

Early Primate Evolution: Chapter 6

fossil	chronometric dating	dating	bipedal
relative dating	techniques	adaptive radiation	prehensile
techniques	radiocarbon dating	stereoscopic vision	opposability
provenience	potassium argon	quadrapedal	

1. Timeline: what is the age of the universe? Earth? Sexual reproduction? Mammals? Primates?
2. Explain how we can study the origin of the universe, an event that took place billions of years in the past.
3. How are fossils formed?
4. Explain the difference between absolute and relative dating techniques. When is provenience important?
5. If you were interested in finding early hominid fossils, what would you have to consider in deciding where to look for those fossils?
6. What are placental mammals?
7. What does the extinction of the dinosaurs have to do with the evolution of the primates and other mammals? What caused their extinction and when?
8. Define primates - in other words - what adaptive strategies define the primate order? Why do we refer to a "suite of characteristics" that characterize primates?
9. Is there a theory as to why primates evolved from early mammals?
10. In what ways is the human primate a typical primate? In what ways is the human primate unique? What are the areas of greatest similarity, greatest difference?

Early Hominin Evolution: Chapter 7

bipedality	foramen magnum	Australopithecus
hominid	Sahelanthropus	(afarensis, africanus)
hominin	prognathism	

1. Name the major structural adaptations of bipedalism. Explain the significance of the foramen magnum for fossil interpretation.
2. What is the latest date estimate for the emergence of bipedalism? What kind of environment?
3. What are the adaptive advantages of bipedalism?
4. What is the time and geographic range of genus Australopithecus? Who is Lucy? Why is her fossil important?
5. Why do we call the first hominids "bipedal apes"?

Plio-Pleistocene Hominins and the Genus Homo: Chapter 8

Paranthropus	Homo habilis	biocultural evolution	Acheulean tool
robust	Oldowan tool	Pleistocene	industry
gracile	industry	sagittal crest	
Homo	Homo erectus	sagittal keel	

1. Where were the robust hominins? What distinguishes them from the gracile Australopithecines?
2. Where were the first tools found? What is their date? Who did they belong to?
3. Name three distinguishing characteristics of genus Homo.
4. Briefly describe Homo erectus in terms of anatomy, time, geography, and culture. Contrast with early Homo. Was Homo erectus hunting or scavenging?
5. What is the evidence for the controlled use of fire? Who is it associated with?
6. When was the Pliocene, and what characterized this epoch? How is this period significant for hominin evolution?
7. How can we account for the fact that the earliest fossils of Homo erectus from both Africa and Java are about the same age?
8. When and why did hominins expand beyond Africa?