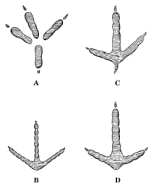
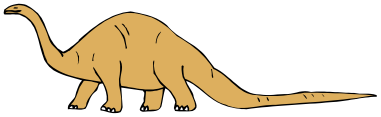


Unit 2: Taxonomy- FRQ



Starting this unit you will be given an optional assignment to write a free response essay from the selection below to be counted as a test/quiz grade. All you have to do is pick one of the FRQ prompts below to write about. You must answer all parts of the question to receive the extra assignment points. Extra help sessions will be provided on the Monday before the test for additional help in essay structure (not in content collection). This assignment is due on the day of the test. Late assignments will not be accepted!

Free Response Questions

1. Linnaeus first classified organisms into 5 kingdoms, but scientists have since classified life into 6 kingdoms (around 2004). It is widely accepted there are now these 6 kingdoms.

a) Name all 6 kingdoms. [6pts]
b) For all 6 kingdoms, give one example of an organism within that kingdom (for the "oldest" kingdom, you may have to look on the internet to get an actual real-name example). [6pts]
c) For all 6 kingdoms, name the environment in which the organism from "b" above lives in. [6pts]
d) Which domain do most of the kingdoms fall under, and which kingdoms are they? [2pts]

2. The complexity of structure and function varies widely across the kingdoms. Despite this variation, organisms exhibit common processes. (You must do both part 'a' and part 'b'. These include the following:

- Transport of materials within organism
- Response to stimuli
  Gas exchange
- Locomotion
- Cellular respiration

(a) Choose two of the processes above, and for each, compare two kingdoms *or* phyla from the list below (e.g., if you pick locomotion you can compare the locomotion of Protista and Cnidaria). In your comparison describe a relevant structure and describe how they function to accomplish the process in that kingdom or phyla. Be specific, you might have to do a little research on your own. [10pts]

Plantae (e.g., maple tree, sunflower)
Archaebacteria (e.g., Crenarchaeota, Euryarchaeota)
Eubacteria (e.g., *Escherichia coli, Salmonella enterica*)
Cnidaria (e.g., hydra, jellyfish, anenome)
Annelida (e.g., earthworm, leech)
Chordata (e.g., mouse, bird, fish, human, etc)
Protista (e.g., an amoeba, paramecium, euglena)

(b) Explain the adaptive (evolutionary) value(s) of the structural examples you described in part (a) [10pts] (in other words, how to those adaptations allow it to survive?).