

## Microevolution

### Read Chapter 7.1-7.2

#### Fill in the blanks

1. Darwin's theory of evolution can be divided into two major components: microevolution and macroevolution. \_\_\_\_\_ refers to small changes within a single species over time, and \_\_\_\_\_ refers to the appearance of new species over thousands or millions of years.
2. Evolution is defined as the changes in the inherited traits in a \_\_\_\_\_ not in individual organisms.
3. Individuals can \_\_\_\_\_ to changes in their environment, such as increasing red blood cell production at higher altitudes.
4. Adaptation refers to the regulation of \_\_\_\_\_ expression based on the environment.
5. Evolution involves passing on DNA to offspring. Every living thing has their own unique combinations of genes that are either beneficial or \_\_\_\_\_ depending on their environment.
6. Populations with a high amount of \_\_\_\_\_ have more combinations of traits and an increased ability for that population to survive.
7. All species over-reproduce and only a small percentage survive, this is called \_\_\_\_\_.
8. " \_\_\_\_\_ " is an expression used to describe the process of evolution by natural selection where organisms with the most beneficial traits for the environment survive and reproduce.
9. Major components of natural selection:
  - a. All individuals are born with a combination of \_\_\_\_\_ they acquired from their parents
  - b. Organisms that survive pass on their \_\_\_\_\_ to their offspring
  - c. All organisms \_\_\_\_\_ - \_\_\_\_\_
  - d. Over time, populations of organisms change because of new combinations of \_\_\_\_\_

10. Lamarck believed that organisms inherited characteristics that were \_\_\_\_\_ by their parents through their life experiences. For example, he believed giraffes have longer necks because \_\_\_\_\_.
11. An example of microevolution in bacteria involves \_\_\_\_\_ resistance.
12. Antibiotics kill most but not necessarily all bacteria in a population, making the antibiotics a \_\_\_\_\_ pressure that affects which bacteria are the “fittest”.
13. Humans can impact evolution by choosing which organisms in a species they want to reproduce, such as dogs. The existence of many variations of dog breeds is called \_\_\_\_\_ selection.
14. Food crops are also selected by humans, the following foods all came from the same ancestral species: Broccoli, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
15. A Labradoodle and a German Shepherd are (the same/ different) \_\_\_\_\_ species.
16. Guppies are a good example of microevolution that could become macroevolution over time. (This example is the microevolution video but in the macroevolution section of chapter 7 in the textbook) Name 3 major changes that happened to the guppy population that lived with the predator:
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_