

CLIMATE:

Why is climate important?

Unit overview

In this unit the children are introduced to different ways of communicating geographical data, particularly through different styles of maps. They will learn to read weather and climate maps, and learn how weather and climate are generalised into world climate zones. The concept of biomes will be explored, each with distinctive climate, soil, flora, fauna and human activity.

Knowledge, skills and concepts

In this unit, the children will:

- locate some of the world's climate zones on a globe or map, name examples and have some understanding of them
- extract geographical data (e.g. rainfall, temperature, weather, climate/vegetation zones) from pictorial/graphical representations
- describe and give examples of the variety of biomes and vegetation belts
- use appropriate geographical vocabulary to describe weather, climate, climate zones, biomes and vegetation belts
- identify the world's hottest, coldest, wettest and driest locations.

Background information

There is often confusion about the difference between weather and climate.

Weather is short term. It is what happens in our atmosphere from day to day. It includes precipitation, temperature, wind and humidity. Weather varies from place to place, from day to day and from season to season. The range of weather in a place is a characteristic of its climate.

Climate is long term. It refers to the average weather pattern of a place over many years. Climates can be predominantly hot, cold, wet or dry, hot and wet, hot and dry, and so on. The climate of a place affects the soil, flora and fauna of that place, and impacts on human activity in a variety of ways.

Biomes include deserts, forests, grasslands, tundra and aquatic environments. Biomes are defined collectively by the climate, soil, organisms, flora and fauna of a large geographical area. Each biome consists of many ecosystems whose communities have adapted to the small differences in climate and the environment inside the biome.

Cross-curricular links

- **English:** reading factual information; recording factual information in writing, on a diagram; writing a case study, a script discussing ideas and information, practising presentation skills; speaking in an interview.
- **Maths:** learning about temperature, including negative numbers measuring in millimetres; using a Venn diagram.
- **Science:** researching plant and animal habitats; learning about temperature, including freezing of water, plant and animal life.
- **Art & design:** creating a wall display of visual material; an informational poster; painting monochrome images. There are two specific art activities suggested that would complement this unit:
 - after looking at Sebastião Salgado's black and white photographs of the Nenets in Siberia, learn to mix black and white paint to replicate a photograph in shades of grey
 - after looking at the aerial photographs of the Sahara Desert, learn to mix primary colours to make shades of orange and brown to follow up with work on desert patterns.
- **Computing:** using Google™ Earth; making a PowerPoint presentation.
- **History:** explorers, especially those associated with the South Pole, Amundsen, Scott and Shackleton and possibly those who adventured in the Tropics, especially Livingstone, Stanley, Speke, Burton and Park.

The Big Finish

This unit culminates with children producing 'The Big Finish Report'. The climate report could be an oral / live presentation, poster, video or PowerPoint. There is a choice of three scenarios: the report can be for a specified animal or specified people – these could be the children's relatives living overseas, or you could revisit the Nenet who are introduced in Week 2. The report should include information about:

- where the specified animal or group of people live – continent, country/ countries
- a weather summary over seasons or a year (temperature and rainfall)
- the climate zone and biome (approximate vegetation zone)
- how the climate and biome affects their way of life.

Map work

Throughout this unit, children will use a variety of styles of maps of the world (accessible on the internet) and interpret them. They will also learn to extract information from geographical photographs. You could use printed copies of the maps and images or display them on the interactive whiteboard. Where it is suggested that children use atlases to locate places, you may choose to use Google Earth instead.

Fieldwork

Try to organise a visit to a deciduous forest or woodland, and find out about the native trees of our temperate forest biome. Try to arrange a talk from a park or countryside ranger to discover more about the issues affecting the flora, fauna and countryside of, or near/nearest to, your local area.

In the school environment, extend any work the children have done previously in collecting, analysing and communicating weather data.

Independent learning area

Create an area in the classroom where children can find out more about biomes, weather and climate. A useful site is www.econet.org.uk/weather, which includes sections on 'Weather around the world' and 'Weather extremes'.

Assessment

All children can:

- indicate the tropical and polar climate zones on a globe or map
- describe the characteristics of these zones using appropriate vocabulary
- say what a biome is.

Most children can:

- indicate the tropical, temperate and polar climate zones on a globe or map
- describe the characteristics of these zones
- describe and compare some biomes using appropriate vocabulary.

Some children can:

- locate most climate zones on a map or globe
- describe the characteristics of most zones introduced during the course of the unit
- explain why there is a relationship between climate and biome using appropriate vocabulary.