



**Why do leaves  
change colour  
in Autumn?**

# Colours in Leaves

Leaves contain millions of coloured materials.

Chlorophyll - green  
Xanthophyll - yellow  
Carotene - orange



# Busy Green Leaves

Plants make their food using sunlight, water, carbon dioxide and something called chlorophyll.

Chlorophyll gives leaves their green colour.



# Closed for Winter

Winter has short days, so many plants stop producing food during autumn. The chlorophyll disappears and we can see the yellow and orange colours in the leaves.



# Where did the colours come from?

The orange and yellow materials were always in the leaves, but the green chlorophyll was covering them up.



# Red Leaves

In some trees food, such as glucose, becomes trapped in the leaves after photosynthesis stops. Sunlight and the cold autumn nights turn the glucose, and the leaves, red.



# Brown Leaves

Many trees send waste materials into their leaves during autumn. The leaves also begin to die. This turns the leaves brown.

