

VOCABULARY

Biome: an area with similar plants and animals.

Boreal Forest: a forest made up of coniferous plants in cold areas.

Chaparral: an area that has mainly shrubs and thorny bushes.

Climate: the weather conditions in an area over time.

Deciduous Forest: a forest that has trees that lose their leaves each year.

Deforestation: cutting down trees.

Desert: a waterless area with little or no vegetation.

Ecosystem: a community of plants and animals and their non-living environment.

Grassland: a large open area covered with grass.

Latitude: imaginary lines goes around the earth horizontally.

Rainforest: a thick forest that has a lot of rain.

Savannah: a grassy plain in tropical and subtropical regions with definition.

Temperature: mild weather, further away from the equator.

Tropics: any place on earth near the equator.

Vegetation Belt: smaller regions indicating where vegetation grows.

WHAT CAME BEFORE

Year 4: The Water Cycle, Rivers & Mountains

WHAT COMES NEXT

Year 6: Volcanoes and Earthquakes



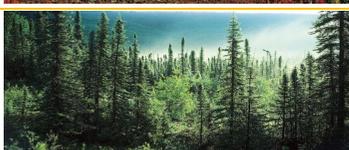
GEOGRAPHY KNOWLEDGE MAT -YEAR 5

CLIMATE, BIOMES AND VEGETATION

WHAT YOU SHOULD ALREADY KNOW

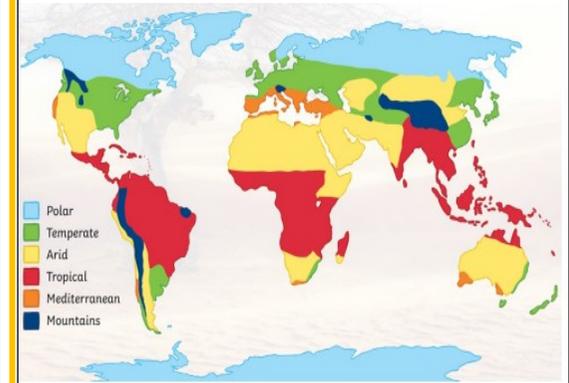
- Understand what a biome is, for example a rainforest.
- Recognise some local, national and international rivers, including their basic features.
- Understand the water cycle.
- Understand food chains.

The Six Major Biomes

Tropical Rainforest	<ul style="list-style-type: none"> • Very steady temperature between 20.c and 25.c. • Rains all year long. • The trees are very tall and varied. • Most of the plants are evergreen. 	
Temperate Deciduous Forest	<ul style="list-style-type: none"> • Temperature ranges from -30.c to 30.c. • Goes through all four seasons. • Ranges of trees, most lose their leaves in the autumn. • Even rainfall throughout most of the year. 	
Coniferous Forest (Taiga)	<ul style="list-style-type: none"> • Temperature ranges from -54.c to 30.c. • Low average temperature. • Most of the trees are evergreen. • Largest land biome. 	
Tundra	<ul style="list-style-type: none"> • Temperature ranges from -34.c. to 6.c. • Coldest of all the biomes. • Little rain, lots of frost. • No tree grow, and only a few small plants. 	
Grasslands (Savanna)	<ul style="list-style-type: none"> • Dry season and a rainy season. • Temperature ranges from -40.c. to 40.c.+ • Mostly grass grows, occasional individual trees. 	
Desert	<ul style="list-style-type: none"> • Temperatures over 50.c. in the day, below freezing at night. • Very few clouds and very little rain. • Very few plants or animals. 	

KEY LEARNING

- The weather changes in different parts of the world. Where there similar weather patterns, this is known as a climate.
- At the top of the Earth there is an arctic climate and some of the coldest temperatures in the world are found here.
- As you approach the equator, you find the Mediterranean and desert climates.
- At the equator there is a tropical climate, and travelling south of the equator it gets cooler again before reaching the Antarctic.
- The equator is an imaginary line that divides the Earth in half. The equator is an equal distance between the North and South Poles. At the equator, day and night are both 12 hours long.
- A biome is a natural area of plants and animals. The world is divided into lots of different biomes and they are all different depending on their climate.



GEOGRAPHICAL SKILLS AND FIELDWORK

- Use atlases, and aerial photographs to identify biomes of the world and explain different climates.
- Compare and analyse a range of features, e.g. temperature, rainfall and humidity, across different biomes.
- Explain how the human impact on biomes can have a positive and negative influence.

VOCABULARY

- **acid rain**- Wind carrying nitrogen and sulphur pollution can fall to the ground as rain, killing trees and poisoning lakes.
- **Biodegradable**- rotting away naturally from bacteria
- **Chemicals** -substance that has been made or purified
- **Ecosystem** -community of living and non-living things all linked together in a habitat
- **Energy** -power created from a resource
- **fossil fuel** -natural fuel formed in the past from the remains of living organisms
- **greenhouse effect** -the trapping of the sun's warmth in a planet's lower atmosphere causing a rise in temperature
- **Incinerator** -apparatus for burning waste material
- **Landfill** -a huge rubbish dump filled with waste
- **Litter**- throwing waste products onto the floor
- **noise & light** - pollution caused by too much noise or light
- **non-renewable resources**- used for energy which will run out
- **Renewable resources**-used for energy which will not run out
- **Smog**—Fumes from traffic and industry create a thick fog

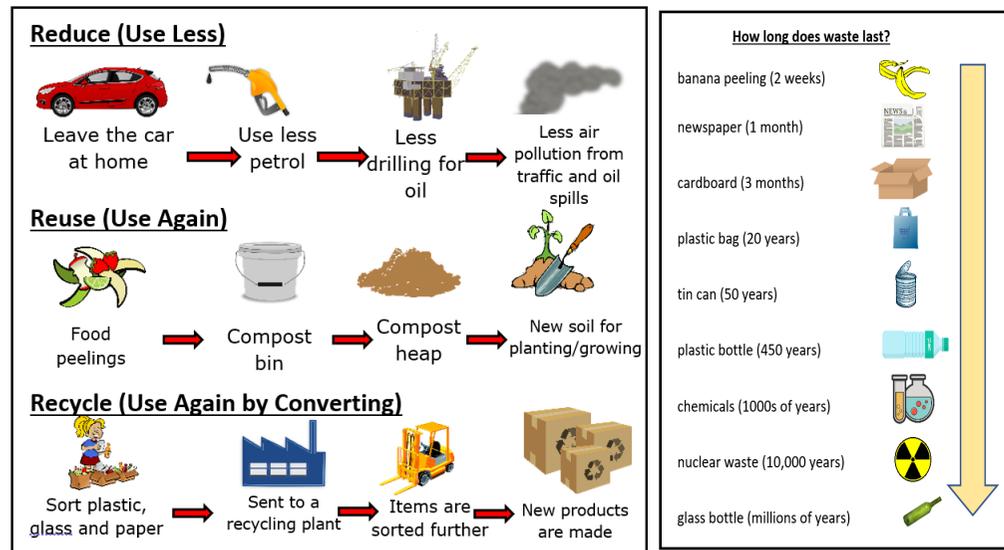


GEOGRAPHY KNOWLEDGE MAT –YEAR 5

POLLUTION AND NATURAL RESOURCES

WHAT YOU SHOULD ALREADY KNOW

Pollution is something introduced into the environment that is dirty, unclean or has a harmful effect. Air, water and land can all become polluted. For example, traffic fumes cause air pollution, factories or farming can put chemicals into rivers and litter/plastic can create land pollution.



Natural Pollution

Much of the damage caused to the environment is caused by human activity but some is created naturally.

- **Volcanoes** – Pollutes the air with dust and poisonous gases
- **Methane** – Production/transport of coal, gas and oil, as well as produced by animals, traps heat

KEY LEARNING

Non-Renewable Energy

Natural Gas 	This fossil fuel is a mixture of gases which you cannot see, taste or smell. It is burned to create energy, releasing carbon into the atmosphere.
Coal 	Coal was formed millions of years ago from plants. It is a shiny, black rock mined from underground and then burned for energy. It is a fossil fuel that creates air pollution.
Petroleum 	A liquid found underground which we sometimes call oil. Oil can be thick and black or watery. It is burned to create energy, releasing carbon into the atmosphere.
Uranium 	Uranium is a mineral found in rocks underground. We split uranium atoms to release energy in nuclear power plants.
Renewable Energy	
Dams 	Dams trap water from seawater at high tide and from rivers. Turbines are turned when the water is released.
Solar Panels 	Solar panels catch energy from the sun's rays and turn into electricity.
Wind Farms 	Huge windmills are placed in areas of strong winds such as marshes or on the top of hills. The wind turns the blades, which creates electricity.
Geothermal 	Geothermal energy is thermal energy generated and stored in the Earth. Water and/or steam carry the geothermal energy to the Earth's surface.

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Antarctica Circle: one of earth's five circles of latitude.

Antarctic Ocean: another name for the Southern Ocean.

Conservation: protection of natural environment and wildlife.

Expedition: a journey undertaken by a group of people with a particular purpose.

Frostbite: injury caused by exposure to extreme cold.

Glacier: a slow-moving mass or river of ice.

Ice Age: when thick ice sheets called glaciers cover huge areas of land, which can last for millions of years and cause big changes to Earth's surface, This has happened a number of times throughout Earth's history.

Iceberg: a large floating mass of ice broken from a glacier or ice sheet and carried out to sea.

Ice Floe: a sheet of floating ice.

Navigate: to move through a particular course in an unfamiliar area.

Pack Ice: a mass of ice floating in the sea.

South Pole: South Magnetic Pole shifting within Antarctica.

Territory: area of land under someone's

WHAT CAME BEFORE

Year 4: UK vs. London/Camden

WHAT COMES NEXT

Year 6: UK vs. the World

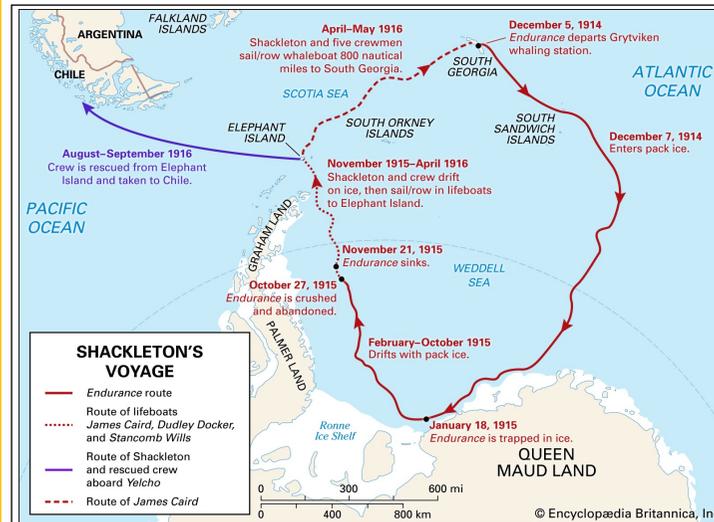


GEOGRAPHY KNOWLEDGE MAT –YEAR 5

UK vs. ANTARCTICA

WHAT YOU SHOULD ALREADY KNOW

- The Equator is an imaginary line that runs through the centre of the earth. The further away from the Equator you are, the colder the climate.
- There are two different poles: South Pole and North Pole.



Ernest Shackleton (1874-1922)

Longest Rivers



Tallest Mountains



Populations



Fauna (animals)



Examples: emperor penguins, elephant seals, south polar skuas, killer whales (orcas), chinstrap penguins and crabeater seals.

Flora (plants)



Examples: not much can grow in such harsh conditions, but Antarctic grass hair and pearlwort manage to survive.

KEY LEARNING

Climate

- The Antarctic is the coldest, driest and windiest continent, even considered a desert due to its low rainfall. 98% of the continent is covered in ice and there are no permanent residents. Temperatures range from -30°C to -60°C

Physical Features

- Glacial Ice Sheets: Antarctica is made up of the East and the West Antarctic Ice Sheets. The Transantarctic mountains separate these two areas.
- Islands and Ice Shelves: Some islands are permanently linked to the mainland by ice whereas others connect seasonally due to sea ice expansion and retreat. The Ross Ice Shelf (at the south) is the largest of these and covers an area larger than the U.K.
- The Dry Valleys: Found in high altitude areas such as Victoria Land near the McMurdo research station. They can have enough melting in summer to allow some land to be free of glaciers.

Human Features

- Melting of the Ice: Global warming is melting the Antarctic Ice Sheet, causing sea levels to rise

GEOGRAPHICAL SKILLS AND FIELDWORK

- How does the UK compare to Antarctica? Consider the different animals and plants that can be found in both areas.
- Compare the climate of the UK and Antarctica using graphs to represent your data.
- Present on a map the voyage Ernest Shackleton

the most well-known city states