

Name \_\_\_\_\_

**AP Biology**  
**TEXT: *Biology*, Campbell and Reece**  
**7<sup>th</sup> Edition**  
**Chapter 22**

**Evolution: A Darwinian View of Life**  
**Thematic Review Guide**

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

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

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

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

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

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6. How did geological gradualism and uniformitarianism influence Darwin?

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

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

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

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

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

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

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

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14. Define ***Descent with Modification***.

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

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

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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?

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

a. paleontology \_\_\_\_\_

b. biogeography \_\_\_\_\_

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c. resistance to insecticides \_\_\_\_\_

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d. drug Resistance \_\_\_\_\_

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e. homology \_\_\_\_\_

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f. homologous structures \_\_\_\_\_

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g. vestigial organs \_\_\_\_\_

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h. embryology \_\_\_\_\_

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i. biochemical similarity \_\_\_\_\_

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