

## Glossary of Terms

### Air Pollution

Something that occurs when polluting substances exist in the air. These substances can affect human health in a negative way.

### Alternative Green Energy Sources

Energy sources that are not based on the burning of fossil fuels or the splitting of atoms. Alternative energy sources have a less damaging impact on the environment. Examples include solar energy, wind energy, geothermal energy, tidal energy, and hydroelectric energy.

### Asthma

Asthma is a breathing disease of the lungs. It causes shortness of breath, tightness in the chest, coughing and wheezing. Asthma is triggered by things like dust, air pollution and mould.

### Atmosphere

The atmosphere extends a few hundred kilometres above the Earth's surface, but most of the Earth's atmosphere lies within 50 kms above the Earth's surface. It is made from a mixture of gases and particles that surround the planet. It provides us with the air we breathe. Its greenhouse gases trap the heat that warms the Earth. It has a protective layer of ozone that shields us from the damaging rays given off by the sun.

### Carbon

Carbon is a natural element which forms most living things. It is the fourth most abundant element in the universe and plays a very important role in the health of the planet.

### Carbon Dioxide

Carbon dioxide is the most important greenhouse gas released by human activities. It has no colour or smell. It is produced when we burn fossil fuels, like coal, gas and oil. It is also released from forest fires, rotting plants, volcanic eruptions, and when we breathe.

### CFLs

Compact fluorescent light bulbs are energy saving light bulbs that can last up to 10 times longer than regular light bulbs.

### Climate

The long-term, average weather conditions in a region, including temperature, precipitation, wind patterns and cloud cover.

### Climate Change

The change in the average weather that a given region experiences. Different areas of the globe will have different changes, including higher or lower temperatures, increased rainfall, more storm activity or extended drought periods.

### Conservation of Energy

Conserving energy is when you reduce the amount of energy used to do something. For example, turning a computer off when not in use is conserving energy. Conservation of energy saves money and reduces air pollution.

### Disease

A disease is an illness or sickness of the body that causes the body not to function properly. For example, heart disease is an illness that causes the arteries that carry blood to the heart to become blocked.

## Glossary of Terms (continued)

### Electrical Energy

Energy produced by the movement of electrons.

### Energy

The ability to do work or the ability to move an object.

### Energy Audit

An investigation that shows how much energy a building uses and how someone can make the building more energy-efficient.

### Energy-Efficient

Something that uses a minimum amount of energy to get the job done. For example, compact fluorescent light bulbs make light by using less energy than regular light bulbs.

### Energy Consumption

The act of using energy.

### Environment

The surroundings in which all plants, animals and humans live.

### Fossil Fuels

Fuels that are made from decomposed ancient plants and animals. Examples include coal, oil, and natural gas. They are buried deep in the ground and took millions of years to form.

### Global Warming

An overall increase in world temperatures which may be caused by additional heat being trapped by greenhouse gases.

### Greenhouse Effect

This effect occurs when heat is trapped and builds up in the lower atmosphere near a planet's surface. Some of the heat flowing back towards space from the Earth's surface is absorbed by water vapour, carbon dioxide, methane and other gases in the atmosphere.

### Greenhouse Gases

Any of the gases that contribute to the greenhouse effect. These include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>), water vapour, and hydrochlorofluorocarbons (HCFCs).

### Hydroelectricity

A type of electricity that is produced by using the energy of moving water.

### Idling

Idling is when the engine is running but the car is parked.

### Non-Renewable Energy Source

An energy source that is limited and cannot be renewed naturally. Examples include fossil fuels (natural gas, propane, coal, petroleum) and uranium.

### Nitrogen Dioxide

Nitrogen dioxide is colorless, odourless gas that can be released by burning fuels and by smoking tobacco products.

### Oxygen

Oxygen is a colorless, odourless and tasteless gas that makes up about 20% of the air we breathe. Oxygen is essential to human, animal and plant life.

## Glossary of Terms (continued)

### Particulate Matter

A type of air pollution that includes dust, soot and tiny bits of solid materials that move around in the air.

### Pollution

Substances in the environment which result in damage to the water, air, or soil.

### Renewable Energy

Energy that can be replaced by natural processes (e.g., energy from the sun, wind, tides, waves, and biomass).

### Renewable Resource

Any natural resource that can be replaced naturally over time, such as a forest.

### Smog

A haze that forms when sunlight reacts with pollutants in the air. Smog makes it difficult for many people to breathe and can cause lung problems.

### Sulphur Dioxide

Sulphur dioxide is a colourless gas with a very strong smell. It is usually produced by burning coal. It pollutes the air when present in large amounts.

### Thermostat

An automatic temperature control on heating and cooling systems. Thermostats sense the temperature in the environment and can automatically turn the furnace on or off to keep the temperature in the room steady.

### Utility Company

A company that supplies gas and electrical power to homes and other buildings.

### Weather

The condition of the lower atmosphere at a particular place and time in terms of temperature, precipitation, wind patterns, cloud cover and air pressure.

### Wheeze

A breathing sound caused when the airways of lungs are blocked or swollen. It is a common sign of asthma.

Many definitions were taken and/or modified from:

- Cool Climate Kid's Club: [www.coolclimate.org](http://www.coolclimate.org)
- The Ontario Curriculum – Science and Technology
- [www.srh.noaa.gov](http://www.srh.noaa.gov)
- [www.science.org](http://www.science.org)
- Energy Kid's Page: [www.eia.doe.gov/kids/glossary/#E](http://www.eia.doe.gov/kids/glossary/#E)
- Environment Canada's Great Art for Great Lakes:  
<http://www.on.ec.gc.ca/community/classroom/c4-big-picture-e.html>