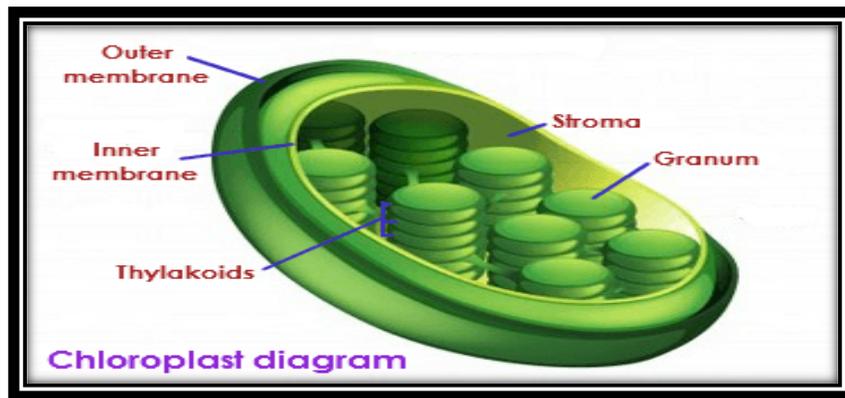


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## Why grass is Green in colour?

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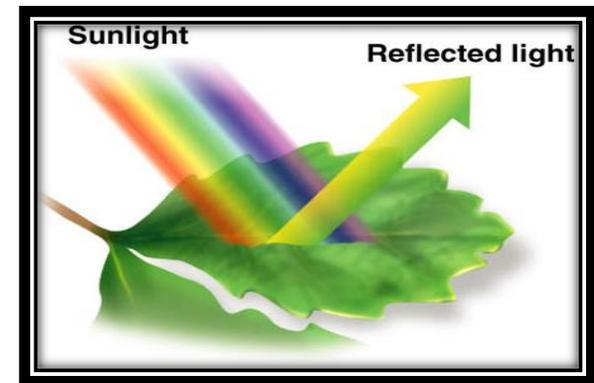
Grass contains a chemical called **CHLOROPHYLL**. **CHLOROPHYLL** is a **green pigment** (a substance whose presence in plant or animal tissues produces a characteristic colour) that is found in all green plants. **CHLOROPHYLL** is found in plant cells called **CHLOROPLASTS**.



**CHLOROPHYLL** converts light energy from the sun into sugars that can be used by plants a grass. **CHLOROPHYLL** absorbs light most strongly in the blue and red portion of the electromagnetic spectrum.

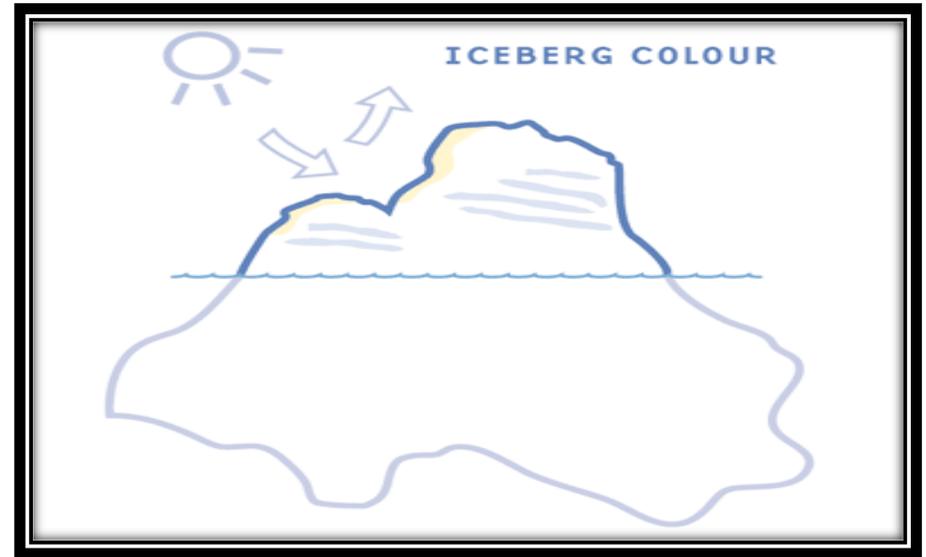
However, **CHLOROPHYLL** is a poor absorber of the green portion of the spectrum. **CHLOROPHYLL** reflects green light which is why grass appears green.

The above process is known as **PHOTOSYNTHESIS**.



# Why the colour of ice appears to be white in colour?

Visible light is made up of many different frequencies of light. Our eyes detect different frequencies as different colours. Ice is not transparent; it's actually translucent. This means that the light doesn't pass right through the material in a direct path - the material's particles change the light's direction.



This happens because light particles (called **photons**) interact with the molecules of ice. The result is that the light photon's path is altered and it exits the ice in a different direction than it entered the ice.

Snow is a whole bunch of individual ice crystals arranged together. When a light photon enters a layer of snow, it goes through an ice crystal on the top, which changes its direction slightly and sends it on to a new ice crystal, which does the same thing. Basically, all the crystals bounce the light all around so that it comes right back out of the snow pile. It does the same thing to all the different light frequencies, so all colors of light are bounced back out. The "color" of all the frequencies in the visible spectrum combined in equal measure is **white**.



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