

Natural Selection and Adaptation Homework

<http://www.pbs.org/wgbh/evolution/library/fag/cat01.html>

Go to OAKS and download the three readings (For reading #1, DO NOT READ THE FULL ARTICLE, only the first 6 pages). Print this assignment and answer the following questions, and be prepared to answer similar questions on the in-class quiz next week.

1. Give a definition for evolution. _____

2. Give a definition for natural selection. _____

3. Can muscle mass gained from exercise be passed on to the next generation? IE, is this a heritable trait linked to genetics? _____
4. Is beak size in medium and small ground finches a heritable trait? _____
5. What seed plant did all of the finches living on Daphne Major eat? _____
6. Which plant was only eaten during drought? _____
7. If there is a drought on Daphne Island (a La Niña year), what kind of birds would you expect to survive, and why? _____

8. What if there is a flood on Daphne Island (an El Niño year)? _____

9. What is the scientific definition of a “theory”? _____

10. Has the theory of evolution ever been scientifically unproven? _____
11. Is a chimpanzee the direct ancestor of human beings? Why or why not? _____

12. Give the definition of a species. _____

13. Is genetic variation a random or non-random process? Explain. _____

14. Is natural selection a random or non-random process? Explain. _____

15. Do individuals evolve? _____
16. Do species evolve? _____
17. How long ago did the ancestor of Darwin’s finches (a blueblack grassquit) reach the Galapagos from South America? _____
18. What makes Daphne Major a good place to study natural selection in the wild? _____

19. Does natural selection only take place slowly and gradually, over long periods of time? _____

20. What factor besides beak size is affecting the evolution of Darwin’s finches? _____

