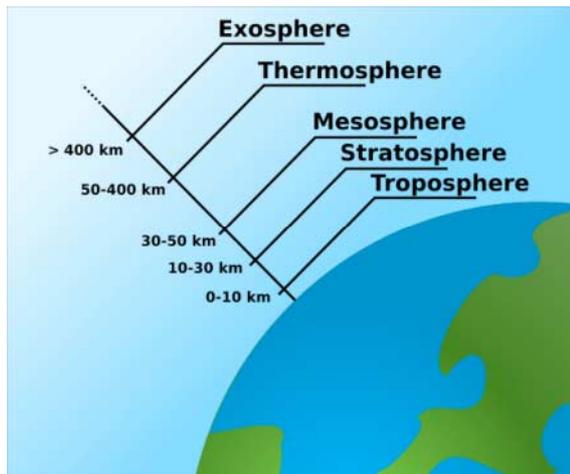


The Greenhouse Effect

The layers of the atmosphere

The atmosphere is divided into 5 layers. It is thickest near the surface and thins out with height until it eventually merges with space.



The **troposphere** is the first layer above the surface and contains half of the earth's atmosphere. Weather occurs in this layer.

The **stratosphere** is the second layer. Many jet aircrafts fly in the stratosphere because it is very stable. The stratosphere contains the **OZONE LAYER**, which absorbs harmful rays from the sun.

The **mesosphere** is the next layer up. Rock segments burn up in this layer.

The **thermosphere** is the fourth layer and this is where space shuttles orbit.

The **exosphere** is the layer where the atmosphere merges into space. It is extremely thin.

What is the Greenhouse Effect?

A greenhouse is a small house made of glass that is used to grow plants. A greenhouse traps the sun's rays and keeps the heat from escaping. It is warm inside.



In the same way that the glass traps heat in a greenhouse, the atmosphere traps heat next to the earth.

Certain gases in the atmosphere such as carbon dioxide, methane and water vapour trap energy from the sun.

The natural greenhouse gases act like a big blanket around the earth, keeping it warm.

Humans can create extra greenhouse gases but this means that more heat gets trapped. This causes the temperature of the earth to rise, which results in Global Warming.

Global Warming is the recorded increase in the average temperatures of the earth's atmosphere and oceans. Global Warming affects the weather patterns on Earth and causes Climate Change.

Climate change results in higher sea levels, more rainfall and severe droughts and floods. What effect would these changes have on humans and animals?

This information is from Met Éireann's Primary School Resources page, where parents, teachers and children will find resources that have been designed for use in primary schools in Ireland.
<http://www.met.ie/education/>



What is the Ozone Layer?

The ozone layer is a layer of concentrated ozone gas about 24km up in the atmosphere. Like a good pair of sunglasses, it protects us from the sun's harmful ultra-violet rays. This very important layer is being destroyed by CFCs (chlorofluorocarbons), which are used in industry and everyday life (e.g. aerosol cans). The chlorine in these compounds can cause ozone destruction. The hole in the ozone leaves humans and wildlife open to unsafe levels of UV light. Most nations have agreed to stop using these harmful chemicals, which is helping to reduce damage to the ozone layer.