

Lesson 4. Plant Adaptations

There are five vital components of a successful plant: air, light, warmth, water, and nutrients. Without one of these components, it is unlikely for a plant to grow successfully. Plants grown in the dark will grow tall searching for light, but will eventually weaken. Losing access to water will cause a plant's stem and leaves to dry up. If the ground is cold, a seed will be unable to germinate and grow into a healthy plant. Because of these requirements, some plant species have adapted to survive in harsh environments. Some plants will go dormant during the winter months and shed their leaves. This is because they are unable to take in ice in the same way they would take in water. In areas such as the Arctic, where temperatures are cold year-round, plants have adapted to grow closer to the ground or in shapes that help them to shed the heavy snow. Plants in desert habitats have adapted to cope with the lack of water. The best example of this phenomenon is the cactus. The cactus adapted to have thick skin and large stems that can store water while reflecting the heat.

Respond to Reading

Directions

Respond to the questions below. Underline and identify specific lines from the passage that support your claim.

The pine tree is an example of a tree that can survive cold temperatures. Which traits of this tree help it survive harsh snowy conditions?

Plants have adapted to survive different conditions, but do they still require the same components to survive?