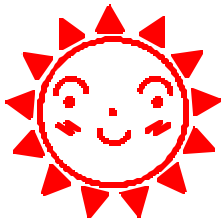
Light and Plants

Plants use light to photosynthesize. Name two places that light can come from:

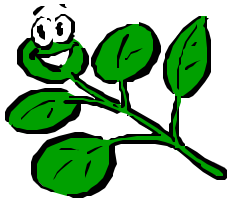
1) _____ 2) _____

Photosynthesis is the process by which plants capture carbon dioxide (CO_2, a gas) from the air and turn it into SUGARS (food). This process is powered by energy from light.

The sugars made by photosynthesis are used by most living things (including plants and animals that eat plants) for energy.



Photosynthetically Active Radiation (PAR) is a combination of red light and blue light. Leaves absorb these wavelengths and reflect the others. Photons are the actual little particles of light energy that the leaf absorbs.



Pigments in the leaf capture the light energy.
There are two main kinds of photosynthetic pigments:
Chlorophylls – green pigments
Carotenoids – orange and yellow

For these two reasons leaves usually look green!

Why is a banana yellow? _____

Why is a raven black? _____

Why are leaves green? _____

In the autumn (up north, in temperate places), before the leaves fall from the trees, the chlorophylls break down and the trees recycle those compounds. At that time, the other colorful pigments (carotenoids) are exposed, and leaves turn yellow, red, orange, and brown.

In subtropical south Florida we do not really have "fall leaves", but in the winter dry season, many of our trees do become leafless for a short while.