Unit 2 Test Concepts to Review:

Chapter 3:

- What is the difference between a negative feedback loop and a positive feedback loop? Which of the two does an exponential growth curve most closely reflect?

- What is the concept of Environmental Unity? How is that different from the Gaia hypothesis?

- Be able to distinguish between the input and output of a system. What would be the difference between saying that system is in a "steady state" or a state of "flux"?

- Be able to distinguish between the following systems: Hydrosphere, Lithosphere, Atmosphere, and Biosphere.

Chapter 4:

- What is the difference between a reservoir and a process in biogeochemical cycles? For example, what are the reservoirs and processes involved in the carbon cycle?

- What are some of the processes involved in the rock cycle?

- How does excess phosphorus in freshwater ecosystems cause eutrophication?

- What chemical conversion happens during “nitrogen fixation”? What chemical conversion happens when CO_2 dissolves in water?

- What is the basic structural element in all “organic” molecules?

Chapter 5:

- Describe Malthus’ predictions about the future of human population growth?

- Be able to calculate the annual growth rate of a population, as well as the doubling time?

- What is demographic transition?

- What is the age structure of a population?

- What are some reasons we are uncertain about the ultimate carrying capacity of humans?

- How could a country reduce its rate of population growth?