**Things You Need to Know About Photosynthesis**

* This happens to EVERY plant, and to some bacteria and algae, too.  Without photosynthesis, plants wouldn't exist.
* Humans and animals do the exact opposite of photosynthesis.  They breathe in oxygen and breathe out carbon dioxide.  This means that we give plants more carbon dioxide, and they give us more oxygen.  Without plants we wouldn't be able to survive, but there is enough carbon dioxide in the atmosphere that plants would still exist without us!
* Before there was photosynthesis, there wasn't much oxygen in our atmosphere.  So before plants evolved the ability to turn water and carbon dioxide into sugar and oxygen, there was no way for plants and animals to exist.  Before photosynthesis, bacteria and other living things used other chemicals to make their food.  But when photosynthesis started, it worked really well, so organisms (living things) that had photosynthesis thrived and evolved into plants and trees.  As more plants grew across the planet, more and more oxygen went into the atmosphere, meaning that animals were able to start evolving!  We would never have existed without photosynthesis.
* The atmosphere is full of carbon dioxide.  Carbon dioxide is a greenhouse gas, meaning that if it is in the atmosphere, it holds heat close to the earth, which makes our planet warm.  If we didn't have carbon dioxide, we wouldn't be a warm planet, we would be cold like the moon.  If we had too much carbon dioxide, we would be like Venus, which is a really hot planet.  Plants keep our atmosphere from getting too much carbon dioxide and heating up by turning a lot of it into oxygen.

**What Does this Do With** [**Global Warming**](http://www.climateclassroom.org/)**?**

Carbon dioxide isn't a bad thing if there isn't too much of it, it keeps the earth warm.  But when there is a lot of it, our planet warms up.  This is a natural process most of the time. There are a lot of changes in our climate (climate is weather over a long period of time) over millions of years, but THIS time, our climate is changing because of US!  This doesn't happen much on our planet.  But humans burn a lot of fuel.  When your parents drive their car, it is releasing carbon dioxide into the atmosphere.  And when you turn on your lights, you are using electricity.  If that electricity is powered by coal or other fossil fuels, then that puts carbon dioxide into the atmosphere too.  Have you ever seen a smoke stack at a factory with smoke going into the air?  A lot of that smoke is carbon dioxide!

When just a few cars and factories do this, it doesn't make much of a difference.  But there are almost 7 billion people living on earth, and a lot of them are driving cars and using factories, so we are putting a lot of carbon dioxide into the atmosphere, and the plants can't make up for how much carbon dioxide we are putting out there!

On top of all of this, we're cutting down trees and plants all over the world, making it even harder for them to replace our carbon dioxide with oxygen!  Even with the amount of carbon dioxide we are putting into the atmosphere, the world will probably only increase in temperature by about 1 degree, but that is actually huge!  It could melt our icecaps, which could make oceans rise, and it could cause rivers and lakes to disappear in some places and form in other places.  We don't completely know what could happen, but it could be bad.

That's why you are always helping if you plant a tree or another plant, and it is why you are helping by not keeping your lights on when you walk out of your room, and by turning off the TV when you are done with it.  Do what you can to [help](http://globalwarmingkids.net/)!