

Extra Credit Reading
THE ORIGIN OF SPECIES

Name: _____

1. What is the principle of natural selection?
2. Name three arguments that are necessary to support the principle of natural selection.
3. What “serious objection” to the theory of natural selection was offered by professors Bronn and Broca?
4. What does Darwin believe is the cause of the wingless condition of many Madeira beetles? Explain.
5. Darwin refers to *The Origin of Species* as an “abstract,” rather than as a full account of his work. Why did he publish this book before his work was complete?
6. Explain the objection to the theory of natural selection raised by the geological record of Darwin’s time.
7. Did Darwin believe that each species was created in multiple locations or just in one area? How does his experience with the beaks and feet of birds support his opinion?
8. Both Lamarck and Darwin believed that organisms have a tendency to adapt and improve, yet throughout the world the lowest forms of life still exist. How does Lamarck explain this apparent contradiction? What is Darwin’s explanation?
9. The Malthusian theory of population growth holds that if growth went unchecked, the population would double every 25 years in geometric progression, leading to a disastrous struggle for existence. How was this doctrine of Malthus applied by Darwin?
10. Darwin could not directly prove that a complex organ like the human eye was formed by natural selection. What was his indirect proof?
11. How do natural selection and instinct account for the honeycombed structure of beehives?

12. What are rudimentary organs? According to Darwin, how do organs become rudimentary? What problem does a minuscule rudimentary organ pose for natural selection?
13. How does the example of a swim bladder support natural selection?
14. What role does Darwin assign to the Creator in the origin of the species?
15. Why do you think Darwin felt compelled to complete his work when he learned that Wallace had drawn similar conclusions regarding the origin of species?
16. Why does the existence of rudimentary organs present a problem to adherents of “the old doctrine of creationism?”
17. Why did Darwin devote so much space to addressing criticisms of his theory?
18. Can evolution be proven through direct observation? If not, how did Darwin prove his theory?
19. Why do you think Darwin failed to directly address the origin of human beings in *The Origin of Species*?
20. What is the significance of analogous variations, as evidenced by the Swedish turnip and rutabaga plants?
21. Would the struggle for life be most severe between two species of hawks or between hawks and sparrows?
22. Why would natural selection not result in the modification of species solely for the benefit of another species?
23. Explain how the domestication of animals and plants was applied to the theory of natural selection.
24. Did you like this book? Why or why not?
25. What did you learn about the scientific process by reading this book?