Honors Biology – Unit 13 Objectives

1. Vocabulary: abiotic factor, biotic factor, trophic level, 10% rule, biomass, productivity, energy pyramid, niche, competitive exclusion principle, symbiosis, mutualism, parasitism, commensalism, biogeochemical cycle, carbon cycle, nitrogen cycle, water cycle, limiting factor, carrying capacity, exponential growth, linear growth, logistic growth, population density, boom-and-bust cycle, predator-prey cycle, biome, colonize, exotic (invasive) species, succession, primary succession, secondary succession, annuals, and climax community.

2. Construct an energy pyramid that accurately depicts the energy relationships between trophic levels.

3. Illustrate and explain the workings of the carbon, nitrogen, and/or water cycle.

4. Classify described relationships between organisms as examples of mutualism, parasitism, or commensalism.

5. Describe the process of succession from bare rock to an appropriate climax community. Explain why succession stops at the level of climax community.

6. Explain how evolution, through natural selection to different abiotic environments, produces trade-offs involving an organism's ability to tolerate extreme environments.

7. Describe conditions that lead to exponential growth, logistic growth, boom and bust cycles, and predator prey cycles.

8. Explain why some exotic species are able to dominate the ecosystems they invade.