Leaves

As seedlings push through the soil, they already have tiny leaves, hungry to meet the rays of the sun. These tiny leaves will begin making food for the new plants, providing energy to grow into adult plants.

Leaves are commonly known for their role as natural solar panels, soaking up the sun's energy to produce food through photosynthesis. But plant leaves serve other functions, as well.

Similar to lungs, plant leaves exchange gases. The carbon dioxide that plants need for photosynthesis enters the leaf, and oxygen created by photosynthesis exits the leaf.

This gas exchange happens through tiny pores called stomata, which open and close, depending on the conditions.

Stomata also regulate the amount of water inside a plant. When they are open, they help the plant pull water up from the roots.

Excess water in the plant escapes from the stomata as water vapor.

In rainforest biomes, the plant life releases so much water vapor into the atmosphere that it condenses and falls back to the ground as rain.

Leaves may look simple, but, when you look closer, they are each packed with vascular tissue that moves water, nutrients and glucose.

Leaves rely on xylem tissue to transport water up from the roots to chloroplasts in the cells.

Phloem tissue transports newly-made glucose from the cells to other parts of the plant for use or storage.

Some plants, like aloe, store glucose and water in their leaves.

Many desert plants protect their precious food and water storage from hungry and thirsty consumers with needles.

Plants living under the forest canopy have leaves adapted for living in low light. Their broad leaves stretch out to catch streams of light peeking through the treetops.

This pitcher plant has adapted to low-nutrient soil by using its leaves to lure insects with sweet nectar.

For some plants, losing all their leaves for part of the year is the best way to conserve water during the cold of winter.

Leaves

Every type of leaf has a design that suits the plant for living in its environment successfully.