Bio. 3302 Introduction to Evolution
Study Guide
Human Evolution

Important Terms and Concepts: Human Evolution

Acheulean Tools
Anthropoids
Archaic humans
Ardipithicus
Australopithecus
Binocular vision
Bipedal
Cranial Capacity
Hominoidea
Homo erectus
Homo habilis
Homo neanderthalensis
Homo sapiens
Homo sapiens neanderthalensis
Laetoli footprints
Lucy
Multi-regional hypothesis
Neanderthal
New World Monkeys
Old World Monkeys
Out-of-Africa hypothesis
Paleolithic
Primate
Prosimians
Giant Sloths
Therapsids

Discussion Questions: Human Evolution

1. What major features distinguish mammals from other vertebrates? What was the lifestyle of the earliest mammals, and what evidence supports this view?

2. What major features distinguish primates from other mammals? What adaptations do primates have that are related to living in trees?

3. What advantages could bipedalism have offered to early humans? Which came first, bipedalism or tool use? Explain. How could tool use result in increased brain size?

4. How has brain size changed in the lineage leading to modern humans? Give the approximate brain size of a chimpanzee, Ardipithecine, Australopithicine, *Homo habilis*, *Homo erectus*, and *Homo sapiens*.

5. What is the significance of the *Ardithopithecus* fossils (Ardi)? How old are they?

6. What are the significant characters of *Australopithecus* (Lucy)? How do we know she was bipedal, at least some of the time?

7. How old are the oldest stone tools, and with whom are they associated? What about use of fire?

8. Discuss the appearance, lifestyle and migration of H. erectus. Compare and contrast the Out-of-Africa hypothesis of modern human origins with the Multi-regional hypothesis.

9. Compare and contrast Neanderthals with modern humans. Do you think they should be considered the same as *Homo sapiens*, a separate subspecies, or separate species? Why or why not?

10. What are some possible reasons for the eventual extinction of the Neanderthals?

11. What are some cultural differences that distinguish modern humans from earlier species? Is it possible we may be too smart for our own good? Why or why not?