

Natural Selection Unit Test

Directions: Answer each question to the best of your ability. Explaining as much as possible will give you a better chance for more points. You can use your answers to the questions (1-7) to help you. Each answer should at least be a paragraph long. To be complete it might need to be a few paragraphs or a long paragraph. Be sure to read all of each question before answering.

1. Give an explanation (like we did last time) answering the question “How are there 13 species of finch (found nowhere else in the world) on the Galapagos Islands when only one finch species migrated there long ago? This should include:
 - a. A *claim* in which you answer the question with a statement.
 - b. *Evidence*, which supports the claim
 - c. *Reasoning*, which connects your evidence to your claim.

2. There are several species of large cats in Africa. They include Lions, Cheetahs, Leopards, Servals, and Caracals. They are all carnivores that hunt for their food, but they have different ways of obtaining their prey. Lions hunt in groups (a pride), cheetahs use their superior speed (70mph!), Leopards are very stealthy and spend lots of time in the trees above their prey, Servals and Caracals both are able to catch smaller prey like rodents, and have an impressive jumping ability which allows them to snatch birds out of mid-air.
 - A. Give an explanation answering the question “How are there 5 cat species in Africa, with different hunting strategies, who all share a common ancestor in the past?”

Use the concepts we have been talking about with finches to make assumptions and guesses about this situation. We obviously have not spent any time talking about this scenario but you should be able to make some connections between these two situations. I know these cats have adaptations which allow them to get foods in certain ways; I want you to tell me how these adaptations came about. I do not expect you know the specific reasons for these adaptations to occur, you should know the general method by which these adaptations occur.

- B. Choose any one of the five cats listed above and try to give specific reasons for why they have their specific hunting strategy. (Obviously you can't know for sure your inference is correct, but I'm asking you to give a *possible* explanation for the hunting style of one of the cats.)