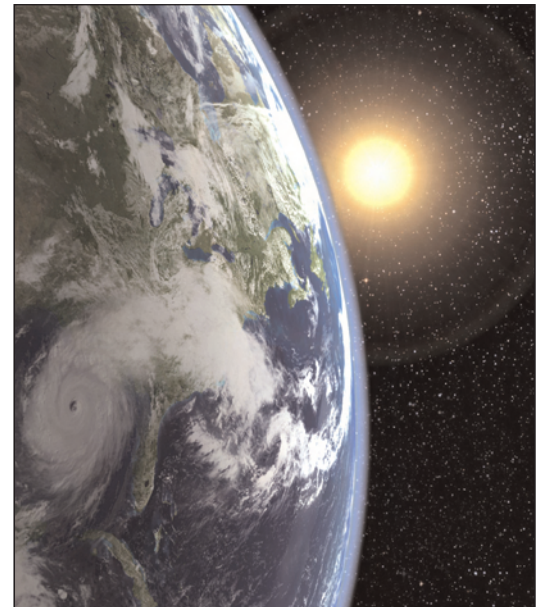


Energy and the Environment

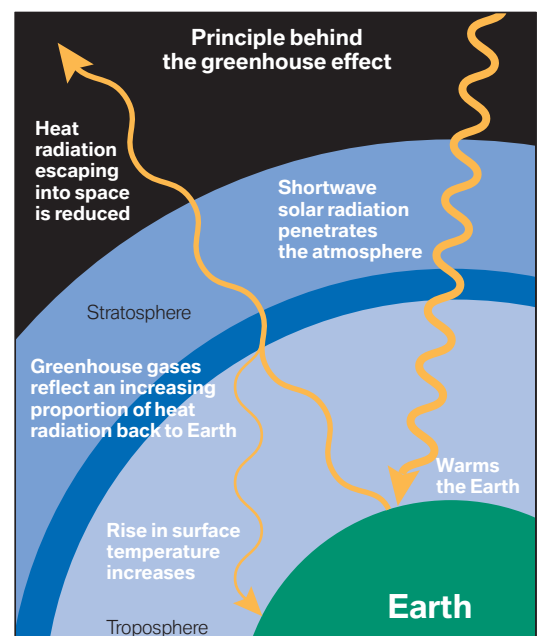
The greenhouse effect

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- The Earth's atmosphere keeps our planet warm. Without it the average global temperature would be extremely chilly (-18°C instead of its current average of 15°C).
- The atmosphere is largely made up of the gas nitrogen (N), as well as oxygen (O) and argon (Ar). It also naturally contains a balance of 'greenhouse' gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxides (NO_x) and water vapour.
- The atmosphere has different layers. The two closest to the Earth are the Troposphere (0-10 km) and the Stratosphere (10-50 km).
- Much of the sunlight that penetrates the atmosphere is reflected back into space. Greenhouse gases make the atmosphere act like a greenhouse, trapping the heat from the Sun. The 'natural' greenhouse effect of the Earth's atmosphere keeps our planet warm and sustains life.
- Since the beginning of the Industrial Revolution in the 19th century, levels of greenhouse gases in the atmosphere have dramatically increased as a result of the burning of fossil fuels.
- The average temperature of the Earth has risen by nearly 1°C in the last 110 years. This is causing changes in weather patterns, which is leading to climate change.
- Opinions vary as to how much the increase in greenhouse gases - particularly carbon dioxide - is due to natural events and how much is due to human activity.
- It is important that we all look carefully at how we use energy and stop the levels of greenhouse gases in our atmosphere increasing further.
- In 2005 an agreement called the Kyoto Protocol was put into practice in an attempt to reduce the amount of greenhouse gases produced by each country. As of June 2008, 182 countries had signed the agreement.
- In 2007, the World Business Council for Sustainable Development and its member companies (including BMW) set out ways to reduce emissions and develop clean fuels for the future.



Greenhouse gases help keep the Sun's heat from escaping from the Earth's atmosphere.



Source:
German Federal Office For Political Education

Research Links

www.unfccc.net
www.defra.gov.uk
www.wbcd.org
www.wmo.ch