

Name _____

Period _____

Ms. Foglia

Date _____

AP: CHAPTER 25: PHYLOGENY AND SYSTEMATICS

1. What is phylogeny?

2. How are fossils significant to our study of biology?

3. Review these key points in the study of fossils:

a. Sedimentary rocks are the richest source of fossils.

b. Paleontologists use a variety of methods to date fossils.

c. The fossil record is a substantial, but incomplete, chronicle of evolutionary history.

d. Phylogeny has a biogeographic basis in continental drift.

e. The history of life is punctuated by mass extinctions.

4. List examples of fossils. _____

5. What techniques do relative dating use to place fossils in their place in geologic time?

6. What marks the separation between the major eras in the geologic time scale?

7. How does absolute dating compare to relative dating?

8. Describe the two main characteristics of the Linnaean system of classification.

a. _____

b. _____

9. What modern techniques are used as the basis for grouping creatures with modern phylogenetic systematics?

10. What does a phylogenic tree show?

11. When classifying organisms in a cladistic diagram, identify three pitfalls scientists might encounter classifying creatures.

a. _____

b. _____

c. _____

12. What do scientists use when placing an organism on a cladistic diagram?

13. How have molecular clocks influenced our thoughts on evolutionary paths?

14. Why is the four chamber heart a poor choice of structure to place creatures on a phylogenic tree?

15. Why are crocodiles now thought to be closer to birds than other reptiles?
