
 YEAR 5 (1 of 2)		Environmental	Physics	Chemistry	Biology
1	2	3	4	5	6
Changing and Choosing Materials	Geology of the Earth	Earth and Space	Pollution	Plants and Photosynthesis	Circulation and Respiration
Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.	Understand that the Earth is made of layers; the crust, mantle, core (outer core and inner core).	Describe the movement of the Earth and other planets relative to the Sun in the solar system and link to work on gravitational force in Y3.	Identify and discuss different kinds of pollution - to include air quality.	Understand the difference between non-vascular (e.g. algae) and vascular plants which have tube-like structures that allow water and dissolved nutrients to move through the plant.	Understand that organs (e.g. heart, lungs) work together in systems (e.g. circulatory system , respiratory system). (Recall Y3 work on heart and circulation).
	Describe the Earth as being formed from tectonic plates.	Understand that a vacuum in space is an absence of matter.	Identify and discuss sources of pollution.		Identify and name the main parts of the human circulatory system
Use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including : <ul style="list-style-type: none"> • filtering • sieving • Evaporating 	Understand that the movement of tectonic plates causes earthquakes.	Describe the movement of the Moon relative to the Earth.	Recognise why it is important to keep the environment pollution free.—including climate change.	Know the functions of the parts of vascular plants: <ul style="list-style-type: none"> • roots • stems • buds • leaves and stomata • xylem and phloem (found in roots, stems and leaves) 	Describe the functions of the heart, blood vessels and blood.
	Know that the intensity of an earthquake is measured using a seismograph and Richter scale.	Understand how lunar eclipses occur.			Understand the link between Pollution and taking care of the Earth.
Demonstrate that dissolving, mixing and changes of state are reversible changes.	Know how volcanoes are formed and that volcanoes can be active, dormant and extinct.	Describe the Sun, Earth and Moon as approximately spherical bodies.	Understand the link between Pollution and taking care of the Earth.	Xylem—transports water. Phloem—transports nutrients.	Identify and name the main parts of the respiratory system.
Explain that some changes result in the formation of new material and that this kind of change is not usually reversible. Including changes associated with burning and the action of acid on bicarbonate of soda.	Understand theories of how the continents and oceans were formed: Pangaea and continental drift.	Use the idea of the Earth’s rotation to explain day and night and the apparent movement of the Sun across the sky.	Recognise their role in preventing pollution and taking care of the Earth.	Understand that photosynthesis is an important life process by which plant cells make their own food and that animal cells are unable to do this.	Understand the process of taking in oxygen and getting rid of carbon monoxide.
	Ctd on next page	Describe the Earth’s seasons as due to the tilt of the Earth.	Understand the term <u>global</u> sustainability and how it applies to pollution.		Ctd on next page

 YEAR 5 (2 of 2)		Environmental	Physics	Chemistry	Biology
1	2	3	4	5	6
Changing and Choosing Materials	Geology of the Earth	Earth and Space	Pollution	Plants and Photosynthesis	Circulation and Respiration
	Understand that most of the Earth's surface is covered by water.			Describe the structure of a plant cell: <ul style="list-style-type: none"> • cell membrane • nucleus • nuclear membrane • cytoplasm • cell walls • vacuole • chloroplasts Chloroplasts contain chlorophyll and this is where photosynthesis takes place.	Recognise the impact of diet exercise, drugs and lifestyle on the way their bodies function.
				Understand the role in photosynthesis of: <ul style="list-style-type: none"> • energy from sunlight • chlorophyll • carbon dioxide • water • oxygen • sugar 	