

Knowledge Organiser
Subject: Geography Unit: Climate Zones and Biomes

Overview:

During this sequence of learning, pupils will look at different biomes across the world and where they are located. They will research a chosen Biome and explore different vegetation belts in a Biome. They will also investigate the water cycle.

What should I already know?

- Have a clear understanding of the Earth's orbit and the impact this has on seasons.
- Different countries have varied climates depending on their location to the Equator. Countries such as Brazil and Egypt are very hot whereas Russia and Antarctica are very cold.
- Rainforests are located near to the Equator and are very hot and wet. This affects the animals and plants that live there.
- Climate can be shown using climate graphs which show the average temperature and rainfall across the year. They are a good way of comparing the climate in different locations.
- Weather refers to the short term conditions whilst climate is the average pattern over a period of 30 years.

Vocabulary:

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| Climate Zone | A climate zone results from the climate conditions of an area: its temperature, humidity, amount and type of precipitation, and the season. |
| Biome | A biome is a large region with a certain climate and certain types of living things. |
| Vegetation belt | A vegetation belt is an area with distinct plant types, determined by climate, soil, drainage and elevation. |

What will I know by the end of the unit?

Knowledge

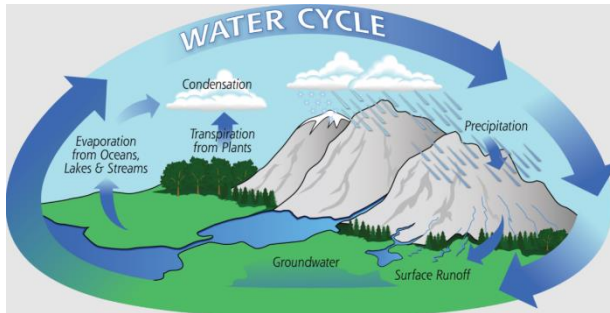
- Climate zones are areas around the world with a certain pattern of weather.
- The main climate zones are: Tropical, Arid, Temperate, Polar, Continental and Mediterranean.



- The Mediterranean climate is characterised by dry summers and mild, wet winters whereas the Tropical climate is very warm and wet throughout the year.
- Vegetation belts are regions of the world that are home to certain plant species determined by the climate.
- A biome is an area classified according to the species that live in that location. Species can include plants and animals e.g. a desert biome is suited to camels and cactus because they require little water. Temperature range, soil type, and the amount of light and water are unique to a particular place and form the niches for specific species allowing scientists to define the biome.

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| Water cycle | The water cycle is the continuous journey of water from oceans and lakes, to clouds, to rain, to streams, to rivers and back into the ocean again. |
| Condense | The process of water vapour turning back into liquid water. |
| Evaporate | The process of a liquid becoming a gas due to being heated. |
| Precipitation | The release of water from the sky, it can be liquid or solid, for example, rain, sleet, hail and snow. |
| Run off | Water is forced by gravity to move across Earth's surface towards larger water accumulations. |

- There are five major types of biomes: **aquatic, grassland, forest, desert, and tundra**, though some of these biomes can be further divided into more specific categories, such as freshwater, Marine, Savanna, Tropical Rainforest, Temperate Rainforest, and Taiga.
- The water cycle is the path that all water follows as it moves around Earth in different states. Liquid water is found in oceans, rivers, lakes—and even underground. Solid ice is found in glaciers, snow, and at the North and South Poles. Water vapor—a gas—is found in Earth's atmosphere.



Skills

- Use maps to discuss environmental regions, key physical and human characteristics, countries and major cities.
- Identify the position of countries in relation to the Equator.
- Compare maps and identify any patterns they have found.