive in their own distinct environments. (Life Science)

Indicators

1-2.5 Explain how distinct environments throughout the world support the life of different types of plants.

Earth Materials



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Standard 1-4: The student will demonstrate an understanding of the properties of Earth materials. (Earth Science)

Indicators

1-4.3 Compare soil samples by sorting them according to properties (including color, texture, and the capacity to nourish growing plants).

GRADE 2

Animals

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Indicators

- 2-2.1 Recall the basic needs of animals (including air, water, food, and shelter) for energy, growth, and protection.
- 2-2.3 Explain how distinct environments throughout the world support the life of different types of animals.
- 2-2.4 Summarize the interdependence between animals and plants as sources of food and shelter.
- 2-2.5 Illustrate the various life cycles of animals (including birth and the stages of development).



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GRADE 3

Habitats and Adaptations

Standard 3-2: The student will demonstrate an understanding of the structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats. (Life Science)

Indicators

- 3-2.1 Illustrate the life cycles of seed plants and various animals and summarize how they grow and are adapted to conditions within their habitats.
- 3-2.2 Explain how physical and behavioral adaptations allow organisms to survive (including hibernation, defense, locomotion, movement, food obtainment, and camouflage for animals and seed dispersal, color, and response to light for plants).
- 3-2.3 Recall the characteristics of an organism's habitat that allow the organism to survive there.
- 3-2.4 Explain how changes in the habitats of plants and animals affect their survival.
- 3-2.5 Summarize the organization of simple food chains (including the roles of producers, consumers, and decomposers).

Earth's Materials and Changes

Standard 3-3: The student will demonstrate an understanding of Earth's composition and the changes that occur to the features of Earth's surface. (Earth Science)

Indicators

- 3-3.1 Classify rocks (including sedimentary, igneous, and metamorphic) and soils (including humus, clay, sand, and silt) on the basis of their properties.
- 3-3.3 Recognize types of fossils (including molds, casts, and preserved parts of plants and animals).



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- 3-3.4 Infer ideas about Earth's early environments from fossils of plants and animals that lived long ago.
- 3-3.5 Illustrate Earth's saltwater and freshwater features (including oceans, seas, rivers, lakes, ponds, streams, and glaciers).
- 3-3.6 Illustrate Earth's land features (including volcanoes, mountains, valleys, canyons, caverns, and islands) by using models, pictures, diagrams, and maps.
- 3-3.8 Illustrate changes in Earth's surface that are due to slow processes (including weathering, erosion, and deposition) and changes that are due to rapid processes (including landslides, volcanic eruptions, floods, and earthquakes).

GRADE 4

Organisms and Their Environments

Standard 4-2: The student will demonstrate an understanding of the characteristics and patterns of behavior that allow organisms to survive in their own distinct environments. (Life Science)

Indicators

- 4-2.2 Explain how the characteristics of distinct environments (including swamps, rivers and streams, tropical rain forests, deserts, and the polar regions) influence the variety of organisms in each.
- 4-2.5 Explain how an organism's patterns of behavior are related to its environment (including the kinds and the number of other organisms present, the availability of food and other resources, and the physical characteristics of the environment).
- 4-2.6 Explain how organisms cause changes in their environment.



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GRADE 5

Ecosystems: Terrestrial and Aquatic

Standard 5-2: The student will demonstrate an understanding of relationships among biotic and abiotic factors within terrestrial and aquatic ecosystems. (Life Science)

Indicators

- 5-2.2 Summarize the composition of an ecosystem, considering both biotic factors (including populations to the level of microorganisms and communities) and abiotic factors.
- 5-2.3 Compare the characteristics of different ecosystems (including estuaries/salt marshes, oceans, lakes and ponds, forests, and grasslands).
- 5-2.4 Identify the roles of organisms as they interact and depend on one another through food chains and food webs in an ecosystem, considering producers and consumers (herbivores, carnivores, and omnivores), decomposers (microorganisms, termites, worms, and fungi), predators and prey, and parasites and hosts.
- 5-2.5 Explain how limiting factors (including food, water, space, and shelter) affect populations in ecosystems.

Landforms and Oceans

Standard 5-3: The student will demonstrate an understanding of features, processes, and changes in Earth's land and oceans. (Earth Science)

Indicators

- 5-3.1 Explain how natural processes (including weathering, erosion, deposition, landslides, volcanic eruptions, earthquakes, and floods) affect Earth's oceans and land in constructive and destructive ways.



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- 5-3.6 Explain how human activity (including conservation efforts and pollution) has affected the land and the oceans of Earth.

GRADE 6

Structures, Processes, and Responses of Animals

Standard 6-3: The student will demonstrate an understanding of structures, processes, and responses of animals that allow them to survive and reproduce. (Life Science)

Indicators

- 6-3.5 Illustrate animal behavioral responses (including hibernation, migration, defense, and courtship) to environmental stimuli.
- 6-3.6 Summarize how the internal stimuli (including hunger, thirst, and sleep) of animals ensure their survival.

GRADE 7

Ecology: The Biotic and Abiotic Environment

Standard 7-4: The student will demonstrate an understanding of how organisms interact with and respond to the biotic and abiotic components of their environment. (Earth Science, Life Science)

Indicators

- 7-4.2 Illustrate energy flow in food chains, food webs, and energy pyramids
- 7-4.3 Explain the interaction among changes in the environment due to natural hazards (including landslides, wildfires, and floods), changes in populations, and limiting factors (including climate and the availability of food and water, space, and shelter).



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- 7-4.4 Explain the effects of soil quality on the characteristics of an ecosystem.
- 7-4.5 Summarize how the location and movement of water on Earth's surface through groundwater zones and surface-water drainage basins, called watersheds, are important to ecosystems and to human activities.
- 7-4.6 Classify resources as renewable or nonrenewable and explain the implications of their depletion and the importance of conservation.

GRADE 8

Earth's Biological History

Standard 8-2: The student will demonstrate an understanding of Earth's biological diversity over time. (Life Science, Earth Science)

Indicators

- 8-2.2 Summarize how scientists study Earth's past environment and diverse life-forms by examining different types of fossils (including molds, casts, petrified fossils, preserved and carbonized remains of plants and animals, and trace fossils).
- 8-2.6 Infer the relative age of rocks and fossils from index fossils and the ordering of the rock layers.
- 8-2.7 Summarize the factors, both natural and man-made, that can contribute to the extinction of a species.

Earth's Structure and Processes

Standard 8-3: The student will demonstrate an understanding of materials that determine the structure of Earth and the processes that have altered this structure. (Earth Science)

Indicators



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- 8-3.7 Illustrate the creation and changing of landforms that have occurred through geologic processes (including volcanic eruptions and mountain-building forces).
- 8-3.9 Identify and illustrate geologic features of South Carolina and other regions of the world through the use of imagery (including aerial photography and satellite imagery) and topographic maps.

GRADES 9-12

Biology

Standard B-6: The student will demonstrate an understanding of the interrelationships among organisms and the biotic and abiotic components of their environments.

Indicators

- B-6.1 Explain how the interrelationships among organisms (including predation, competition, parasitism, mutualism, and commensalism) generate stability within ecosystems
- B-6.2 Explain how populations are affected by limiting factors (including density-dependent, density-independent, abiotic, and biotic factors).
- B-6.5 Explain how ecosystems maintain themselves through naturally occurring processes (including maintaining the quality of the atmosphere, generating soils, controlling the hydrologic cycle, disposing of wastes, and recycling nutrients).
- B-6.6 Explain how human activities (including population growth, technology, and consumption of resources) affect the physical and chemical cycles and processes of Earth.



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Earth Science

Solid Earth

Standard ES-3: Students will demonstrate an understanding of the internal and external dynamics of solid Earth.

Indicators

ES-3.5 Analyze surface features of Earth in order to identify geologic processes (including weathering, erosion, deposition, and glaciation) that are likely to have been responsible for their formation.

Earth's Hydrosphere

Standard ES-5: The student will demonstrate an understanding of Earth's freshwater and ocean systems.

Indicators

ES-5.1 Summarize the location, movement, and energy transfers involved in the movement of water on Earth's surface (including lakes, surface-water drainage basins [watersheds], freshwater wetlands, and groundwater zones).

ES-5.2 Illustrate the characteristics of the succession of river systems.

The Paleobiosphere

Standard ES-6: Students will demonstrate an understanding of the dynamic relationship between Earth's conditions over geologic time and the diversity of its organisms.

Indicators



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ES-6.3 Summarize how fossil evidence reflects the changes in environmental conditions on Earth over time.