I. Ecology - study of all organisms in relation to other species and to the environment
   A. Levels of organization in ecological interactions
      1. Population (Collared Lizards) - a group of individuals of same species in same area (habitat), and actually or potentially interbreeding
      2. Community (Animals including lizards, as well as plants, bacteria, and worms) - two or more populations of different species living and interacting in the same area (all interacting populations within an ecosystem)
         a) Producers - plants
         b) Consumers - lizards
         c) Decomposers - bacteria and fungi
         d) Detritivores - worms (feed on partially digested stuff)
      3. Ecosystem - all the organisms and their non-living environment within a defined area
      4. Biome - a general type of ecosystem occupying an extensive geographical area (tropical rain forest, desert, grassland, etc.)
      5. Biosphere - that part of the Earth inhabited by living organisms; includes the living and non-living components

II. Population dynamics
   A. Variables affecting population size
      1. Natality - births
      2. Mortality - deaths
      3. Immigration - individuals joining the population
      4. Emigration - individuals leaving the population
   B. Population growth rate = (births + immigrations) - (deaths + emigrations) [per individual]
   C. # indiv. added to pop. = population growth rate * number of original individuals
      1. This is an exponential growth rate (2, 4, 8, 16, etc.)

III. Environmental resistance - limits to growth
   A. Density-dependent factors - supply of food
      1. Exploitation competition - rate of eating food differs (Neil Smith eats faster)
      2. Interference competition - make Neil Smith sick by talking about the vacuum cleaner (thus others eat more efficiently)
      3. Predation, parasitism, competition
   B. Density-independent factors - temperature

IV. Human growth
   A. Currently varies from 0 to 4%
   B. Present world population is expected to double before it levels off
   C. Rapid human growth the past few years has been made possible through technology