

AIR POLLUTION

1. Smog: pollution in cities.

All cities, especially the biggest ones, are a type of pollution for the atmosphere. Pollution comes from cars, industries, power stations, central heating systems, etc. The result is that in the sky of a big city there is an accumulation of contaminating substances which can cause respiratory diseases and lack of visibility. This problem is called smog (smoke + fog = smog). Polluted air that forms a cloud close to the ground.

2. The Greenhouse Effect

The greenhouse effect is the process by which the Earth's surface and lower atmosphere is getting warmer as a result of pollution by gases such as carbon dioxide (CO₂). This gas is released by the burning of coal and oil as it happens in our cars and power stations. Furthermore, the volcanic eruptions and the deforestation also increase the CO₂ levels (forest fires).

The heat from the sun cannot escape, leading to a general increase in the Earth's temperature called **Global Warming**. It has been discovered that, over the last one hundred years, the average temperature of the planet has risen from between 0.3 and 0.6 °C.

Global warming has many harmful consequences: temperatures will rise, ice at the North and South Poles will melt, sea level will rise and many coastal cities will be flooded. We should save energy, stop using oil, gas and petrol and we should change to green energy (wind power, solar power, hydroelectricity...) and, of course, stop cutting down trees.

3. The hole in the ozone layer

The ozone layer is an important part of the atmosphere (stratosphere). It's made up of ozone (a type of oxygen) that protects the earth from too many harmful rays called UV. Some years ago it was discovered that there is an area where the ozone layer is getting thinner. This area is known the hole in the ozone layer. It was located over Antarctica but it is getting bigger and bigger; nowadays it affects South America and Australia, too. Harmful radiation affects our health causing skin diseases (skin cancer).

The disappearance of the ozone from the atmosphere is caused by contaminating substances called CFCs. These gases were used in refrigerators and aerosols but they have been substituted for other gases which do not damage the ozone layer.

- Complete this chart:

PROBLEM	CAUSES	CONSEQUENCES	SOLUTIONS
Smog			
Greenhouse effect			
Hole in the ozone layer			

PROBLEMS	CAUSES	CONSEQUENCES	SOLUTIONS
SMOG	Cars. Central heating systems (they burn gas, diesel oil). Industries.	Affects respiratory system Lack of visibility	Use the car less (on foot, by byke...) Use public transport Sharing your car with your colleagues Close windows and doors to save energy
GREENHOUSE EFFECT	Release carbon dioxide from burning coal and petrol: cars, power stations (we get usually electricity from fuels and very little from green powers). Cutting down forests (remember plants take carbon dioxide and release oxygen).	1. Temperatures rise 2. There would be more droughts making hard to grow crops. 3. Lakes and rivers will dry up 4. Climate change (and perhaps wild weather) 5. The ice on the poles will melt. 6. Sea level will rise 7. Cities on coasts will be flooded.	Stop using oil, coal and gas. Use green power such as solar power, wind power, water power (hydro electricity) Stop cutting down forests. Save energy using less your car. Recycle glass bottles, newspapers, cans. Use paper on both sides. Reuse plastic shopping bags. Buy products that don't use much packaging. Switch lights off when you're not in the room.
HOLE IN THE OZONE LAYER	CFC gases (used in fridge and aerosols) destroy the ozone layer	Ultraviolet rays which can burn our skin and cause diseases such as skin-cancer	Stop using CFCs