CLASSIFICATION OUTLINE

A. Classification: What IS it?

B. Why Classify?

C. Brief History (see Classification History chart)
   2 kingdoms (Linnaeus, 1735): animals, plants
   3 kingdoms (Haeckel, 1866): animals, plants, protists
   4 kingdoms (Copeland, 1956): animals, plants, protists, monerans
   5 kingdoms (Whittaker 1969): animals, plants, fungi, protists, monerans
   6 kingdoms (Woese ..., 1977): animals, plants, fungi, archaeabacteria, eubacteria
   3 domains (Woese ..., 1990): eukarya, archaea, bacteria
   ? kingdoms ...?

D. Universal System
   1. What is it?.................................(Linnaeus + Whittaker & Margulis)
   2. Why?
   3. What is it based on?.......................(structural similarities which are likely indicators of relationships)
   4. Basic unit: SPECIES
      a. definition (4 parts) (see “Species Definition”)
      1)
      2)
      3)
      4)
      b. Properly written: Homo sapiens, or Homo sapiens, or H. sapiens

   5. Levels of Classification (taxa)
      a. Highest (largest level):.........Kingdom
      b. Lowest (smallest level):.........species... sub-species
      c. all levels in between:

   6. Interpreting Relationships from Classification Outlines
      a. boxes-within-boxes (demo with nested boxes)
      b. where are similarities most alike? .....most different?
      c. where are relationships closest? ....most distant?
      d. practice questions

E. Problems of Classification:
   1. What organisms seem to fit equally well into two categories?
   2. Is our classification system a natural system, into which we simply place organisms, or is it a human invention, our best effort to organize living things?
   3. Explain difference between “classifying” and “identifying” or “keying”