



Autumn - What happens to leaves in Autumn?

Fact

- In autumn as the days get shorter and colder trees start to prepare for winter. They put a little plug in the leaf stem that joins the leaf to the branch which stops the water and nutrients getting to the leaf and the leaf turns from green to orange or brown.
- The block in the leaf stem also stops the tree from supporting the leaf's weight. When this happens the leaf drops off or gets blown away in the wind.
- Leaves are green because of chlorophyll. Chlorophyll is a strong chemical that overrides any other colours that may be in the leaf.
- Chlorophyll also helps with photosynthesis (which is the process the tree then uses to make food).
- Without photosynthesis the leaf can't make chlorophyll, so the green colour fades, revealing other colours that were in the leaf all along like orange and yellow.
- When leaves turn brown, it's simply the waste left over after the chlorophyll is gone.

Do you know

- Trees and plants that lose their leaves in autumn are called deciduous. Those that don't are called evergreen. Evergreen trees do lose their leaves continually, but never all at once, so it's like they're green all year round.
- A green banana has chlorophyll, but as the banana ripens, the chlorophyll breaks down and the colour yellow can show through.
- Chlorophyll is green. The other pigments found in leaves have different names yellow is xanthophyll (zan-thow-fill), orange is carotene (ca-row-teen) and red is anthocyanin (an-thow-sigh-an-in)

Experiments you can do

Have a look at the trees around where you live. Which ones are deciduous, and which ones are evergreen? Think about which season it is too. Will that make a difference to whether a tree looks evergreen?

The best time to tell whether a tree is deciduous or evergreen is in winter when all the leaves on a deciduous tree are gone.

Other Investigations

Collect some fallen autumn leaves from a deciduous tree and compare them to the leaves of an evergreen. Compare the feeling, smell, flexibility (whether you can bend them) and look at things like the veins. What are the differences?

Squeeze both really hard between your fingers or crush them with your shoe on concrete – does any water come out of either of them?

Jokes

How does an Elephant get out of a tree? Sits on a leaf and waits till Autumn!
From William C.