

Read about it**Global Warming**

Global temperatures and sea levels seem to be rising, but whether this is mankind's or nature's fault is unclear. Environmentalists point to a build-up of greenhouse gases caused by the burning of fossil fuels, deforestation, dairy farming and other human activities. The result is that a growing number of governments and businesses are becoming more environment-minded. Scientists are meanwhile exploring ways to counteract climate change. The future of climate negotiations may lie in controversial new markets developed to commoditise both clean air and the right to pollute it. In 1997, 39 of the world's richest countries agreed to curb greenhouse-gas emissions at the Kyoto Climate Change Conference. But the resulting Kyoto protocol, enacted in 2005, will have little impact because it does not require developing countries to cut their emissions, and America is not a party to it. The biggest contributor to global warming, the United States, is belatedly embracing environmentalism.

Carbon dioxide and other gases warm the surface of the planet naturally by trapping solar heat in the atmosphere. This is a good thing because it keeps our planet habitable. However, by burning fossil fuels such as coal, gas and oil and clearing forests we have dramatically increased the amount of carbon dioxide in the Earth's atmosphere and temperatures are rising.

The vast majority of scientists agree that global warming is real, it's already happening and that it is the result of our activities and not a natural occurrence.¹ The evidence is overwhelming and undeniable.

We're already seeing changes. Glaciers are melting, plants and animals are being forced from their habitat, and the number of severe storms and droughts is increasing.

What on earth are we doing?

One of the most serious problems facing humanity is the worsening situation of the earth's environment. Scientists predict that the earth will last another 4 billion to 5 billion years, unless a nuclear cataclysm or an environmental disaster destroys it much sooner. Some major problems threaten the planet's ecosystems: extinction (the destruction of forests and other natural habitats is causing species of plants and animals to become extinct); water pollution (domestic and industrial waste and toxic chemicals are poisoning rivers and seas); air pollution and global warming (the emissions of carbon dioxide and other greenhouse effect gases from cars and factories cause lung cancer and raise the planet's temperature leading to desertification, melting of the polar ice caps and consequent increase in sea and ocean levels, and causing holes in the ozone layer, so that the ozone can no longer prevent harmful radiation from the sun); overpopulation (the world's population now at 6.5 billion and increasing about 80 million every year, is destroying the planet in the effort to produce more food and energy).

Since 1990 we have had the warmest 10 years on record. This has left some parts of the world devastated by drought and famine, and others suffering freak storms. Satellite data reveal that the planet has lost about 10% of its snow cover since 1960s, and that lakes and rivers in the high latitudes of the northern hemisphere remain frozen for two weeks less than they did two centuries ago. Glaciers in non-polar regions are also retreating, while Arctic sea ice has thinned by 40% since 1950s. The World Health Organisation estimates that the spread of diseases induced by global warming may have led to 5 million deaths. As climatologists are certain that it is our greenhouse gas emissions that have

caused global warming, we need to know what will happen if we do not reduce our emissions. The Intergovernmental Panel on Climate Change (IPCC) has come up with a few predictions.

1. If CO₂ emissions remain the same as they are today – 375 parts per million of the atmosphere, global temperatures will rise another centigrade. Glaciers and sea ice will probably vanish, and the number of extreme climate events, such as floods, landslides, heat waves and violent storms, will increase. A lack of rain and heat waves will have a catastrophic effect on agriculture.

2. If energy use continues to grow at the current rate, we will have a fourfold increase in greenhouse gases compared to pre-industrial levels. Average global temperatures will rise a catastrophic eight centigrade. We would lose our major capital cities and much of the best farmland, and be subject to violent weather because of the greater energy trapped at the earth's surface. (*The Ecologist*, February 2004)

If we do not want to live in a greenhouse full of exhaust fumes and air pollution, we can reduce our contribution to climate change. 20 per cent of emissions of CO₂ – the main greenhouse gas – comes from energy use in home and 25 per cent comes from cars. By following 15 easy steps we could reduce our impact on the environment. 1. Buy the most energy-efficient appliances. 2. Cook with lid on pot and use a pressure cooker. 3. Draught-proof windows and door to prevent heat loss and save energy. 4. Install double-glazed windows. 5. Invest in solar photovoltaic tiles for your roof. 6. Reduce your air travel. 7. Put aluminium foil behind your radiators with the dull side of the foil against the wall. 8. Take shorter showers. 9. Replace your light bulbs with Compact Fluorescent Lightbulbs, which, though more expensive, use one-fifth of the electricity of an average bulb and last 10 times longer. 10. Run the washing machine and dishwasher with full loads. 11. Turn off the lights when you leave a room. 12. Turn your TV and other appliances off instead of leaving them on stand-by. 13. Walk, cycle, take public transport or consider a car-pool whenever possible.

- 1. Rank the recommendations above in order of importance. Which of them do you and your family already follow? Which do you find impracticable? Why?**
- 2. What are the four major threats to the environment? Extinction, water and air pollution, overpopulation.**
- 3. Why do so many species become extinct? Because their natural habitats are being destroyed.**
- 4. What positive function does the ozone perform? It protects us from the sun's direct radiation which is detrimental to our skin.**
- 5. Why is overpopulation a vital question? If the world's population grows at the present rate, it will be difficult to find the food and resources to feed so many people.**

A Planet Under Pressure

The relationship of humans with the Earth's environment has changed throughout the evolution of Homo sapiens and the development of societies. For virtually all of human existence on the planet, interaction with the environment has taken place at the local, or at most the regional, scale. The environment at the scale of the Earth as a whole - the passing of the seasons, the vagaries of weather and climate, the ebbing and flowing of river systems and glaciers, the rich diversity of life in all its forms - has been something within which people have had to operate, subject only to the great forces of nature and the occasional perturbations of extraterrestrial origin. Earth's environment has been a bountiful source of resources as well as a remarkably stable life support system that has allowed human civilisations to develop and flourish.

A profound transformation of Earth's environment is now apparent, owing not to the great forces of nature or to extraterrestrial sources but to the numbers and activities of people - the phenomenon of global change. Begun centuries ago, this transformation has undergone a profound acceleration during the second half of the 20th century. During the last 100 years human population soared from little more than one to six billion and economic activity increased nearly 10-fold between 1950 and 2000. The world's population is more tightly connected than ever before via globalisation of economies and information flows. Half of Earth's land surface has been domesticated for direct human use. Most of the world's fisheries are fully or over-exploited. The composition of the atmosphere - greenhouse gases, reactive gases, aerosol particles - is now significantly different than it was a century ago. The Earth is now in the midst of its sixth great extinction event. The evidence that these changes are affecting the basic functioning of the Earth System, particularly the climate, grows stronger every year. The magnitude and rates of human-driven changes to the global environment are in many cases unprecedented for at least the last half-million years.

This executive summary describes a book that sets out what is known about global change and the nature of the Earth System. It addresses a number of important but difficult questions. How does the Earth System operate in the absence of significant human influence? How can human-driven effects be discerned from those due to natural variability? What are the implications of global change for human well-being? How robust is the Earth System in the face of this new internal force of change? Can human activities trigger abrupt and potentially irreversible changes to which adaptation would be impossible? How serious is this inadvertent human experiment with its own life support system?

1. **Skim through the text and find what effect global warming might have on the world.**
2. **Where do you think the text was taken from?**

The Kyoto Protocol: Do we care enough about the planet?

At three Earth summits (1992 in Rio de Janeiro; 1995 in Berlin; 1997 in Kyoto) the delegates from about 200 nations met for the United Nations climate-change conference. The topic of the debates was the continuing accumulation in the atmosphere of carbon dioxide and other greenhouse gases, which cause the death of people and threaten the planet with a catastrophic climate change. The result was the Kyoto Protocol, which fixed for the period 2008-2012 the 5% reduction in greenhouse-gas emissions to below 1990 levels. This agreement was enforced in February 2005, but only in 35 countries. While most European governments ratified the Protocol, the US and most of the largest emerging countries like China, India and Brazil rejected it maintaining that an excessive reduction in carbon emissions would stop economic growth. Environmentalists complained that the leaders of the most powerful countries were not able to find an agreement on the Kyoto Protocol at the G8 summit in Scotland in July 2005. They were also sceptical of the promises made to look for a common environmental policy after 2012. It seems clear that continued indecisiveness on the environmental problem may be a formula for disaster.



AL GORE

Age: 59

Born: March 31, 1948, in Washington, D.C.

Education: Graduated from Harvard, 1969; later attended Vanderbilt Divinity School and Vanderbilt law school.

Military: After Harvard, enlisted in the U.S. Army, serving in Vietnam as a reporter for Stars and Stripes.

Personal: Father, Al Gore Sr., was a longtime U.S. senator from Tennessee who lost his seat largely due to his opposition to the Vietnam War; mother, Pauline LaFon Gore, was one of the Vanderbilt's first female law students; married Mary Elizabeth (Tipper) in 1970; the couple has four grown children.

Politics: U.S. House of Representatives, 1977-85; U.S. Senate in 1985-93; vice president under President Bill Clinton, 1993-2001; ran for president in 2000, losing to George W. Bush in one of the closest and most controversial presidential elections in American history.

Other: Documentary based on his global warming lecture, "An Inconvenient Truth," won an Academy Award earlier this year.

Former Vice President Al Gore and the U.N.'s Intergovernmental Panel on Climate Change have won the 2007 Nobel Peace Prize Friday Oct. 12, 2007 for their efforts to spread awareness of man-made climate change, and to lay the foundations for the measures needed to counteract it.

A Global Warning: Al Gore's Inconvenient Truth

With wit, smarts and hope, AN INCONVENIENT TRUTH ultimately brings home Gore's persuasive argument that we can no longer afford to view global warming as a political issue - rather, it is the biggest moral challenges facing our global civilization

What is an inconvenient truth in your opinion?

Vice-President Al Gore after having lost the elections switched from politics to movies. He served as Vice-President to Bill Clinton and was narrowly defeated by George W. Bush in the controversial election of 2000. At the age of 58, Tennessee Senator is the star of the film An Inconvenient Truth, a disturbing documentary about global warming. As a passionate environmentalist he toured the United States to present his "slide show" on global warming, mentioning the Bush's administration's refusal to ratify the Kyoto Treaty, even if most Americans would like the USA to join the treaty. He remarks: "I do believe that the people of the country are way ahead of the politicians in the country. I do believe that there are some powerful polluting interests that have way too much influence in the American political system, but I believe, as more citizens understand the gravity of this planetary emergency, they will be much more forceful in insisting that politicians respond to it." He believes that Hurricane Katrina was a wake-up call to many people who had heard that the scientists were warning that the hurricanes would get much stronger, the increased incidence of flooding and droughts simultaneously.

He adds "while there are still the nay-sayers, many of them on the payroll, or getting grants from coal and oil companies ... still try to cloud the issue, increasingly people are saying "No, we see it, we understand it, this is not a political issue, it's a moral issue, it has to do with the survival of human civilisation". With the film and the book he hopes he will contribute to a widespread understanding of why people have to act urgently.

In his documentary Al Gore delivers a frightening message: the earth's climate has reached a critical point and we are all doomed unless we take action now. His 100-minute documentary on global warming and its effects is based on the talk he has given at least a thousand times in cities around the world. The film is riding a new wave of environmentalism in the US: ordinary Americans have begun to worry about rising energy prices, their standard of living, extreme weather, and record temperatures nearly every summer. While campaigning to be Bill Clinton's vice president in 1992, Gore wrote a book called *Earth in the Balance*, which told the story of burning rain forests and melting glaciers. The book was a best seller, but Gore and his message were soon forgotten when all eyes tuned to the charismatic and notorious Clinton. The images Gore shows in his sequel, *An Inconvenient Truth*, are quite dramatic: dry mountaintops in Europe that once were capped by glaciers; warmer waters creating ever powerful hurricanes in the Atlantic; buildings and forests collapsing from melting permafrost in the Arctic; and disease-carrying insects migrating north as temperatures rise. Gore shows a graph of both the carbon dioxide levels and the earth's temperature for the past 650,000 years. Even though warm periods and ice ages come and go across the chart, today's temperatures and CO₂ concentration are the highest point on the graph. He leaves it to the audience to imagine what the earth's temperature might be like 45 years from now. He makes it clear that if the glaciers go, so does drinking water from China and India. When the ice sheet covering Greenland melts, the world's oceans will suddenly rise by seven metres, taking some coastlines off the map. Some of Gore's critics accuse him of preaching an alarmist environment religion. The Bush administration and several coal and oil companies have gone to great lengths to influence Americans' perception of global warming. Gore counterattacked this critique by showing a study that revealed that 0% of articles in peer-reviewed journals which denied climate change, compared to 53% of articles in the popular American press. Just when *An Inconvenient Truth* opened, a firm hired by ExxonMobil ran a television ad in praise of carbon dioxide, claiming that plants need it and it makes things grow. Then another firm with ties to ExxonMobil posted a video at the popular youth site YouTube that was meant to look like a parody by a college student. The clip shows Gore boring a group of penguins with his lecture. Exxon aside, however, critics of the scientific consensus on global warming have begun to yield ground. Danish skeptic B. Lomborg, for example, recently modified his position and acknowledged the role of humans in climate change. Gore adds that industry could be making big money in developing alternative energy sources and that we have all the technology to solve the problem. Gore can be faulted for oversimplifying a few of the issues: carbon dioxide, for example, is not the only substance affecting global temperatures. Then one may wonder why Gore did not go on national television more than 10 years ago to present the same lecture then. The question is: will Gore run for office again? He has the momentum now. But he answers: "I have no plans to be a candidate again. I am on a campaign for a cause."

His PowerPoint presentation about global warming became his aptly titled book and documentary *An Inconvenient Truth*. He had stumbled into the issue of global warming as a student at Harvard. He grasped the science and never relented in his determination to alert people that we are baking our planet and ourselves with our lust for fossil fuels. His tenacity has created something few politicians achieved: a movement. His Alliance for Climate Protection led to the Live Earth concerts, and on October 12th he was named as joint winner of the Nobel Peace Prize, together with the U.N.'s Intergovernmental Panel on Climate Change, for being "probably the single individual who has done

most to create greater worldwide understanding of the measures that need to be adopted" to combat global warming.

1. Do you think Gore will succeed in persuading people support his cause?
2. Why is the documentary and the book aptly titled?

Talk about it

In the 18th century Thomas Malthus predicted that the human population would eventually exceed food production. Are we running out of food and water?

Will technology solve all our environmental problems? Why (not)?

Name some films with plots about the end of the world. Are they just science fiction and fantasy?

What can we do to make the world a better place?

Famous British actor Orlando Bloom is committed to the ecological cause. In his house in London he uses solar panels and energy-efficient light-bulbs. He claims: "The environment is such a massive issue that we all kind of think it's doom and gloom, but I don't think that's the case. You can be somebody who drives an SUV. That's fine, but there's a balance, so if you do that, then maybe use energy-efficient light bulbs at home, or just be conscious of switching off lights, or, if you can afford to drive an SUV, maybe you can afford to make a donation to a wind farm or plant some trees. It's all about balance". (Speak Up, August 2007).

Do you agree with Orlando Bloom's view? Why (not)?

Imagine you could ask him some questions about his commitment to the environment cause. What would you ask? (Minimum three questions)

Work in groups. Decide which environmental issue you think presents most danger to the human race. Make a list of things that could or should be done to lessen the danger. Present your findings to the whole class and decide your "propaganda" strategies (public speech, documentary, book, tv show, song, poem, etc.). Here is a short list of "green" issues: climate change – global warming, or "the greenhouse effect"; acid rain; species in danger of extinction (eg. the rhino, the elephant, the tiger); destruction of the rainforest; destruction of the countryside; pesticides and other pollution in food.

Freshwater is one of the most precious resources and it represents less than .01 percent of earth's total water. In much of the world there is not enough of it and where there is, it is wasted and mismanaged. The disparity in water's availability to rich and poor is increasing: while a U.S. family uses as much as 2,000 litres of water every day, families in the developing world often survive on 150 litres and have to walk several kilometres to obtain it. As the global population expands while water supply is limited, it seems inevitable that in the near future there will be armed conflicts, the so-called water wars, over who gets access to it. Discuss.

In Europe each person produces at least half a kilo of waste everyday. In some countries, the average output can be as much as three kilos per person. Cities are choking on their inhabitants' refuse. Excess packaging is one of the key waste products together with disposable goods. Discuss and provide solutions. Fast food companies use a lot of plastic and polystyrene foam packaging. McDonald's is believed to generate 1.6 billion cubic feet of trash in the form of polystyrene hamburger containers. According to some environmental groups, a strip of 55 billion end-to-end burger containers – the number of burgers McDonald's claims to have served – would circle the earth 333 times at the equator.

So going to a fast food restaurant can have a very strong environmental impact, so the greenest choice is to avoid fast food both for your health and that of the planet.

Around the world there are about 4,000 groups which work in different ways to improve the world and to raise awareness of environmental problems. Friends of the Earth and Greenpeace have branches in a lot of countries. Find the ones in Italy. Find other organizations that in Italy support the environmental cause. The first boat which Greenpeace used was called "Rainbow Warrior", from a North American legend which says that when the Earth is sick and the animals disappear the warriors of the Rainbow will come to protect the wildlife and heal the Earth. Antinuclear boat, the "Rainbow Warrior" was destroyed in Auckland harbour in New Zealand in 1985 by French secret agents. Why are environmental activists feared and opposed by lots of establishments? Can you find other examples? Is violence justified to stop a protest?

Write about it

In what way do you think climate change will affect your personal lifestyle? Do you think you will have to give up any of your activities or will everything stay the same? Write 150 words.

Creative writing

POEM PROMPT

* _____ *

* _____ * is the colour of.....
.....

I feel it when I

It sounds like.....
and many people think it is.....

When we live with * _____ *
We.....
.....

It tastes ofand
.....
and I see it in my.....

I dream of * _____ * when I
.....
.....

And I hope that one day * _____ *
.....
.....

Project

There are different ways to protest against a system that promotes consumerism for economical gain. A non-violent civil disobedience movement, called Critical Mass, started in the United States in San Francisco in 1992 and present in 300 cities around the world. It aims at fighting back the overpowering presence of cars on the streets, thus the use of petrol and the consequent pollution of our environment. It consists of cyclists gathering and blocking traffic to protest against the system that promotes the

destruction of the environment for capital gain, the fighting of wars for oil, etc. Find some information about critical mass: its origins, its objectives, where it can be found, its impact in Italy, if some famous people partook the bike rides, etc. It is a no-global movement opposed to the United States' dependency on oil and its President's willingness to go to war with Iraq on account of it. Say whether you approve of no-global movements, mention events of no-global movement incidents in Italy. Can you look for other movements that are present in Europe or the United States that fight for the preservation of our planet? www.wwf.org , www.panda.org , www.greenpeace.org . These well known environmental campaign groups have branches in many countries. Look at their websites and find out what they are doing in Italy. Write to them to find out what conservation and environmental issues are important. Ask them to send you posters and other material that you can exhibit in class.

As a class you want to sensitize your school mates as to the issue of the respect for the environment and what you can do to safeguard nature and thus the future of human beings. Think of a catching slogan and a striking logo. Write a statement of belief, why you think becoming aware of environmental issues and what we can do to protect our planet is important.

Leonardo DiCaprio's "The 11th Hour" is a feature length documentary concerning the environmental crises caused by human actions and their impact on the planet. "The 11th Hour" documents the cumulative impact of these actions upon the planet's life systems and calls for restorative action through a reshaping of human activity. With the help of over fifty of the world's most prominent thinkers and activists, including reformer Mikhail Gorbachev, physicist Stephen Hawking, and Nobel Prize winner Wangari Maathai, "The 11th Hour" documents the grave problems facing the planet's life systems.

The most powerful element of "The 11th Hour" is not the portrait of a planet in crisis, but the hope and solutions the films offers. Scientists and environmental advocates paint a portrait for a radically new and exciting future in which humanity seeks not to dominate the earth's life systems, but to mimic them and coexist. "The 11th Hour" calls for a future that is both sustainable and healthier.

Find out other information about this film.