Biodiversity  
Classroom Program for Grades 4-8

Life on earth is varied and diversified; however, it is still all interconnected.

Lesson: Explore the diversity of life on earth, past and present. Through hands-on activities experience how human impacts influence and change ecosystems.

Conservation Message: All life on Earth exists as a part of an ecosystem.

Curriculum Objectives: Learn about factors that impact the biodiversity of ecosystems.

Tennessee students will apply the following Science Curriculum Performance Indicators:
- Organize data into appropriate tables, graphs, drawings, and diagrams.
- Analyze the effects of changes in the environment on the stability of an ecosystem.
- Establish the connections between human activities and natural disasters and their impacts on the environment.
- Analyze the environments and the interdependence among organisms found in the world's major biomes.
- Describe the importance of maintaining the earth’s biodiversity.

Georgia students will apply the following Science Performance Standards:
- Students will describe the roles of organisms and the flow of energy within an ecosystem.
- Students will identify factors that affect the survival or extinction of organisms such as adaptations, variation of behaviors, and external features.
- Students will examine the dependence of organisms on one another and their environments.
- Students will communicate scientific ideas and activities clearly.

Alabama students will apply the following Science Course of Study Content Standards:
- Examine evidence to support an argument that the internal and external structures of plants and animals function to support survival, growth, behavior, and reproduction.
- Create a model to illustrate the transfer of matter among producers; consumers, including scavengers and decomposers; and the environment.
- Analyze evidence to explain how changes in human population, per capita consumption of natural resources, and other human activities affect Earth's systems.
- Analyze and interpret data to provide evidence regarding how resource availability impacts individual organisms as well as populations of organisms within an ecosystem.

Additionally, all students will apply the following National Science Education Content Standards:
- Develop an understanding of organisms and their environment.
- Develop an understanding of populations and ecosystems.
- Develop an understanding of the interdependence of organisms.
- Develop an understanding of diversity and adaptations of organisms.

Visit the Tennessee Aquarium Education Department's website  
http://www.tnaqua.org/Education
3. The number of ______ within a given sample, community, or area provides diversity or richness.

4. Populations of organisms of different species that interact with one another.

5. A group of individuals of the same species, occupying a defined area, often isolated from other similar groups.

7. This type of diversity helps a species resist disease and adjust to changes in their environment.

9. Over-exploitation, to include over-harvesting, over-______________, and over-collecting may remove too many or vital portions of a population to secure continued success of the species.

1. Environmental conditions may be altered through _______ _________ in which species and populations are unable to adapt or relocate.

6. This type of diversity refers to the dynamic complexity of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

8. An ________ species may become invasive and adversely affect native species populations.

10. The most diverse group of animals on earth are ________ accounting for more than half the identified animals.

Answers can be found on the Tennessee Aquarium Education Department’s website
http://www.tnaqua.org/Education