# Chapter 44

#### Learning Objectives:

* Define ecology and the four basic levels of ecological research
* Describe examples of the ways in which ecology requires the integration of different scientific disciplines
* Distinguish between abiotic and biotic components of the environment
* Recognize the relationship between abiotic and biotic components of the environment
* Define biogeography
* List and describe abiotic factors that affect the global distribution of plant and animal species
* Compare the impact of abiotic forces on aquatic and terrestrial environments
* Summarize the effects of abiotic factors on net primary productivity
* Identify the two major abiotic factors that determine terrestrial biomes
* Recognize distinguishing characteristics of each of the eight major terrestrial biomes
* Describe the effects of abiotic factors on the composition of plant and animal communities in aquatic biomes
* Compare and contrast the characteristics of the ocean zones
* Summarize the characteristics of standing water and flowing water freshwater biomes
* Define global climate change
* Summarize the effects of the Industrial Revolution on global atmospheric carbon dioxide concentration
* Describe three natural factors affecting long-term global climate
* List two or more greenhouse gases and describe their role in the greenhouse effect

**Directions:**

Have students prepare the review questions and critical thinking questions at the end Chapter 44. Put them into groups and have them discuss.

You can also have them prepare and turn in these questions for a homework grade.