

**Directed Reading B** *continued*

9. What hypothesis did Darwin develop about the Galápagos finches?

Darwin hypothesized that the island finches descended from South American finches. He proposed that the first finches on the islands were blown there from South America by a storm. His hypothesis is that the finches evolved adaptations for the various island environments over many generations.

**Match the correct description with the correct term. Write the letter in the space provided.**

Malthus's principle

10. the idea that human populations can grow faster than the food supply

a. Lyell's theory

b. selective breeding

Lyell's theory

11. the idea that Earth had formed naturally over a long period of time

c. Malthus's principle

selective breeding

12. the practice of breeding plants and animals to have desired traits

13. Why do farmers and breeders use selective breeding?

farmers and breeders can get more money by selling crops and livestock with desired traits.  
Ex. bigger tomatoes, and cuter puppies and cows with more meat on them

14. Why might selective breeding be used in horses?

Horses with a better pedigree with desired traits are selected to breed so that the next generations of horses will be stronger and faster, especially in a time without cars and tractors.

15. Why might selective breeding be used in fruit trees?

Trees that make bigger fruit faster, will be bred so that whole crops will have a higher annual yield. This makes more money for farmers and can reduce the price of fruit.

16. After reading Malthus's theory, Darwin realized that any species can

produce many **offspring**.

17. The populations of all species are limited by starvation, disease, predation,

or **competition**.

18. Darwin reasoned that survivors had traits that helped them

**survive** in their environment.

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19. Darwin believed that offspring of these survivors inherit

the **traits** that help them survive.

20. What idea of Darwin's about species was supported by Charles Lyell's book?

Darwin reasoned that if Earth were very old, then there would be enough time for organisms to slowly change.

**DARWIN'S THEORY OF NATURAL SELECTION**

21. What was the name of Darwin's famous book?

The Origin of Species

22. What theory did Darwin introduce in the book?

The theory of natural selection.

23. What is natural selection?

Natural selection is the mechanism, or process by which organisms that are better adapted to their environment survive and reproduce more successfully than less well adapted organisms do.

It is also known as "Survival of the fittest"

**Match the correct description with the correct step in natural selection. Write the letter in the space provided.**

overproduction

24. Many more offspring are produced than will survive.

a. inherited variation

b. struggle to survive

inherited variation

25. No two offspring are alike.

c. overproduction

struggle to survive

26. Many offspring will be killed before reproducing.

d. successful reproduction

successful reproduction

27. The best adapted organisms will have many offspring that survive.

28. List two things that Darwin did not know in relation to his theory.

1. Darwin did not know what the source of the variation in traits was, Now we know that it is genetic mutation.

2. Darwin did not know how organisms inherited traits, Now we know it is through replication and meiosis and fertilization.