

## Physical World Subject Knowledge Organiser :

The aim of this world is to celebrate the **Physical** nature of our world by studying different biomes with a focus on the Sahara Desert.



### Contextual World Knowledge

The Sahara Desert is the world's largest hot desert and the third largest desert behind Antarctica and the Arctic. Located in North Africa, it covers large sections of the continent - covering 9,200,000 square kilometers which is comparable to the area of China or the US. The Sahara is the hottest desert in the world – with one of the harshest climates. The average annual temperature is 30°C, whilst the hottest temperature ever recorded was 58°C. The area receives little rainfall, in fact, half of the Sahara Desert receives less than 1 inch of rain every year. Despite many thinking of the Sahara as a constantly hot climate, temperatures drop dramatically at night, due to the lack of humidity, and can reach lows of -6°C. Snow falls regularly on several mountain ranges, but nowhere else in the Sahara. The Sahara Desert is the largest hot desert in the world, and the third largest overall after the Antarctica and the Arctic. The Sahara Desert covers an incredible 9.2 million km<sup>2</sup>, which is almost the same size as China, and a total of 8% of the earth's land area. The Sahara is much more than just sand – in fact, the majority of the Sahara is made up of barren, rocky plateaus, as well as salt flats, sand dunes, mountains and dry valleys. The rivers and streams found in the Sahara are all seasonal, apart from the River Nile.

### Geographical Vocabulary

- Weather:** The state of the atmosphere at a particular place and time.
- Climate:** The weather conditions prevailing in an area in general or over a long period, generally about 30 years.
- Equator:** A line drawn on the earth equidistant from the poles, dividing the earth into northern and southern hemispheres and constituting the parallel of latitude 0°.
- Biome:** A large naturally occurring community of plants and animals occupying a major habitat.
- Adapt:** The action of becoming adjusted to certain conditions in order to survive.
- Ecosystem:** A biological community of interacting organisms and their physical environment.
- Desert:** A barren area of landscape where little precipitation occurs and, consequently, living conditions are hostile for plant and animal life
- Desertification:** The process by which land becomes drier and degraded, as a result of climate change or human activities, or both.
- Habitat:** The natural home or environment of an animal, plant, or other organism.
- Extreme weather:** Extreme weather is when a weather event is significantly different from the average or usual weather pattern. This may take place over one day or a period of time.
- Climate change:** A change in the average conditions of a certain area or country.
- Global warming:** A gradual increase in the overall temperature of the earth's atmosphere.
- Pollution:** A substance of gas that is released into the atmosphere which can be harmful or have poisonous effects.

### Geographical Understanding

Biomes are areas of our planet with similar climates, landscapes, animals and plants. What lives in each biome depends on: how warm or cold it is, how dry or wet it is, how fertile the soil is. The animals in a biome depend upon plants for food. The plants in a biome often also depend upon the animals for spreading pollen and seeds so that new plants can grow. So both plants and animals rely on each other to stay alive. Tropical rainforests are hot and wet all year round. They are home to half of all the different types of plants and animals on the planet. Deserts are hot and dry all year round. The only things that grow are cacti and small shrubs because the soil is shallow and rocky. Animals come out at dusk when it is cooler. The savannah is hot all year round with a long, dry season. Only grasses and shrubs grow here but it is home to lots of different types of animals such as elephants, zebras and wildebeest. Woodlands are habitats where the main plants found are trees, but mosses, ferns and lichen can also be found. The climate is warm and mild, with more rain falling in the winter than the summer. Grasslands are areas of land that are vast and open, with grasses being the main plants. The largest grasslands are found in East Africa. Zebras, giraffes, elephants and rhinos can all be found living in grasslands. The tundra is the coldest of all the biomes. There is very little rain or snow and the temperatures are freezing. Winters are long and summers are short. Part of the soil is frozen all year round, although the top part defrosts in summer and plants such as mosses can grow. The Sahara exhibits great climatic variability within its borders, with two major climatic regimes differentiating along a north-south axis: the desert's northern latitudes are arid subtropical and have two rainy seasons, while the southern ones, although also arid, are more tropical and have only one rainy season. The southern reaches of the Sahara end in the Sahel, a semi-arid buffer zone that separates the desert from the more temperate savanna biomes beyond. A number of other factors affect climatic variability within the Sahara as well: There are a number of opportunities that arise as a result of living near the Sahara Desert, these can include the extraction of oil and gas as well as harnessing solar energy. Other opportunities that arise can include tourism with people all over the world visiting the area due to its ties with Hollywood (Movie sets for films such as Star Wars) and people visiting to take part in extreme sports that can only be done in Deserts, such as sandboarding.

### Skills and Enquiry

You need to be able to:

- Understand and make Inferences from photos
  - Describe using data from a graph
- (Think about the GCSE Technique G – General Trend / C – Changes to the trend / S – Specific Data / E – Exceptions to the trend)
  - Analyse Choropleth maps
  - Analyse Line graphs
- Recognise social, economic and environmental opportunities of living in and around the Sahara Desert.
  - Draw conclusions from data
- Understand and know how to use median, mean, range.

### The St Benet Biscop Geographer

At StBB we want pupils to develop geographical enquiry further by asking perceptive questions, thinking critically, weighing evidence and developing a perspective or judgment.

As SBB Geographers you need to be aware of the impacts of our daily decisions and choices on both people and the environment.

You will relate this to the Sahara Desert in a range of contemporary issues. This will enrich your knowledge of the global community, your place in the world, the importance of ecosystems and opportunities related to the Sahara Desert.