PLANT PROCESSES

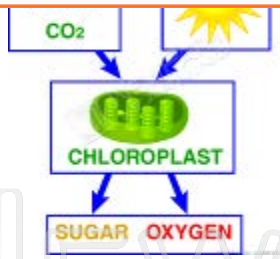
Photosynthesis

In order for an organism to be alive, it needs energy. The energy is needed to complete certain functions that keep it alive. The meals that we eat daily supply us with energy for our cells, and it takes energy to create those meals.

Organisms like plants and algae obtain energy in another way. They use light from the sun to produce energy in a process known as photosynthesis.

Photosynthesis is a process powered by sunlight that uses carbon dioxide and water to produce oxygen and food.

The of
pho o
proc



First Stage of Photosynthesis: The process begins in the leaves or other green parts of a plant. Energy is caught by a structure within a plant cell called the chloroplast.

It is the chloroplasts that give plants their famous green color. This color comes from the pigment, chemicals that absorb light, inside of the chloroplast. The pigment within the chloroplast is called **chlorophyll**. A chloroplast may also contain yellow and orange pigment, but they are usually hidden by the green color of chlorophyll. These other colors can be seen in the fall season.

Lesson Checkpoint:

What part of the plant gives it the green color and also

Sec he
chlo sis.
In t

Wat in
the
tran

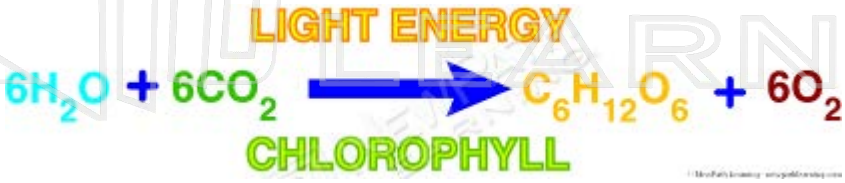
Carb trol
whe
<im
http://www.vcbio.science.ru.nl/public/Final-Images/PL_Thumb_jpg/PL_Thumbs251-300/PL0275_Thumb.jpg>

The two materials enter the chloroplast once they enter the cell.

Lesson Checkpoint:

How do the stomata and roots assist during photosynthesis?

The Chemistry of Photosynthesis: The process requires six molecules of water (H_2O) and six molecules of carbon dioxide (CO_2). These molecules undergo chemical changes and oxygen (O_2) and sugars like glucose ($C_6H_{12}O_6$) are produced. The oxygen is let go through the stomata and the sugars are used to power cell functions. The process of photosynthesis can be shown in a chemical equation.



Sources of Energy

All o urce.
We y
com en
in p
ene
orga
food

PREVIEW

Please Sign In or Sign Up to download the printable version of this worksheet

Pla

Whe hat
is a
wea
envi

Tropism is a plant's growth response to a particular stimulus. Have you ever experimented with a plant by having it contained in a box that does not allow sunlight except for a small hole on one side of the box. You will have noticed that the plant grows towards that hole in order to receive more sunlight.

This is an example of a tropism. There are three important types of stimuli that plants will respond to. They are gravity, touch, and light.

Gravity: A plants responds to gravity by growing the roots down into the ground or the stems into the sky.

Touch: A Venus fly trap will spring closed if an insect triggers a small hair that detects sensitive movements.

Ligl ne
face rds
the

Plan
The e
plan
and

The
diffe
fruit and the shedding of leaves.