

Plus Hour #5: General Topics: Birds & Mammals

Biological Sciences 102 – Animal Biology

This assignment is worth 20 points and accounts for the fifth plus hour assignment.

Ten points of this assignment are EXTRA CREDIT and meant to help you make up for one missed or poor performance on a laboratory quiz during the semester.

Using your textbook or a reliable Internet reference, answer the following questions. You may wish to review several websites or sources to verify your answers. You may wish to refer to the brief description of radiometric dating on the next page.

Submission Directions

You may print out this assignment and type and print out the answers on another sheet(s) of paper or you may copy and paste the questions into an MS Word document (or other word processing software), type out your answers between the questions and submit them in printed form.

Some of this information may show up on the final exam.

1. The National Park Service (NPS) and the Nature Conservancy are removing the feral pigs from Santa Cruz Island and other islands in the Channel Islands off of Santa Barbara. The feral pigs are invasive non-native species. This will help increase the survival of the largest mammal on the islands. What mammal is this? What specific mammal and bird species are involved and briefly describe the food web involved. Note the answer involves the mammal, two different eagle species and a pesticide.
2. What is Bernoulli's Principle? Describe how Bernoulli's Principle relates to bird flight.
3. Relative to primate locomotion, what is brachiation? List three different primate species that demonstrate brachiation. What is the evolutionary advantage of this type of locomotion in these species?
4. How does the structure of a chimpanzee pelvis differ from the structure of a human pelvis? What is "knuckle-walking"? Give an example of a primate that is a "knuckle-walker"? Why must this animal walk using this posture?
5. What is Boyle's law? How does Boyle's law related to the function of the respiratory system in mammals?
6. What is a prosimian? Give two different examples of prosimians. How are prosimians different from apes and monkeys?
7. What is a nephron? In what vertebrate organ are nephrons found? Draw a simple diagram of a nephron and clearly label each of the parts.
8. What is a therapsid? To what class of vertebrates did this group evolve? What is the evidence for this evolution?
9. Why do some animals migrate? List three different animals in three different classes and briefly describe their migration. List at least two different explanations of how these animals navigate during their migration; note these need not necessarily be vertebrate species.
10. Relative to mammals, what is a home range? Which has a larger home range, a larger or a smaller mammals and why?