# **Plant and Animal Adaptations Comprehension Check**

1. What is an adaptation?
2. Describe natural selection and provide an example that illustrates this concept.
3. Some adaptations (such as a dog shedding extra fur in hot weather) occur quite quickly. Others take time to develop. Provide an example of an adaptation that has taken place over a long period of time.
4. Explain how scientists believe algae adapted to become the plants we are familiar with today.
5. Provide an example of an animal adaptation used to make eating easier.
6. Explain why camouflage is considered an adaptation for survival.
7. Plants and animals often adapt when their environment changes. Many animals have the unique ability to move if their environment becomes too difficult for survival. Plants, on the other hand, do not have that ability. Give an example of a plant adaptation that helps it survive in areas with little water or ground nutrients.
8. What have many aquatic plants developed to help them survive their wet environments?
9. Many animals have adapted feet for walking, running, or other movement. Provide an example of a different adaptation that helps animals move.

1. Charles Darwin created the “Survival of the Fittest” theory. Why is this a good name for his theory given what you know about natural selection and adaptation?

# **Plant and Animal Adaptations Comprehension Check Answer Key**

1. What is an adaptation?
   1. Adaptations are features that help a living thing survive in its environment. Both plants and animals develop adaptations to ensure their survival.
2. Describe natural selection and provide an example that illustrates this concept.
   1. Natural selection is a process in nature by which organisms with traits better suited for their environment survive, reproduce, and pass those traits to new generations. One main idea with this process is that organisms that do not adapt will likely not survive environmental changes.
3. Some adaptations (such as a dog shedding extra fur in hot weather) occur quite quickly. Others take time to develop. Provide an example of an adaptation that has taken place over a long period of time.
   1. Some adaptations develop over generations. For example, many species have developed features such as legs, wings, and fins to help them move. Other species have developed teeth and jaws to help them eat. Adaptations such as lungs and gills help animals obtain oxygen. Animals’ eyes and ears help them find food and avoid danger. Humans have adapted their brains over time to learn new skills.
4. Explain how scientists believe algae adapted to become the plants we are familiar with today.
   1. Scientists believe plants originally adapted from algae. Over many generations, the algae adapted and learned to grow differently in water as well as on land. Once this happened, even more adaptations occurred. New plants and animals grew, resulting in more adaptations such as plants’ ability to grow upright, absorb water and nutrients from the soil, and use photosynthesis to gather energy from the sun.
5. Provide an example of an animal adaptation used to make eating easier.
   1. Many animals have adapted teeth or jaws to make eating easier. However, these adaptations are not all the same. For example, insects have moveable mouth parts that act like teeth and hawks have sharp, hooked beaks for piercing and ripping their prey. Although their adaptations serve the same purpose, the physical changes are different because they need to support the animals in whatever environment they are in.
6. Explain why camouflage is considered an adaptation for survival.
   1. Camouflage is considered an adaptation for survival because it allows organisms to blend into their natural surroundings. This acts as a form of protection because it makes it more difficult for predators to find them.
7. Plants and animals often adapt when their environment changes. Many animals have the unique ability to move if their environment becomes too difficult for survival. Plants, on the other hand, do not have that ability. Give an example of a plant adaptation that helps it survive in areas with little water or ground nutrients.
   1. Some plants, like cacti, survive in very dry areas with little water or nutrients. Tropical rain forest plants have adapted to absorb many nutrients when they are available. Cacti have large roots that spread over large areas. In addition, they store water in their stems instead of their leaves. This allows them to store more water and survive even when it is dry for extended periods of time. Finally, cold-climate tundra plants have adapted to be able to grow close to the ground in groups to better their chances of survival against strong winds.
8. What have many aquatic plants developed to help them survive their wet environments?
   1. Many aquatic plants have developed air systems within their stems and leaves. This adaptation allows them to have access to air even though they are mostly or fully submerged in water.
9. Many animals have adapted feet for walking, running, or other movement. Provide an example of a different adaptation that helps animals move.
   1. Earthworms have adapted to move without legs and feet. They change the length of their body parts in order to crawl. Bats have adapted by developing wings for flying.
10. Charles Darwin created the “Survival of the Fittest” theory. Why is this a good name for his theory given what you know about natural selection and adaptation?
    1. Survival of the Fittest is a good name for Charles Darwin’s theory because it references the idea of Natural Selection. If plants and animals are not able to adapt to environmental changes around them, they are not fit to survive and will likely die. On the other hand, organisms that do adapt become fit for the environment and have a higher likelihood of survival.