**CHAPTER 3 STUDY OUTLINE**

**THE BIOSPHERE**

3.1 What Is Ecology? (pages 64-67)

1. Studying Our Living Planet
	1. The Science of Ecology
	2. Levels of Organization
2. Biotic and Abiotic Factors
	1. Biotic Factors
	2. Abiotic Factors
	3. Biotic and Abiotic Factors Together

3.2 Energy, Producers, and Consumers (pages 69-71)

1. Primary Producers
	1. Energy for the Sun
	2. Life Without Light
2. Consumers
	1. Types of Consumers

3.3 Energy Flow in Ecosystems (pages 73-78)

1. Food Chains and Food Webs
	1. Food Chains
	2. Food Webs
		1. Food Chains Within Food Webs
		2. Decomposers and Detritivores in Food Webs
	3. Food Webs and Disturbance
2. Trophic Levels and Ecological Pyramids
	1. Pyramids of Energy
	2. Pyramids of Biomass and Numbers