



LEVELED BOOK • J

# Why Do Leaves Change Color?

**MULTI**  
**level**  
**G•J•M**

Written by Kira Freed

[www.readinga-z.com](http://www.readinga-z.com)

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## Table of Contents

So Many Colors . . . . .	4
Making Food . . . . .	6
Summer . . . . .	8
Fall . . . . .	10
Winter . . . . .	13
Spring . . . . .	14
Glossary . . . . .	16



A fall forest has many colors.

## So Many Colors

Why are the **leaves** on trees different colors? What makes them **change** color?



deciduous tree in summer



evergreen tree in summer



deciduous tree in winter



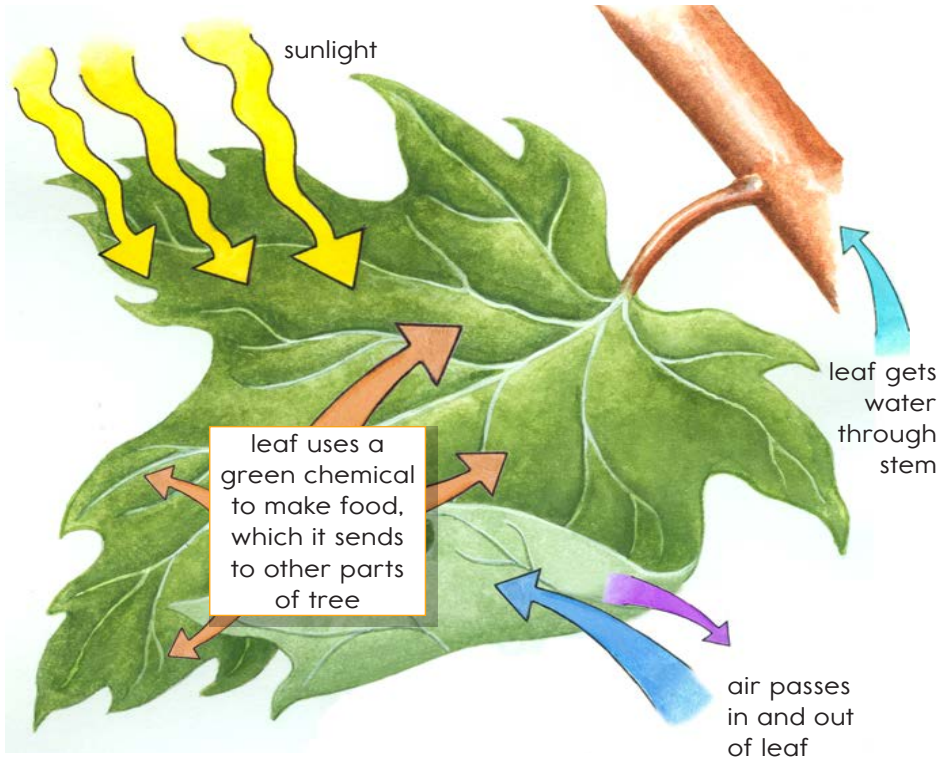
evergreen tree in winter



## Two Types of Trees

Not all trees lose their leaves in fall. Deciduous (dee-SIJ-oo-us) trees lose their leaves once each year. Evergreen trees lose and grow their leaves throughout the year. This book is about deciduous trees.

## Photosynthesis

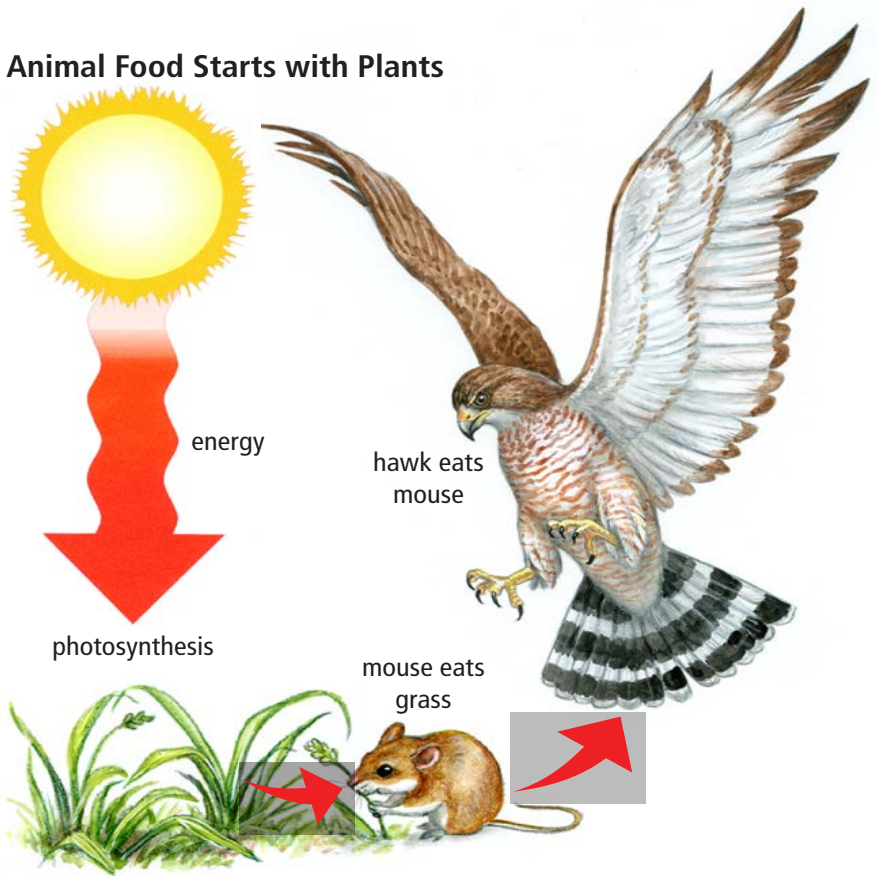


## Making Food

Leaves use sunlight, water, and air to make food for the tree.

This way of making food is called **photosynthesis**. A **chemical** that helps leaves make food also makes them green.

## Animal Food Starts with Plants



Almost all life on Earth depends on photosynthesis.

Photosynthesis is important to animals as well as plants. Some animals eat plants. Other animals eat those animals. Without photosynthesis, neither kind of animal would have food.





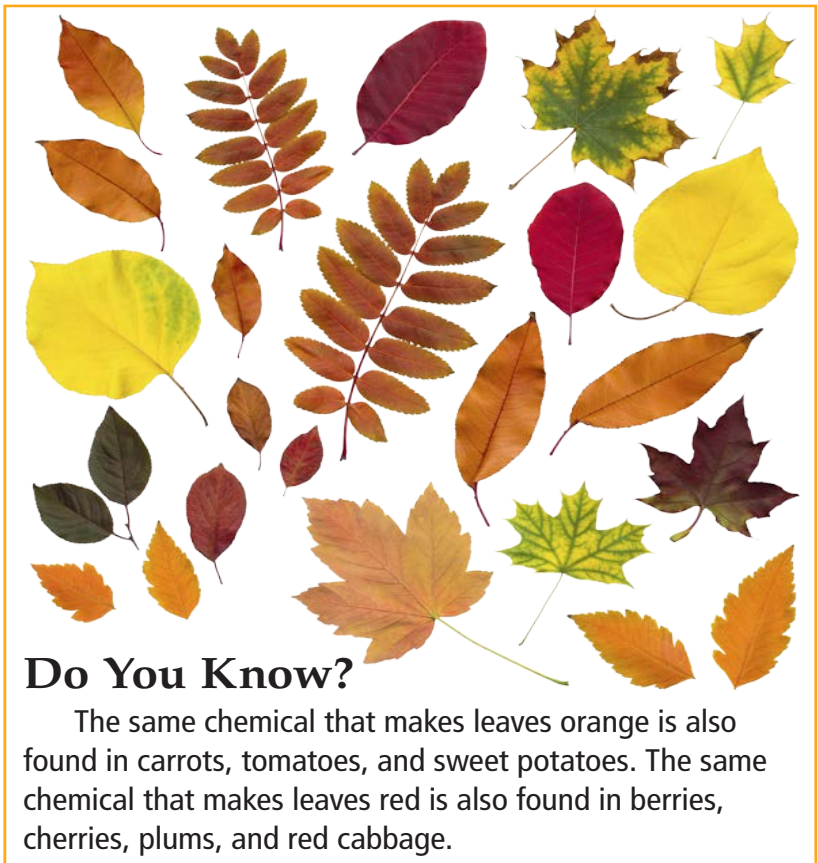
It may not look like it, but this tree is working hard.

## Summer

Summer is playtime. For the leaves of many trees, however, it's work, work, work! The Sun is shining. The leaves are making food for the trees. The trees **store** any extra food deep inside. The stored food will help them get through winter.



Leaves are green in summer because they are making food. Leaves also have orange, yellow, or brown colors inside them. During summer, those other colors are hidden by the green color.



### **Do You Know?**

The same chemical that makes leaves orange is also found in carrots, tomatoes, and sweet potatoes. The same chemical that makes leaves red is also found in berries, cherries, plums, and red cabbage.



Shorter, cloudier days mean less food for trees in fall.

## Fall

Many places get colder in **fall**. The days get shorter, and the nights get longer. Trees get less sunlight, so photosynthesis slows down.





Other colors are hidden beneath the green.

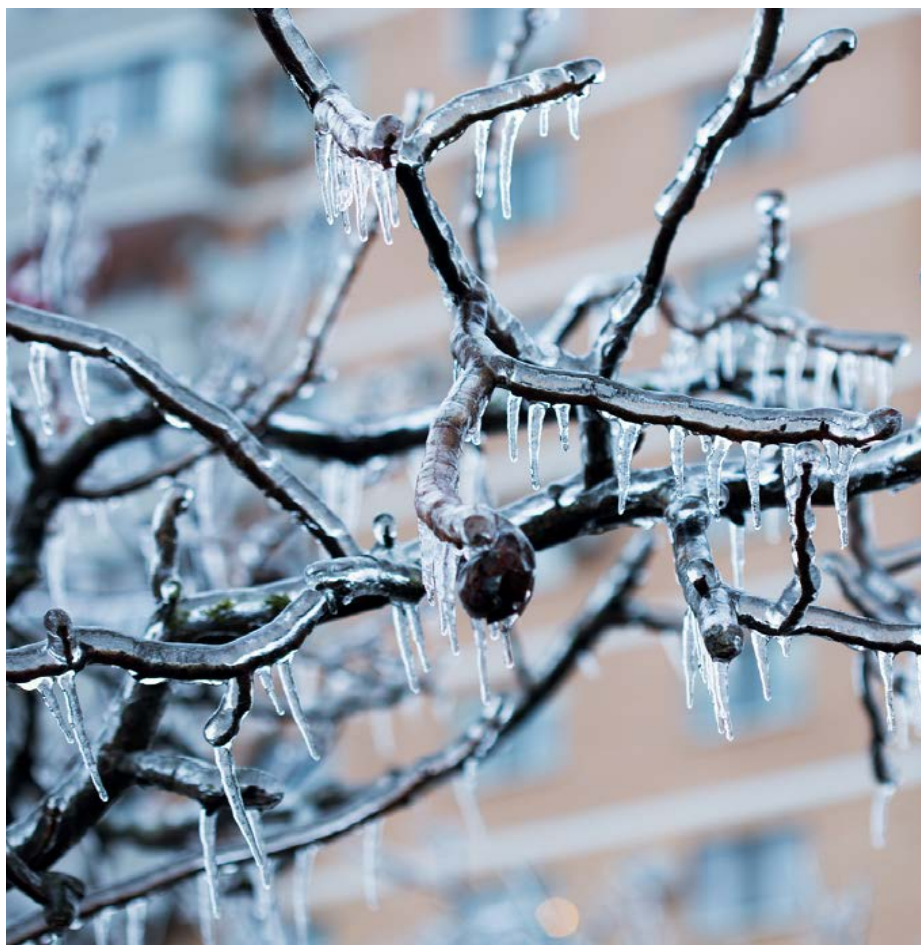
Over time, leaves stop making the green chemical, so they lose their green color. When that happens, the hidden orange, yellow, and brown colors start to show. Leaves also start making a red color at this time.



An early freeze can harm a tree.

Once it gets cold enough to freeze at night, the trees drop their leaves. They do this to keep themselves safe. If the leaves freeze while still on the trees, the trees can be hurt.





Trees must live on saved food during winter.

## Winter

Trees that drop their leaves are bare in winter. They use the stored food to get through the cold days and colder nights.

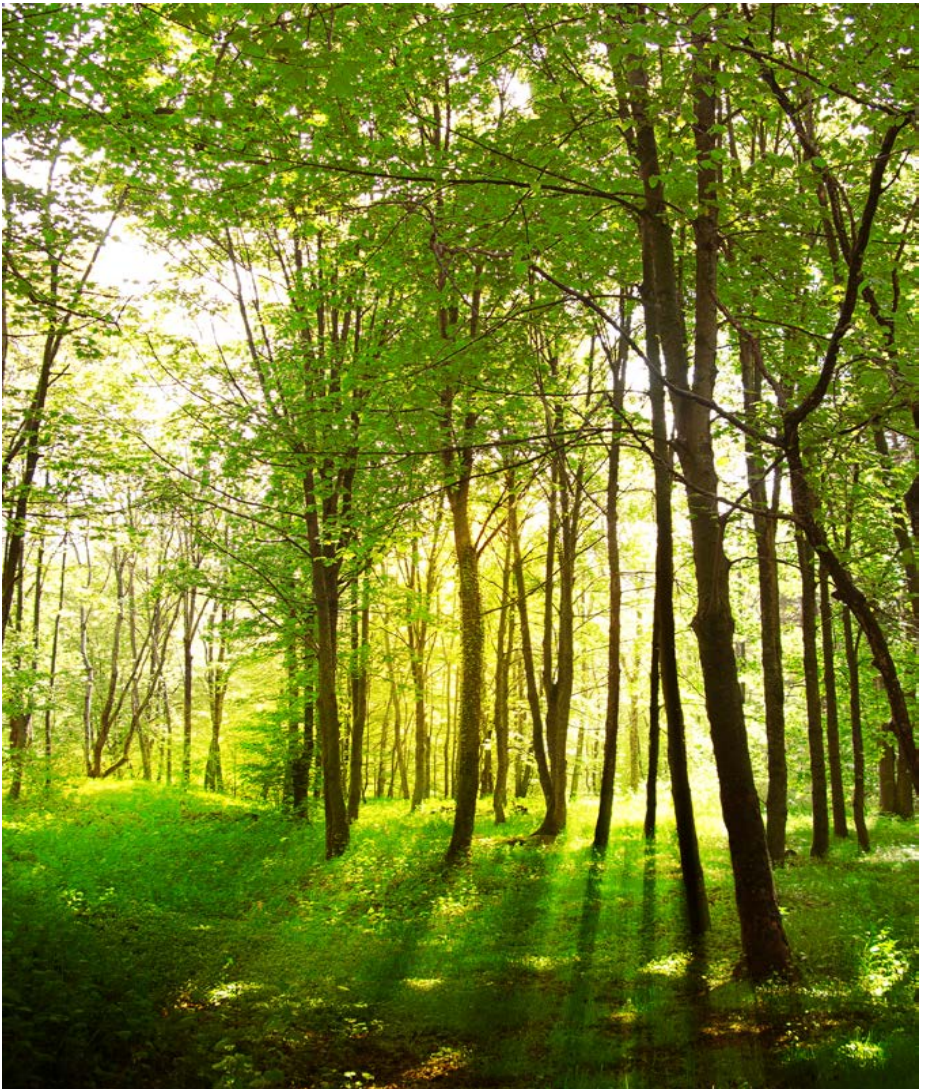


New leaves take the place of the old ones in spring.

## **Spring**

Spring comes before long. Ice and snow melt, and the rains come. The Sun shines, and tiny leaves grow from branches.





Spring sunshine turns a forest green again.

Once again, the leaves use sunlight, water, and air to make food. The cycle begins again.

## Glossary

<b>change</b> (v.)	to become different (p. 4)
<b>chemical</b> (n.)	something made by a chemical process (p. 6)
<b>fall</b> (n.)	the season between summer and winter, when temperatures get cooler and days get shorter (p. 10)
<b>leaves</b> (n.)	the parts of plants that grow on stems or branches and use light to make food for the plants (p. 4)
<b>photosynthesis</b> (n.)	the process by which chlorophyll in plant cells transforms sunlight, water, air, and nutrients into food (p. 6)
<b>store</b> (v.)	to keep or collect something to use later (p. 8)

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