

1. _____, author of *The Origin of Species*, changed the course of scientific history in the early 1800's with his radical theories.
2. Darwin's voyage aboard the H.M.S. _____ led him to propose a revolutionary hypothesis about life.
3. On the _____, Darwin observed the characteristics of many plants and animals, such as finches and tortoises.
4. His theories centered mainly around the concepts of _____ and _____.
5. A scientific _____ is a well-supported, testable explanation of phenomena that occur in the natural world.
6. At the time Darwin presented his case, popular European beliefs included: the Earth was only a few _____ years old; and the planet and all its inhabitants were _____ and had not changed over time.
7. _____ proposed that the Earth is shaped by geological forces that took place over _____ of years.
8. _____ stressed that scientists must be able to explain past events in terms of processes that could be observed in the present day.
9. _____ observed that organisms _____ over time, and that they are _____ to their environments.
10. Darwin asked, "If Earth could change over time, then could _____ change as well?"
11. Lamarck believed that choosing to use or not use an organ could result in gain or loss of that organ over time.
12. Lamarck's hypothesis was later found to be _____.
13. Lamarck hypothesized that all organisms have an innate tendency toward _____, and that traits acquired during one's lifetime could be passed on to _____.
14. _____ influenced Darwin with his concept that organisms will produce more offspring than can survive or reproduce, and therefore the Earth can only support a limited number of individuals.
15. In 1858, _____ developed a theory of natural selection almost identical to Darwin's.
16. Because Darwin had _____ and _____ his theory more extensively, he is most well recognized for his work.
17. _____ naturally exists among organisms - for example, some trees produce larger fruit than others.
18. When humans breed domesticated plants and animals for specific characteristics, it is known as _____.
19. If there are not enough resources to support the number of individuals born, there will arise a _____.
20. Only the most _____ members of a species will survive.
21. _____ are inherited characteristics that increase the chances of survival.
22. Over time, _____ will result in changes to the inherited characteristics of a _____.
23. Traits that provide a greater fitness will be _____.
24. Natural selection can only be observed as changed in _____ over many generations.

25. Darwin's concept of _____ implies that those organisms best adapted to their environments will live the longest and have the most _____ success.
26. Darwin's concept of _____ implies that all living organisms are related.
27. Evidence of evolution can be categorized into four main groups: 1) the _____; 2) geographic _____ of living things; 3) _____ structures of living organisms; and 4) similarities in early _____.
28. A _____ is an organ with little or no function, such as the human appendix.
29. It is important to remember that evolution does not act on _____, but on _____ over time.
30. A _____ is a group of interbreeding organisms of the same _____ that live in the same geographical area.
31. Interbreeding leads to members sharing common genes, so the members are said to belong to the same _____.
32. There are two main causes of genetic variety: 1) _____, which are caused by a mistake when replicating DNA, or exposure to harmful chemicals/radiation; and 2) _____, which is the results of independent assortment of chromosomes and crossing over during meiosis.
33. Today, evolution is understood to be the change in the _____ of a particular allele in a gene pool.
34. When the relative frequency of a particular allele does not change, that population is said to be in _____.
35. Natural selection is not the only source of _____ change.
36. In small populations, individuals carrying a particular allele may have more offspring than others, simply by _____.
37. When allele frequencies change as a result of the migration of a small subgroup, it is known as the _____.
38. _____ and _____ decided to find out what it takes for no _____ to take place.
39. In order for the Hardy-Weinberg principle to be true, five conditions must be met: 1) mating must be _____; 2) the population must be _____; 3) there can be no _____; 4) there can be no _____; and 5) _____ must not take place.
40. The Hardy-Weinberg principle provides a standard against which changes can be _____.
41. The formula for Hardy-Weinberg equilibrium is: _____
42. "p" represents the relative frequency of the _____ allele.
43. "q" represents the relative frequency of the _____ allele.