**Chapters 3-6: Ecology**

* **Objectives**
  + Describe the study of ecology
  + Evaluate how biotic and abiotic factors shape an ecosystem
  + Create an ecological pyramid
  + Demonstrate how matter and energy cycle among the living and nonliving parts of an ecosystem
  + Explain how the availability of nutrients affects the productivity of ecosystems
  + Model how predator-prey relationships influence an ecosystem
  + Compare biodiversity in different ecosystems
* **Essential Questions**
  + How do living and nonliving parts of the Earth interact and affect the survival of organisms?
  + What factors affect the growth and carrying capacity of populations?
  + How does matter cycle through the biosphere?
  + What causes ecosystems to change?
  + How can we preserve biodiversity?
* **Vocabulary**
  + Biosphere
  + Ecology
  + Ecosystem
  + Biotic factor
  + Abiotic factor
  + Autotroph
  + Heterotroph
  + Photosynthesis
  + Chemosynthesis
  + Food web
  + Biological Magnification
  + Trophic level
  + Ecological Pyramid
  + Biogeochemical cycle
  + Nutrient
  + Resource
  + Pollutant
  + Carrying capacity
  + Limiting factor
  + Climate
  + Biome
  + Biodiversity
  + Monoculture
  + Disturbance
  + Sustainable development
  + Renewable resource