

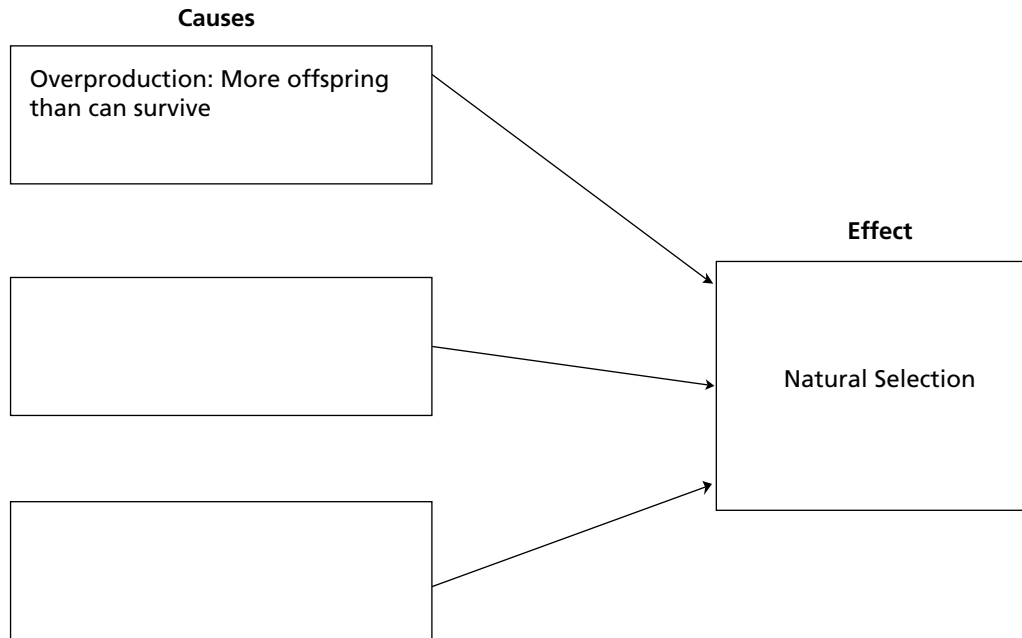
Changes Over Time ▪ *Guided Reading and Study*

Darwin's Theory

This section discusses Charles Darwin and his theories of evolution, which are based on what he saw during his trip around the world.

Use Target Reading Skills

In the graphic organizer, identify factors that cause natural selection.



Darwin's Observations

1. Is the following sentence true or false? Charles Darwin was not surprised by the variety of living things he saw on his voyage around the world. _____
2. A group of similar organisms that can mate with each other and produce fertile offspring is called a(n) _____.
3. A(n) _____ is the preserved remains or traces of an organism that lived in the past.
4. Is the following sentence true or false? Darwin observed the greatest diversity of organisms on the Galápagos Islands.

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Darwin's Theory *(continued)*

Galápagos Organisms

5. Circle the letter of each sentence that is true about Darwin's observations.
 - a. Many Galápagos organisms were similar to organisms on mainland South America.
 - b. Iguanas on the Galápagos Islands had small claws for climbing trees.
 - c. Darwin thought the ancestors of Galápagos animals and plants came from mainland South America.
 - d. All tortoises living in the Galápagos Islands looked exactly the same.
6. Darwin noticed many differences among similar _____ as he traveled from one Galápagos island to the next.

Look at the bird beaks below. Match the bird beaks with the kind of food the bird eats.

Kind of Food

Bird Beaks

_____ 7. insects

_____ 8. seeds

a.

b.



9. A trait that helps an organism survive and reproduce is a(n) _____.

Evolution

10. Circle the letter of each sentence that is true about Darwin's conclusions.
 - a. Darwin understood immediately why Galápagos organisms had many different adaptations.
 - b. Darwin thought that Galápagos organisms gradually changed over many generations.
 - c. Darwin believed that evolution had occurred on the Galápagos Islands.
 - d. Selective breeding helped Darwin understand how evolution might occur.

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11. Circle the letter of the term that means a well-tested concept that explains many observations.
- a. idea
 - b. evolution
 - c. scientific theory
 - d. hypothesis

Natural Selection

12. In his book, *The Origin of Species*, Darwin explained that evolution occurs by means of _____.
13. Is the following sentence true or false? Individuals with variations that make them better adapted to their environment will not survive.
- _____

Match the factors that affect the process of natural selection with their definitions.

- | Definitions | Factors |
|---|-------------------|
| _____ 14. Effect caused by limited food and other resources. | a. overproduction |
| _____ 15. Differences between individuals of the same species | b. competition |
| _____ 16. Effect caused by species producing more offspring than can survive. | c. variations |
17. Is the following sentence true or false? Only traits that are controlled by genes can be acted upon by natural selection.
- _____
18. Is the following sentence true or false? Darwin knew all about genes and mutations. _____

