Foxford Learning Plan

Year 9

Spring 1

Earth and atmosphere

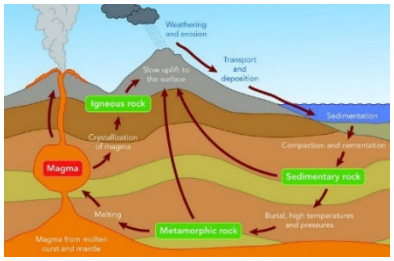
Key Vocabulary

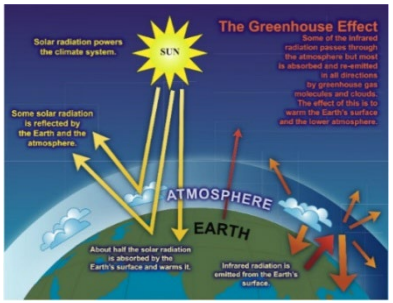
Carbon cycle	A series of processes that move carbon through organisms and the atmosphere.
Respiration	The process that transfers energy in plants and animals. In respiration, glucose reacts with oxygen to make carbon dioxide and water.
Photosynthesis	The process pants and algae use to make their own food, glucose. In photosynthesis, carbon dioxide and water react together to make glucose and oxygen.
Combustion	A chemical reaction in which a substance reacts quickly with oxygen and gives out heat energy. Also called burning.
Global warming	The gradual increase in surface temperature of the Earth.
Fossil fuels	Remains of dead organisms that are burned as fuels, releasing carbon dioxide.
Carbon sink	Areas of vegetation, the ocean or the soil, which absorb and store carbon.
Greenhouse gas	A gas that contributes to the greenhouse effect, such as carbon dioxide and methane.
Greenhouse effect	When energy from the sun is transferred to the thermal energy store of gases in Earth's atmosphere.
Carbon footprint	A way to measure your personal contribution of carbon dioxide gas to the atmosphere
Rock cycle	Sequence of processes where rocks change from one type to another.
Weathering	The wearing down of rock by physical, chemical or biological processes.
Erosion	Movement of rock by water, ice or wind (transportation).
Minerals	Chemicals that rocks are made from.
Sedimentary rocks	Formed from layers of sediment, and which can contain fossils. Examples are limestone, chalk and sandstone.
Igneous rocks	Formed from cooled magma, with minerals arranged in crystals. Examples are granite, basalt and obsidian.
Metamorphic rocks	Formed from existing rocks exposed to heat and pressure over a long time. Examples are marble, slate and schist.

Over this course I will be able to

Key Skills

- Label the crust, mantle and core on a diagram and explain how movement of tectonic plates causes geological activity.
- Use rock cycle diagrams to explain how igneous, sedimentary and metamorphic rocks form and change.
- Model the carbon cycle, identifying how photosynthesis, respiration and combustion transfer carbon.
- Interpret evidence about greenhouse gases and explain how burning fossil fuels contributes to global warming.
- Compare ways to reduce carbon footprints and manage Earth's resources sustainably, using evidence to justify choices.





I will understand

- How the Earth is structured and how its layers affect the planet.
- How rocks are formed and change through the rock cycle.
- How carbon moves between the atmosphere, living things and the Earth.
- How Earth's atmosphere has changed and why it is important for life.
- How human activities affect Earth's resources, climate and sustainability.