

SOUTH CAROLINA STATE MUSEUM
PRE-VISIT MATERIALS
(Grades K-7)

ENVIRONMENTALLY SPEAKING

TO THE TEACHER:

The pre-visit packet contains: lesson background, curriculum standards, and terms and definitions.

GRADES:	K-7
LENGTH OF LESSON:	60 minutes
CLASS SIZE:	30 students max. (Approx. two groups of 15 students each)

During the lesson, docents will guide students through South Carolina’s habitats as they explore the diversity of life. Activities are designed to:

- ❑ Demonstrate the interdependence of living and non-living factors within ecological systems.
- ❑ Explore ecosystems of the present and future.
- ❑ Assess man’s impact on the environment and promote stewardship.

Our environment is fragile. What has been the modern world’s impact upon South Carolina’s environment?

Every **ecosystem** contains three groups of organisms: **producers**, **consumers** and **decomposers**. These organisms are classified according to the way they obtain their food.

Each organism has its own **niche** within a community. Animals may share the same habitat if they eat different foods, live in different types of shelters, and reproduce in different types of ways. **Competition** results when animals try to occupy the same niche. Better-suited species will eventually take over forcing the other organisms to adapt or cease to exist.

In addition to living organisms in the ecosystem there are non-living factors in the environment, such as water, light, temperature, wind and soil. Resources on Earth are limited. Every environment has a **carrying capacity**. **Conservation** is the process of identifying and using resources in a responsible manner.

TERMS AND DEFINITIONS:

Science Curriculum by Grade according to South Carolina State Standards	
Kindergarten	K-1.1; K-1.3; K-1.4; K-2.1; K-2.2; K-2.5
1st grade	1-1.1; 1-2.1; 1-2.2; 1-2.4; 1-2.6
2nd grade	2-1.1; 2-2.1; 2-2.2; 2-2.5
3rd grade	3-1.1; 3-2.1; 3-2.2; 3-2.5
4th grade	4-1.1; 4-1.4; 4-2.1
5th grade	5-1.1; 5-2.1; 5-2.2; 5-2.4
6th grade	6-2.1; 6-2.2; 6-3.1
7th grade	7-1.5; 7-1.6; 7-2.1

1. **ecosystem**- An area in which living organisms and non-living factors interact to exchange energy and materials
2. **community**- All of the living organisms within a given ecosystem.
3. **habitat**- An organism's home; where it lives and satisfies all other needs for survival.
4. **macro-habitat**- The entire area that surrounds an organism (example: swamp).
5. **micro-habitat**- That smaller part of habitat where the organism spends most of its time (example: a slug is usually in and around rotting leaves).
6. **niche**- The role of an organism in the community.
7. **environment**- Living and non-living surroundings of an organism that influences its behavior, adaptations and survival.
8. **biotic factors**- Differences in various habitats that depend on living life factors such as plants, animals or fungi.
9. **abiotic factors**- Differences in various habitats that depend on non-living factors such as the wind, humidity, or light.
10. **diversity**- The variety of species in the environment or the variety of environments of themselves.
11. **ecology**- Study of relationships among organisms and between them and their physical environment.
12. **interdependence**- Relying on actions or existence of other populations for survival... working together with or preying upon a variety of organisms for food, protection or transportation.
13. **autotroph**- Any organism that derives energy from sunlight or inorganic materials.
14. **heterotroph**- Any organism that cannot make its own food but relies on other organisms to do so.
15. **producer**- An organism, usually a green plant, that can produce its own food from inorganic sources.
16. **consumer**- An organism that lives by feeding on other organisms.
17. **decomposer**- An organism that breaks down the remains of dead animals and plants into simpler organic substances.

18. **carrying capacity**- Maximum number of individuals of a given species which an ecosystem has sufficient resources to support.
19. **co-existence**- Organisms living together within the same habitat.
20. **competition**- The struggle between organisms for limited space, food, and/or light.
21. **adaptation**- Gradual modification over time of an organism's ability to survive in a changed environment.
22. **predator-prey relationship**- One organism relies on killing another for its food; this relationship results in a balance of these populations.
23. **food chain**- A feeding sequence providing energy from one organism to another (example: grain---mouse---hawk).
24. **food web**- A network of food chains due to consumers' multiple food sources.
25. **food pyramid**- A model showing the decrease in available energy and biomass from one trophic level to the next higher one.
26. **barrier island**- Sandy features which lie in front and serve to protect the marshes and mainland from the energy of the ocean (example: Kiawah Island).
27. **erosion**- The process by which wind, water, plants, chemicals, etc. break up rock into soil or sand.
28. **altered habitat**- A habitat that has been changed from its natural state either in physical appearance or diversity of biomass.
29. **mountain cove**- A sheltered, V-shaped area in the mountains...a habitat with plentiful shade, mild temperatures, and nutrient-rich soils.
30. **refuge**- A place providing protection from predators and weather.
31. **conservation**- Responsible use, protection and management of natural resources.
32. **renewable resources**- Materials consumed from the Earth at a slower rate than they are replaced through natural cycles.
33. **non-renewable resources**- A limited supply of materials consumed from the Earth that once used cannot be replaced.