

# THE IMPORTANCE OF PHOTOSYNTHESIS

What is photosynthesis? Why does it matter? Could we live without it? In this project you will learn about the plant process of photosynthesis and about its importance to the earth and all living creatures.

Imagine this scenario:

The President of the United States has become very concerned about global warming. He has tried and tried to pass legislation to limit the consumption of natural resources, but such legislation has not yet proven to be effective. He is now considering taking much more drastic measures to decrease the various threats of global warming, including increased rates of skin cancer, melting ice caps, the rise in sea level, and overall change in global climate.

With the help of his special environmental advising committee, the President has decided to release a chemical into the atmosphere that will wrap around the earth and will block up to 80% of the sunlight and keep it from entering the earth's atmosphere. The committee thinks this will be a great way to decrease the harmful effects of global warming and will save the planet.

On behalf of the Plant Lovers of America (a very large non-profit lobbying group) you have been chosen to write a letter that will inform the President about photosynthesis and the importance of sunlight to life on earth and will persuade him to consider other options and not release the chemical into the atmosphere.

## TASK

To complete your task, you will explore several websites that provide information on photosynthesis. You will need to take notes as you are researching. Pay special attention to what photosynthesis is and why we need it.

Then you will write a letter of at least 2 paragraphs (remember a paragraph is 5-7 sentences) using what you have learned to persuade the President not to release the sun-blocking chemical into the atmosphere. You need to be able to fully explain to him what photosynthesis is and why it is so important.

## PROCESS

Visit these websites to gain an understanding of what photosynthesis is and why we need it. Take your notes in a Word document. I want your notes to be in your own words, so do not just copy and paste.

Go here to do a fun, animated activity that will help you better understand the inputs and outputs of the photosynthetic process and will show you how the important outputs are formed (to reach this animation click on the Illuminating Photosynthesis link on the right hand part of the page):

<http://www.pbs.org/wgbh/nova/methuselah/photosynthesis.html>

Go here for a good, simple, and somewhat humorous introduction to photosynthesis:

<http://www.ftexploring.com/photosyn/photosynth.html>

Go here to find out about the energy flow in ecosystems and the role of photosynthesis in this energy cycle:

<http://www.ftexploring.com/me/me2.html>

Go here to learn a little bit more about the mechanism of photosynthesis (be paying attention to what the inputs and outputs are in the process):

<http://www.ftexploring.com/me/photosyn1.html>

Go here to learn more about where and how photosynthesis takes place:

<http://www.ftexploring.com/photosyn/chloroplast.html>

Go to this site to help solidify your understanding of the inputs and outputs of the photosynthetic process:

<http://www.sambal.co.uk/photosynthesis.html>

Finally, go here to receive some thorough, concise information on photosynthesis (read Parts 1 and 2 only):

[http://encarta.msn.com/encyclopedia\\_761572911/Photosynthesis.html](http://encarta.msn.com/encyclopedia_761572911/Photosynthesis.html)

Go to this site to see some common uses for plants:

<http://www.eduplace.com/activity/pdf/plantproducts.pdf>