

**Basics of Human Biology: Chapter 3**

taxonomy	derived trait	sexual dimorphism
morphology	shared derived trait	Mammalia
phylogeny	osteology	vertebral column
primitive trait	dental formula	

1. Explain how the relationships among organisms are determined.
2. What does it mean to say the body is a system of systems?
3. Explain why the study of an organism's skeleton can also reveal information about the appearance and behavior of that organism.

**Modern Evolutionary Theory: Chapter 4**

niche	sexual selection	subspecies
mutation (point and chromosomal)	gene flow	gradualism
genetic variation	genetic drift	punctuated equilibrium
allele frequency	founder effect	parallel evolution
gene pool	bottleneck	convergent evolution
population	fission	
	speciation	

1. Explain the role of sexual selection in evolution.
2. Describe the agents that are responsible for generating and distributing variation (mutation, gene flow, genetic drift, fissioning, founder effect) and give an example of each.
3. Briefly describe the difference between gradualism and punctuated equilibrium theories of evolution.
4. What does it mean to say that evolution is not goal oriented?
5. Explain why the evolution of sexual reproduction resulted in accelerated evolutionary change.
6. Explain speciation and how it happens. Why is it so difficult to identify?

## Primate Behavioral Ecology: Chapter 5

anthropoids	hominoid	altruism	estrus
Haplorrhini	hominin	behavioral ecology	dominance hierarchy
Strepsirrhini	affiliative	spandrel	foraging
Old & New World monkeys	agonistic grooming	reproductive strategies	

1. Why study nonhuman primates?
2. In evolutionary terms, explain why chimpanzees are better models for human behavior than baboons. Why are the gorilla and the orangutan not as good as the chimpanzee and bonobo as models for the study of early human behavior?
3. Briefly explain the importance of genetics for interpreting species relationships. Describe the results of genetic comparisons of humans and nonhuman primates (DNA sequences, proteins). What do these data say regarding the difference between chimps and humans?
4. The primate adaptation is characterized by living in social groups. Describe the key characteristics of primate societies (eg. based on individual recognition, primary social bond, etc.)
5. What social bond appears to be the strongest among chimps, and how does this bond affect chimp society?
6. Describe dominance in chimpanzee society. What are the roles of "displays" and violence?
7. Describe what we know about chimpanzee behavior from Jane Goodall's and other primatologists' research. Include the nature of friendship, grooming, family bonds, cooperation, hunting, food sharing, violence. Where do chimpanzees sleep? What are their living patterns? What do they eat?
8. How do bonobos differ from chimpanzees? What is their relationship to humans?
9. What do you think about the ethics of using nonhuman primates for research?
10. Briefly compare macaques and chimpanzees in terms of social organization, sexual behavior and social interactions.