# Earth Systems and Resources

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# Objectives:

• Students will be able to identify the many resources that occur on earth naturally and how we use them in everyday life.

### Resources:

There are two main resources that we use on earth. They are Renewable and Nonrenewable.

Renewable Resources: Air, solar, water, and geothermal heat

Nonrenewable Resources: Fossil fuels such as coal, petroleum, oil, and natural gas.

### Renewable

An example of a renewable resource would be solar energy, hydrologically derived energy, wind, and geothermal heat. These are examples of renewable energy because when we use them, they replenish at the rate in which we use them, unlike nonrenewable resources.

#### Nonrenewable:

Nonrenewable resources are the resources that we use everyday but are rapidly running out of. They take up to a thousand years to replenish, and the rate that we use these resources doesn't allow time for these resources to recharge.

# Earth Systems

Earth system science embraces chemistry, physics, biology, mathematics and applied sciences.

The Earth system consists of land, oceans, the atmosphere, and the poles. Life, too, is a part of the Earth system. Life has many effects on carbon, nitrogen, water, oxygen, and more systems found here on Earth. Humans also play a role in these changes and without them, most of these changes would not take place.

Examples being as follows: global change and climate

## Global Change

Global change refers to the planetary-scale that changes the Earth's systems.

The term global change encompasses planetary-scale changes to atmospheric circulation, ocean circulation, climate, the carbon cycle, the nitrogen cycle, the water cycle and many other cycles. Sea-ice changes, food webs, sea-level changes, biological diversity, pollution, health, fish stocks, and much more.

Civilization has also become a large term throughout population, the economy, resource use, energy, development, transport, communication, land use and land cover, urbanization, globalization.

## Climate

Climate refers to the long-term average of the aggregation of all things connecting to weather. Precipitation, temperature, and cloudiness for example.

The climate system includes processes involving the ocean, land, and sea ice in addition to the atmosphere.

Climate is changing every year at a shocking rate. 2015, 2014, and 2010 are recorded to be some of the hottest years on the record since 1998. The myth that the Earth is not getting hotter, is just that a myth. It is proven that Earth has warmed a lot since 1998.