



Vocabulary: Natural Selection



Vocabulary

- **Biological evolution** – change in the inherited traits of a population of organisms that occurs over many generations.
 - *Misconception alert:* Biological evolution refers to changes in populations of organisms over time, but does not imply *how* these changes have taken place. In spite of a variety of criticisms, natural selection is considered by most biologists to be the primary mechanism of evolution.
- **Camouflage** – coloring or markings that help an organism blend in with its surroundings.
- **Industrial Revolution** – period of industrialization that began in the late 18th century and continued through the 19th century.
 - The Industrial Revolution was linked to advances in technology that allowed various manufacturing processes to become mechanized.
 - The Industrial Revolution was a time of rapid population increases, widespread migration from rural areas into cities, and mass production of goods in factories.
 - Because coal was the main source of power at the time, one consequence of the Industrial Revolution was severe air pollution.
- **Lichen** – a combination of two primitive organisms, a fungus and green algae. Lichen forms a thin “crust” on rocks and tree trunks.
- **Morph** – a distinct form of a given species.
 - Different morphs of the same species may look different but can successfully reproduce. For example, a cocker spaniel can successfully mate with a poodle.
- **Natural selection** – the process by which favorable inherited traits become more common over time. Darwin proposed that natural selection was the primary mechanism of biological evolution. Natural selection assumes the following:
 - More organisms are born than can survive and reproduce.
 - Organisms compete for limited resources and survival.
 - There are variations between organisms, and these variations can be inherited.
 - Some variations make an organism more likely to survive and reproduce. Over time, favorable variations will spread throughout a population, while unfavorable variations become less frequent.
- **Peppered moth** – a common moth found in Europe, Asia, and North America.
 - The scientific name of the peppered moth is *Biston betularia*.
 - Two peppered moth morphs are shown in the *Natural Selection* Gizmo: a light gray, speckled variety called a *typica*, and a dark variety, called a *carbonaria*.

