PODCAST OUTLINE: HIERARCHY II

1. Introduction

2. Populations
   A. Definition
   B. Properties
      1. Density
      2. Dispersion
      3. Birth and death rates
   C. Population trends over time
   D. Survivorship
3. Communities

A. Definition – How different from populations

B. Properties

1. Species composition

2. Diversity
   a. Definition
   b. Importance of Shannon-Weiner index

3. Succession

4. Ecosystems

A. Trophic levels
   1. Producers
   2. Consumers
   3. Decomposers
4. Ecosystems (cont.)

B. Food chains

1. Simple food chains

2. Food webs

C. Ecosystem processes

1. Energy flow

   a. Role of producer

   b. Role of herbivores

   c. Role of carnivores and decomposers

   d. Proportion of energy transfer from one trophic level to another

2. Nutrient cycling

   a. Presence of nutrients in organisms

   b. Movement between trophic levels

   c. Difference between energy flow
Questions

1. Considering populations, communities, and ecosystems, which would be a multispecies assemblage and why?

2. Name and describe three properties that populations have.

3. Why are big, fierce animals so rare in ecosystems?

4. What is the Shannon-Weiner index, and why is it of value to ecologists?

5. What is the primary difference between the way that nutrients and energy move in ecosystems?
6. Why are decomposers important, and what would happen if they were removed from an ecosystem?

7. How is it possible to have more than one community on a given piece of land?

8. What is succession, and what causes it to start within a community?