

WHY DO LEAVES CHANGE COLOR IN THE FALL?

Before we answer that question, let's take a closer look at what leaves 'do'. Did you know that they are nature's food factories? They play an important role in 'feeding' plants and trees. The process is called **photosynthesis** -- which means "putting together with light." Photosynthesis is essential to all living things that need oxygen to survive! Here's basically how that works.

Plants and trees take **water** from the ground up through their roots. They also capture a gas -- **carbon dioxide**, that is exhaled by humans -- from the air. With the help of the sun, plants turn these two ingredients into oxygen and glucose; we use the oxygen to breathe and the plants use the **glucose** (a kind of sugar) for food and energy to grow. In fact, in the summer, the plants generate more glucose than they need, and store some for the coming months.

During the summer months, the leaves are green...thanks to a chemical called **chlorophyll**. As autumn arrives, the days get shorter and the nights get cooler. These changes 'tell' the trees that it is time to get ready for winter...when there isn't enough light or water for photosynthesis to occur.

When trees and plants stop making "food" in the fall, the chlorophyll goes away and the plants live off the energy/fuel they stored during the summer. When the green disappears, the yellow and red and orange colors that have been there all along can be seen. In many kinds of trees, the food -- or glucose -- gets trapped in the leaves when photosynthe-

sis stops. The autumn sunlight and chilly evenings use the glucose to change the leaves into their bright colors.

Experts say that one of the best places in the world to see brilliant fall colors on display is the Eastern United States. That is because of the climate there, and the wide variety of deciduous trees (those that lose their leaves). The brightest colors occur when late summer is dry, and autumn brings bright sunny days and nights in the 40's. If the fall is cloudy and warm, the colors in the leaves are more drab. ♡



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