

1. What is the difference between gradualism and punctuated equilibrium?
2. The total number of genes present in a population is the _____.
3. Urey and Miller subjected water, ammonia, methane, and hydrogen to heating and cooling cycles and jolts of electricity in an attempt to _____.
 - A. determine how the dinosaurs became extinct
 - B. form complex organic compounds
 - C. determine the age of microfossils
 - D. find out how ozone forms in the atmosphere
4. What is the term used to describe a trait that helps an organism survive in its environment?
5. Broccoli, cabbage and cauliflower all descend from the same wild mustard seed. Is this a result of natural or artificial selection?
6. Both beetle and an eagle have wings. Is this an example of a homologous structure or analogous structure?
7. Which of the following would have a higher biological fitness?
 - A. A large strong grizzly bear that wandered out of his natural habitat and into a desert.
 - B. A mouse small enough to fit in cracks, hide from predators and obtain food.
 - C. A strong male hippo, able to outcompete his competitors, but who is unable to have children.
 - D. A large, strong bird with a mutation that has made his beak so large she has difficulty catching and eating the smaller insects.
8. Explain how genetic drift affects populations.
9. Squirrels with greyish-brown coats tend to blend in with their environments more than very dark coated squirrels, or very light colored squirrels. What type of selection is this?
10. Tall oak trees are better able to compete for sunlight in crowded forests. Short and medium sized oak trees are at a disadvantage. What type of selection appears to have made oak trees grow tall?
11. How does natural selection compare to artificial selection?
12. Explain how antibiotics are influencing the evolution of microbes.
13. Why is a small gene pool considered to be harmful to a population?
14. What type of selection splits a population into 2 groups, removing the average traits, and selecting for 2 extremes?
15. What is the human tailbone an example of?
16. List 3 examples of evidence for evolution.
17. The embryological evidence shown to the right is used to support the principle of:
 - A. Descent through modification
 - B. Artificial selection
 - C. Independent assortment
 - D. Common ancestry
18. What are these structures called? How do they provide evidence for evolution?
19. Flying squirrels and Sugar gliders live in similar environments, thousands of miles apart. They have developed similar features. This is _____ evolution
20. What is one example of adaptive radiation?
21. The primitive Earth atmosphere is hypothesized to have consisted mostly of
 - A. oxygen, nitrogen, and helium
 - B. hydrogen, methane, ammonia, and water vapor
 - C. amino acids, ATP, carbohydrates, and oxygen
 - D. none of these

22. Which event contributed most directly to the evidence of aerobic organisms?
- A. an increase in the concentration of methane in the ancient atmosphere
 - B. a decrease in the sun's light intensity
 - C. the presence of organisms able to carry on photosynthesis
 - D. an increase in the number of organisms carrying on fermentation
23. These graphs show how a drought affected the frequency of beak size in finches. What type of selection would you say this is?
24. Which combination of characteristics in a population would provide the greatest potential for evolutionary change?
- A. small population, few mutations
 - B. large population, few mutations
 - C. small population, many mutations
 - D. large population, many mutations
25. The ancient belief that nonliving materials could be transformed into living organisms was referred to as _____.