

Review Pak #6

“Can I Build a Dinosaur?”

Multiple Choice Questions

1. In any species, individuals of the same species have slight differences, called
 - (A) traits.
 - (B) variations.
 - (C) adaptations.
 - (D) genes.

2. Some variations make certain individuals better suited to their environment. These advantageous traits are called
 - (A) variations.
 - (B) traits.
 - (C) adaptations.
 - (D) genes.

3. An adaptation that involves physical features such as camouflage coloring is a
 - (A) structural adaptation.
 - (B) behavioral adaptation.
 - (C) physiological adaptation.

4. Adaptations that involve the way organisms act such as hunting at night are called
- (A) structural adaptations.
 - (B) behavioral adaptations.
 - (C) physiological adaptations.
5. An adaptation that involves internal body systems that affect organisms' biochemistry is called a
- (A) structural adaptation..
 - (B) behavioral adaptation.
 - (C) physiological adaptation.
6. Which statements are examples of physiological adaptations in a species? Select **THREE** correct answers.
- (A) Water storage in camels
 - (B) Migratory behavior in birds
 - (C) Stomata in plants
 - (D) Venom production in snakes
 - (E) Hollow bones in birds
7. Which statements are examples of behavioral adaptations? Select **THREE** correct answers.
- (A) Birds migrating south for the winter
 - (B) Thick fur in Arctic animals
 - (C) Bears hibernating during the winter
 - (D) Fish developing gills to breathe underwater
 - (E) Plants releasing chemical compounds to attract insects or repel predators

8. Which statements are examples of structural adaptations? Select THREE correct answers.

- (A) Echolocation in bats
- (B) Spines on Cacti
- (C) Thick fur in Arctic animals
- (D) Hollow bones in birds
- (E) Fish schooling behavior

Questions 9 and 10 refer to the following information.

Your teacher discusses how the giraffes that can reach leaves located highest in the trees are the ones to survive and reproduce. The offspring of these giraffes are more likely to have longer necks giving them the ability to successfully reach the top leaves too.

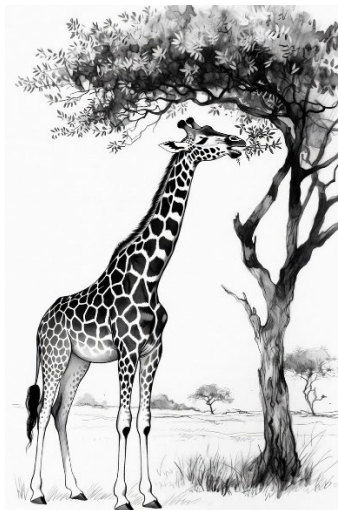


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Your teacher asks what type of adaptation the longer neck is for the giraffes. Two of your classmates disagree on the type of adaptation.

Skylar: The adaptation is behavioral because the giraffes are learning to reach for the top leaves to eat and survive.

Cooper: The adaptation is structural because only the giraffes that can reach those top leaves are able to survive.

9. Which student identified the correct adaptation for the scenario?
- (A) Skylar
 - (B) Cooper
 - (C) Neither are correct
 - (D) Both are correct
10. What is the correct explanation to support the answer?
- (A) Giraffes learn to extend and grow their necks.
 - (B) Only the giraffes that are structurally able to reach the high leaves, survive and reproduce, and pass that trait on to their offspring.
 - (C) It is physiological because the giraffes are adapting to the need to reach the highest leaves.
 - (D) The giraffes are learning to use their long necks to grow them even longer to reach the leaves.
11. The idea that individuals that are better adapted are more likely to survive, reproduce, and pass on their traits to their offspring is called
- (A) artificial selection.
 - (B) adaptation.
 - (C) evolution.
 - (D) natural selection.

12. Why is the example of the peppered moth in London significant in the study of natural selection?
- (A) It shows how human intervention can change a species over time.
 - (B) It provides evidence of how environmental changes can lead to changes in traits within a population.
 - (C) It demonstrates the effects of artificial selection in an urban environment.
 - (D) It highlights how genetic engineering can lead to new traits in species.
13. A population of rabbits in a forest is experiencing changes due to various factors. Select the statements that correctly describe factors influencing natural selection in this rabbit population. Select THREE that apply.
- (A) farmers breeding rabbits to be larger for meat production
 - (B) predators such as foxes becoming more prevalent in the area
 - (C) rabbits being moved to a controlled environment for a breeding program
 - (D) the availability of food sources such as berries and grasses
 - (E) a new disease spreading among the rabbit population
 - (F) rabbits being exposed to antibiotics to prevent illness
14. Why are dog breeds an example of artificial selection?
- (A) They've evolved naturally over millions of years.
 - (B) They adapt to their environment without human intervention.
 - (C) Humans have selectively bred them for specific traits.
 - (D) They exhibit traits that are beneficial for their survival in the wild.

15. Genetic engineering is like artificial selection except that genetic engineering
- (A) is a natural process.
 - (B) always produces negative results.
 - (C) uses laboratory techniques to manipulate the organism's genes.
 - (D) always takes longer than artificial selection.

Free Response Questions

1. Compare natural selection and artificial selection. Give one way they are alike and one way they are different.
2. Salmon migrate earlier than before because the water temperatures have become too warm for them to successfully spawn. Identify the adaptation type and explain how this ensures their success for future generations.

3. Explain how antibiotic resistance in bacteria is an example of natural selection.