

AIR POLLUTION - JUNIOR VERSION

Air is everywhere around us, even if we cannot see, taste or touch it. It does not even have its own smell, but is full of scents and bad smells that it carries to our noses. The air we breathe is made up of a mixture of gases and solid and liquid particles. Nitrogen and oxygen, respectively 78% and 21% by volume, are the two main components of the atmosphere. Nitrogen is a colourless and odourless gas and is inert, since it does not contribute to life processes, unlike oxygen, which is essential for living beings to breathe. The oxygen in the air is almost entirely of biological origin, as it is produced by autotrophic organisms through chlorophyll photosynthesis. The remaining 1% consists of water vapour, carbon dioxide and other gases. The composition of the air has remained unchanged for millions of years but, with industrial development and urbanisation, its progressive pollution began. Air pollution refers to the presence of substances that change its composition and balance. In the short or long term, on a local or global scale, these substances cause harmful effects on humans and the animal and plant world. Pollutants are classified into pollutants of anthropogenic origin, resulting that is from human activities, and of natural origin, resulting, for example, from volcanic eruptions. Anthropogenic pollution is generated by large fixed sources (e.g. industrial plants), small fixed sources (e.g. heating systems) and mobile sources (vehicle traffic).

The damage caused by air pollution varies widely, e.g. respiratory diseases; severe damage to vegetation; acid rain. Another serious problem caused by air pollution is the ozone hole. A gradual solution to the problem of air pollution is required, for example by:

- creating green and pedestrian zones in cities;
- increasing use of public transport;
- use of catalytic converters;
- building incinerators, which are used to burn waste, with little pollution;
- use of non-polluting energy sources such as wind and solar energy;
- use of natural gas heating instead of the more polluting oil heating.

Air pollution can also be limited by making small everyday changes, such as switching off lights when not needed, using cars only when necessary, recycling waste, not overheating or overcooling the rooms where we live. In this way, we could reduce the quantities of gases responsible for the pollution that causes acid rain, the hole in the ozone layer and the greenhouse effect released into the atmosphere. Even small gestures can be very important.