

Name _____

Period _____

Ms. Foglia

Date _____

AP: CHAPTER 22: DESCENT WITH MODIFICATION

1. Identify the three significant historical themes that set the stage for Darwinian evolutionary theory.

2. What were the two major points made in *The Origin of Species*?

3. What were the conventional paradigms in the 1800's when Darwin developed his theories?

4. What was the contribution of Carolus Linnaeus to the evolutionary theories?

5. How did the study of fossils help Darwin shape his theories?

6. How did geological gradualism and uniformitarianism influence Darwin?

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7. Identify the two principles of Lamarck's theory of evolution.

8. How did the observations during his voyage on the Beagle influence Darwin's theories?

9. Why were the Galápagos Islands so important to Darwin's observations?

10. What are the elements for the formation of new species?

11. What is the driving force behind the evolution of the 14 species of finches on the Galapagos?

12. What was Wallace's role in the Theory of Natural Selection?

13. What were the main points of *The Origin of Species*?

14. Define Descent with Modification.

15. How does the "tree analogy" represent the evolutionary relationships of creatures?

16. Summarize the observations and inferences recognized as the backbone of evolution by natural selection.

17. Observations:

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

18. Inferences:

- a. _____
- b. _____
- c. _____

19. How did Darwin's experience with artificial selection influence his theories of evolution?

20. For each of the following, indicate how it is used as evidence of evolution by natural selection.

a. Paleontology _____

b. Biogeography _____

c. Resistance to insecticides _____

d. Drug Resistance _____

e. Homology _____

f. Homologous structures _____

g. Vestigial organs _____

h. Embryology _____

i. Biochemical similarity _____
