

## How do matter and energy link organisms to each other and their environments?

- Living organisms have the capability of producing populations of unlimited size, but the environment can support only a limited number of individuals from each species.
- Changes in an ecosystem can result from changes in climate, human activity, introduction of nonnative species, or changes in population size.
- Water, carbon and nitrogen cycle between abiotic resources and organic matter in the ecosystem and oxygen cycles through photosynthesis and respiration.

Key Vocabulary	Assignments	
Abiotic	<b>Chapters 19, 21, 22-1 &amp; 22-2</b>	
Biodiversity	<b>#1 Read 361-365</b>	<b>Due:</b>
Biological Magnification	A. What is causing the thinning of the ozone layer?	
Biosphere	B. How does a population differ from a community?	
Biotic	C. Why are models so useful in ecology?	
Community	D. Why is it important to understand challenges in a species' environment in order to understand the species' evolution? Relate your answer to what Darwin referred to as "the struggle for survival."	
Ecology	<b>#2 Read 368-372</b>	<b>Due:</b>
Ecosystem	A. List three abiotic factors that can affect an organism.	
Energy Transfer	B. What does a tolerance curve indicate about an organism?	
Ecosystem Recycling	C. How is an organism's niche different from its habitat?	
Greenhouse Effect	D. List two factors that might cause an organism to restrict its use of a resource.	
Keystone Species	<b>#3 Read Section 22.1</b>	<b>Due:</b>
Niche	A. Explain the importance of the study of environmental science.	
Population	B. Name the three major layers between Earth's center and 20 km above Earth's surface.	
Succession	C. How does the greenhouse effect occur?	
Sustainability	D. List several reasons to value biodiversity.	
Tolerance Curve	<b>#4 Read Section 22.2</b>	<b>Due:</b>
	A. Draw a model of your own ecological footprint. Include boxes to represent the resources you use, their original sources, and any activities that affect your environment. Draw arrows to indicate relationships between factors.	