Name_____KEY_____ Period_____ Date_____

Evolution and Natural Selection Review Packet

First: Define evolution and natural selection

__NATURAL SELECTION_____ is the process in which changes in an environment pressure a species to change.

__EVOLUTION_____ is the process in which traits caused by mutations slowly accumulate in a population over time.

I. Evolution Practice Worksheet Directions: Circle the correct answer in questions 1 – 17.

1. The process in which the environment puts pressure on a species to change: (evolution or natural selection)
2. Slow change in a species over time describes Darwin's theory of (evolution or natural selection).
3. According to Darwin, evolution occurs as a result of (natural selection or artificial selection).
4. The (individual or population) evolves.
5. Giant tortoises are only found on the Galapagos Islands. Each island had a different species of tortoises. This would suggest that all tortoises evolved from (a common ancestor or different ancestors).
6. The source of variation in a species is (mutations or lack of change) in DNA.
7. Mutations can be harmful or helpful. A helpful mutation will (increase or decrease) the fitness of an individual in its environment.
8. According to the theory of natural selection, a good mutation will probably (increase or decrease) in frequency in a population.
9. Members of (different or the same) species share the same group of alleles called a (gene pool or gene frequency).
10. Fossils in the lowest sedimentary rock layers are (older or younger) than fossils found in higher layers of rock.
11. The whale's flipper and the arms of a human are examples of (vestigial organs or homologous structures) because they have the same bones but use them for different functions.
12. The hip bones in whales and snakes serve no function, so they are examples of (vestigial organs or homologous structures).
13. (Vestigial organs or Homologous structures) show that two species evolved from a common ancestor.
14. All vertebrate embryos are (alike or not alike) in that they all have similar patterns of development.
15. An ancestral flock of finches flew from South America to the Galapagos Islands. They spread out and adapted to all the different environments on the islands. This is an example of (evolution or artificial selection) due to (behavioral or geographic) isolation.
16. Mountains, volcanic eruptions, and large bodies of water are examples of (geographic or reproductive) barriers that can isolate populations.
17. Two groups that are geographically isolated for long periods of time tend to become reproductively isolated due to (choice or mutations).

18. Number (1 to 5) the following sentences in the order in which they occur during speciation.

__2__ As food sources become scarce the population of mice migrates around the sides of a mountain.
__4__ Over thousands of years, mutations slowly start to accumulate in the separated mice populations.
__1__ Gene sharing in a mice population is not interrupted because they have the same habitat gene pool.
__5__ The mice population becomes reproductively isolated and two new species evolve.
__3__ Members of the mice population become geographically isolated on either side of the mountain and members no longer share a common gene pool.