

Aerosol: Using a gas under pressure to produce a fine spray of liquid. An example is an aerosol can of spray paint.

Atmosphere: A layer of gases surrounding a planet.

The Earth's natural atmosphere is a layered mixture of gases, which contains: 78.08% nitrogen, 20.95% oxygen, 0.93% argon, 0.038% carbon dioxide, traces of hydrogen, helium & other gases, and 1% water vapour.

Carbon Dioxide (CO₂): A gas made up of carbon and oxygen. It has no colour and no smell. We breathe it out of our lungs. It is also man-made by the burning of fossil fuels, and absorbed naturally by trees and plants. It is a greenhouse gas.

Chlorofluorocarbons (CFCs): A family of chemical compounds that have been released into the atmosphere since the 1930s. They are found in air-conditioning, refrigeration, and aerosol cans. In the 1980s they were linked to causing a hole in the ozone layer.

Climate: Climate is what we expect to happen season to season. Long-term weather patterns of a region or place.

Climate Change: The change in long-term weather patterns. Climate change can be natural due to volcanoes and wildfires, or caused by changes people have made to the land or the atmosphere.

Conservation: The act of protecting nature – water, plants and wildlife.

Coral Reef: Coral reefs are colonies of tiny animals found in marine waters that contain few nutrients; they are very sensitive to water temperature.

Deforestation: The mass removal of trees from an area.

Desertification: Long term damage to dry lands caused by drought and by human activities such as over cultivation, deforestation and poor irrigation practices that turn the land to a desert.

Drought: A long period of dry weather with little or no rain.

Erosion: The process of land being washed away or worn away slowly by wind or water.

Floods: A great overflow of water onto a place that is usually dry.

Fossil Fuels: Fuels (coal, oil, natural gas) that result from the compression of ancient plant and animal life formed over millions of years.

Glacier: A large mass of ice and snow that moves very slowly across the land, forming permanent changes to the landscape. The Oak Ridges Moraine in the Greater Toronto Area is a geological formation created by a glacier.

Global Warming: A continual rise in the average temperature of the Earth. This occurs in the air and water at the Earth's surface.

Greenhouse: A glass building that is used for trapping the sun's heat, light and energy to grow plants.

Greenhouse Gases (GHG): Gases which allow the sun's rays to pass through and warm the Earth but prevent this warmth from escaping into the atmosphere. GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), halon gas....

Greenhouse Effect (GHE): When the Earth's atmosphere becomes thick with gases and substances which trap the sun's radiation, making the Earth warmer.

Halon Gas: A liquefied, compressed gas that stops the spread of fire by chemically disrupting the fire. It is a greenhouse gas.

Invasive Species: A non-native species out-competes the native species in an area for water, nutrients and space. This can have negative impacts on the ecological services in the area.

Meteorology: The science that studies weather, climate and the Earth's atmosphere.

Methane (CH_4): This gas is produced when vegetation is burned, digested or rotted without oxygen. It is a greenhouse gas.

Nitrous Oxide (N_2O): A colorless, non-flammable gas with a sweetish odor. Oceans and rainforests naturally produce nitrous oxide. Nitrous oxide is produced by a range of human activities, including the use of fertilizers in agriculture, use of catalytic converters in cars and the burning of organic matter. Nitrous oxide is used in dentistry for its pain reducing effects. Nitrous oxide is a greenhouse gas.

Ozone Layer (O_3): A layer of specialized oxygen in the Earth's atmosphere. The ozone layer protects humans, animals and plants from harmful ultraviolet (UV) light rays from the sun.

Radiation: Energy transmitted in waves or a stream of particles. Light, heat, radio waves and x-rays are forms of radiation.

Ultraviolet Light (UV Light): Scientists classify Ultraviolet (UV) light into three spectrums. UV-A tans skin and poses little threat to humans. UV-B is mainly absorbed into the ozone layer, but what filters through can age skin, and cause cancer and cataracts. UV-C causes some redness in skin and eye irritation.

Urban Heat Island Effect: The difference in heat between urban & rural areas. Dark surfaces in urban areas absorb the heat from the sun. Lighter surfaces in rural areas reflect the heat from the sun

Weather: What we experience day-to-day, and includes: temperature, precipitation, cloud cover.... What is happening outdoors now!