



What is Global Warming?



Life on Earth



Planet Earth is a spectacular place. From hippos to hula dancers, there is no other planet in our solar system where huge trees, vast oceans, amazing animals and many different

people are found. It took a long time for planet Earth to develop into a home where a variety of things could survive. In fact, the earth is about 4.5 billion years old!

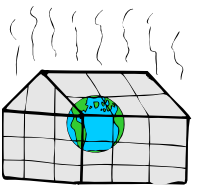
The Role of the Sun



Life on Earth could not exist if it weren't for the sun. The sun is a big star that gives us light, heat and energy. Without it, plants wouldn't grow and the

earth would be too cold for life to survive. When the sun shines, its heat gets trapped in our **atmosphere**. The atmosphere is an invisible layer of gas that surrounds the earth like a blanket of air. If the atmosphere didn't trap heat from the sun, our entire planet would be covered with ice!

Greenhouse Gases



The gases in our atmosphere that trap heat from the sun are sometimes called **greenhouse gases**. Greenhouses are small glass houses that are used to

grow plants. The glass panels of the greenhouse let in sunlight but keep heat from escaping. This causes the greenhouse to warm up—much like the inside of a car heats up on a sunny day. The greenhouse gases in our atmosphere act like the glass panes in a greenhouse. Sunshine gets absorbed by the earth and the atmosphere. Some of the sun's energy goes back into

space, but much of it remains trapped in our atmosphere by the greenhouse gases. This is how our planet stays warm enough for life on earth to survive.

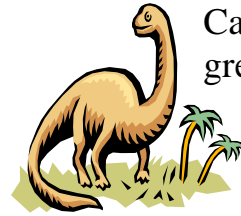


Too Much of a Good Thing



As with many things, too much of a good thing can become a problem. Eating too much ice cream for example can make us sick. The same is true with greenhouse gases. Although they are necessary to keep the planet warm, too many greenhouse gases in our atmosphere are now making the planet too warm. This is called **global warming**.

Fossil Fuels and Global Warming



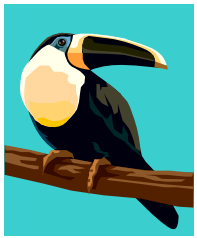
Carbon dioxide is one of the greenhouse gases on our planet that traps heat from the sun.

While carbon dioxide is an important part of nature, too much of it is being put into the atmosphere by the burning of **fossil fuels**. These fuels—like gasoline, oil and coal—come from the fossils of plants and dinosaurs that lived on earth millions of years ago. We use these fuels to drive our cars, power our trains and fly our planes. We also use fossil fuels to heat our homes, create electricity and run factories.

Burning fossil fuels is creating more carbon dioxide than is healthy for the planet. It is possible to get our energy and electricity from other sources like the sun and the wind. **Solar power** and **wind power** don't pollute or create greenhouse gas. One day, we'll be getting most of our

energy from these **alternative**, or different sources of energy.

Rainforests and Global Warming



Another way that too much carbon dioxide gets put into the atmosphere is when rainforests get cut down or burned. Rainforests are huge forests that are found around the world. They contain over half of all the world's animals and are home to some of the largest trees on the planet. They are also where many native tribes of people live. Trees—including those found in the rainforest—contain a lot of carbon in their branches and leaves. When the rainforest is cut down and burned, or left to rot, this carbon gets released into the air and becomes carbon dioxide. As we already know, carbon dioxide is a greenhouse gas that creates global warming.

One way to help stop global warming is to protect the rainforests. That's because when the rainforest trees are left standing, all that carbon stays within their leaves and branches and doesn't get released into the air as carbon dioxide. Not only that, but trees inhale carbon dioxide! That means that when trees are left standing, they remove carbon dioxide from the atmosphere, which helps keep the planet cool.

Climate Change



While global warming makes the average temperature of the planet get warmer, it doesn't mean that coconut trees will start growing in Iceland!

Global warming can actually make places around the world get colder as well as hotter. That's because global warming affects the **climate**. Climate is the normal weather pattern of a particular area. For instance, the climate in San Francisco is

normally rainy in the winter, foggy in the summer and sunny in the autumn. When the climate changes, it means that over time, the weather patterns change. In the case of San Francisco, winters might get warmer and have less rainfall, and summers might get colder and foggier. In other parts of the world, global warming may bring about climate changes where hurricanes get stronger and tornadoes become more frequent. Droughts might happen in areas that were previously moist, and floods may happen in areas that were dry. Simply put, global warming brings about serious changes in the weather. It's even starting to melt the ice at the North and South Poles! What can we do to help?



Since most of the greenhouse gas on our planet is caused by the burning of fossil fuels, one thing we can do is try to use less gasoline. That means instead of driving our cars to school or to our friend's house, we can walk or ride our bikes. We can also take **public transportation**—the buses, subways and trolleys that a city or town provides for its citizens.

Another thing we can do is **conserve** or save energy, which for now, comes from fossil fuels. Remember to turn off the lights, the TV, and the computer when you're not using them. Also try to put on a sweater when it's cold instead of turning up the heat.

We can also work to protect the rainforests. By using less paper and wood products and adopting rainforest acres, we can help save the trees and the forests that keep our planet cool.

We all have the power to stop global warming. Together, we can make a positive difference! Learn more by visiting: <http://www.rainforesthroes.com/kidscorner/>