



Holly Park Learning Organiser

Year 3 - Geography (I)



Settlements - Do we live in a Biome?

Prior Knowledge:

- Localities are unique
- Local areas share the same weather patterns
- The North Pole and the South Pole have a cold climate all the year round
- The equator has hot weather around the year
- Animals and plants are suited to their habitats and these are different around the world

National Curriculum Learning Objectives

- To describe aspects of biomes and vegetation belts
- Use maps, atlases, globes and digital/computer mapping to locate countries and describe the features studied.
- Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of OS maps) to build their knowledge of the UK and the wider world.
- Use fieldwork to observe, measure, record and present the physical features in the local area using a range of methods including sketch maps, plans and graphs and digital technologies

Key Vocabulary

biome	A large area on the Earth's surface which has certain types of animals and plants living there.
vegetation belt	The plant life in a certain area. This is determined by climate, soil, drainage and elevation (height from sea level)
tundra	A cold, treeless region
temperate	An area with cold winters and hot summers
forest	An area filled with trees and underbush
grassland	An area with large, flat areas of grass
desert	An area of land that receives no more than 25cm of rain per year
marine	Having to do with the ocean
shrubland	An area of plants which are no more than 3m high
coniferous	A tree producing cones with needle-like leaves
rainforest	An area of tall, mostly evergreen trees and high rainfall

General Overview of This Unit:

Each biome has different characteristics.

Place: Worldwide and Coppetts Wood

Focus: Biomes

New Learning in this Unit:

- Animals and plants living around the world are unique because of the climate, land type, soil, rainfall and vegetation.
- The characteristics are given names eg forest
- All over the world there are areas with shared characteristics
- Fieldtrips can be used to prove something
- We can collect our own information and analyse it, doing our own research to answer a question.

Enquiry Skills - Disciplinary Knowledge

- Begin to ask/initiate geographical questions.
- Use NF books, stories, atlases, pictures/ photos and internet as sources of information.
- Investigate places and themes at more than one scale
- Begin to collect and record evidence
- Analyse evidence and begin to draw conclusions e.g. make comparisons between two locations using photos/ pictures, temperatures in different locations.

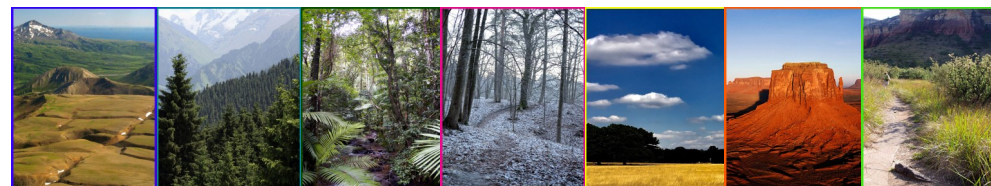


Adaptations:

Cut out different plants and animals and stick them into the correct biome for them

Essential Knowledge to Progress:

Animals and plants need food and water to survive. Conditions are different around the world. This means that the animals and plants that live there are also different.



Session	1	2	3	4	5	6
Enquiry Question	What is the same and different about these places? How would you describe them?	What is a biome?	Why are the biomes so different?	Do we live in a Biome? How can we find out?	How can we use our data to answer a question?	Which biome do we live in? What is your evidence?
Main Teaching Point	Places have different features that make them unique.	There are 8 different biomes that have different features.	Location, weather, climate, elevation, land type, soil,, etc. make the biomes have different characteristics.	We can collect our own information and evidence to answer a geographical question. Plan own Fieldwork	We can compare our findings with other information to answer a question.	Using evidence, we can answer questions about a place and its features.

Map Skills

- Make a map of a short route experienced with the key features in order.
- Make a simple scale drawing
- Know why a key is needed
- Begin to recognize OS symbols on a map
- Locate places on large scale maps
- Draw a sketch map from a high viewpoint
- Begin to identify significant places and environments

Style of Map

- Large Scale OS maps
- Map sites online
- Junior atlases
- Features on aerial photographs
- Maps with co-ordinates
- Maps using symbols and keys
- Maps with 4 compass points
- World Map showing Biomes
- Map with continents named

Suggested End of Unit Task:

Children to present their findings to others in the class to decide on the outcome to the enquiry question - Do we live in a biome?

Fieldwork

Visit Coppetts Wood to find evidence of the biome in which we live.

What vegetation can you find?

What evidence of wild animals can you find?

What is the temperature?

What is the weather like?

What evidence can you find to convince someone of the correct biome?

Biomes & Vegetation Belts

Geographers disagree on how many **biomes** there are - some are divided into smaller sections.

There are five major **vegetation belts** - tundra, forests, grassland, ice-sheet and desert.



Assessment Benchmarking:

- Children have begun to develop a framework of world locational knowledge, including knowledge of places in the local area, UK and wider world, and some globally significant physical features.
- Children demonstrate their knowledge and understanding of the wider world by investigating places beyond their immediate surrounding, including human and physical features and patterns, how places change and some links between people and environments. They become more adept at comparing places and understand some reasons for similarities and differences
- Children are able to investigate places and environments by asking and responding to geographical questions, making observations and using sources such as maps, atlases, globes, images and aerial photos. They can express their opinions and recognise that others may think differently

Future Learning from this Unit:

- The continent of Africa covers many climate zones (Y4)
- An environmental region is an area that has a particular type of environment and physical features (Y4)
- Environmental regions have an impact on the way humans use the land. (Y6)
- The rainforests can be compared to other forests (Y6)
- Humans have an impact on natural environments; sometimes this is negative. (Y6)
- Antarctica is crucial in keeping the world's temperature stable. (Y6)

Rainforest

The rainforest biome remains warm all year. It must stay frost-free. The temperatures range from 20°C (68°F) to 25°C (77°F). Rainforests receive the most rain of all the biomes. - 2,000 to 10,000mm of rain per year. There are two types of rainforest - tropical and temperate. Tropical rainforests are found closer to the equator and temperate forests are found further north, near to the coast. The majority of houseplants come from the rainforest.

The main animals are jaguars, sloths, gorillas, orangutans, red-eyed tree frogs and macaws.

The tropical rainforest is a hot, moist biome where it rains all year long. It is known for dense vegetation that form three different layers. The top canopy contains giant trees. These prevent sunlight reaching the ground. The middle understory is made up of vines, smaller trees, vines and palms. The bottom layer - the floor is covered with wet leaves and 'leaf litter'. The dead leaves quickly turn to compost which goes back into the ground. The main plants are vines, palm trees, orchids and ferns.



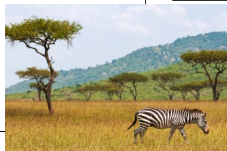
Grassland

The range of temperature can be -20°C (-4°F) to 30°C (86°F). The Grasslands receive around 500-900mm of rain-fall per year. The grasses are made up of prairie clover, salvia, oats, what, barley and coneflowers. Grassland can be found on every continent except for Antarctica. Grasslands are open and continuous flat areas of grass. They are often located between temperate forests and deserts. Grasses are usually between 25cm and 2 metres tall! The height of the grass is determined by the amount of rainfall.

Tropical Grasslands have dry and wet seasons that remain warm all the time. Temperate Grasslands have cold summers and warm summers.

Every year, the grass dies to protect it from the winter/dry conditions. The soil protects the roots and it starts to grow again in the new season.

Zebras, antelope, bison, maned wolf and an Indian elephant are Grassland animals



Desert

During the day, desert temperatures rise to 38°C (a little over 100°F). At night, desert temperatures fall to an average of -3.9°C (about 25°F). The temperature is different at night to the day, because of the lack of clouds, the heat can escape easily. Deserts get about 250mm rain per year - the least amount of rain of all the biomes.

Cacti, small bushes and short grasses grow in the desert. Some plants can survive by being dormant and then flourishing when water is available. Some plants such as cacti store water in their stems and use it slowly, bushes conserve water by growing only a few leaves or having large roots.

Animals that live in the desert are: scorpions, meerkats, camels, sidewinder snakes and jerboa.

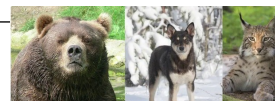


Coniferous Forest

The Coniferous Forest has a winter with temperatures ranging from -40°C (-40°F) to 20°C (68°F) and a summer with an average temperature of 10°C (50°F). The Coniferous Forest is between the Tundra and the Deciduous Forest.

The forests are made up of trees that produce cones and needles called 'coniferous-evergreen trees'. Needles help the trees survive in areas that are very cold or dry. Some of the common trees are spruce, pine and fir. Coniferous forest regions have cold, long, snowy winters and warm, humid summers. They have well-defined seasons.

The main animals are moose, white-tailed deer, grizzly bears, lynx, porcupines and red squirrels.



Tundra

The Tundra receives 150-250mm of rain per year. Temperatures usually range between -40°C (-40°F) and 18°C (64°F). The Tundra receives such little rainfall, it is similar to a desert. Temperatures can get warmer in the summer. Tundra winters are long, dark and cold for six months of the year. There is always a layer of frost under the ground 'permafrost'. Tundra can be found at the tops of mountains elsewhere in the world. The Tundra is still quite a wet place because the water there evaporates much slower due to the lower temperature.

There is almost no vegetation due to the frost. There is some lichen, moss, grass and shrubs

The main animals are arctic fox, polar bear, snowy owl, lemming, reindeer and the arctic hare



Shrubland

The summers are hot and dry with temperatures reaching up to 38°C (100°F). In the winter, temperatures stay around -1°C (30°F) and are cool and moist. They receive around 200-1000mm of rain per year.

The vegetation includes herbs, shrubs and grasses and forests. Shrublands get more rain than deserts and grasslands, but less than forests. There are usually short trees, there is not enough rain to support tall trees. Shrublands are usually quite open, so grass grows between the shrubs. Some plants have adapted to fire, to protect themselves from the frequent lightning that occurs in the summer. Some plants have small needle-like leaves to save water, some have leaves that reflect the sunlight.

Shrubland animals are: coyotes, rabbits, snakes and lizards with birds such as quail and hawk.

Temperate Deciduous Forest

The Temperate Deciduous Forest has temperatures between -30°C (-22°F) and 30°C (86°F) with a yearly average of 10°C (50°F). Hot summers and cold winters are typical. The forest receives 750-1500 mm of rain per year.

The trees found here are oak, maple and beech, shrubs, herbs and moss.

The forests have four seasons. Leaves change colour and fall off in Autumn, growing back in the Spring. Because it gets so cold, the trees have a period of being 'dormant'. They have thick bark to protect them from the cold weather. Only small amounts of sunlight get through to the floor so smaller plants can grow here.

Rabbits, foxes, raccoons, squirrels, bears. Deer and moose all live in the deciduous forest.

Marine

Oceans - Atlantic, Pacific, Indian, Arctic, and Southern Oceans.

Coral reefs - Coral reefs are small in size when compared to the oceans, but around 25% of marine species live in the coral reefs making them an important biome. .

Over 90% of the life on Earth lives in the ocean.

The Mariana Trench is the deepest point in the ocean at 36,000 feet deep.

The largest animal on Earth, the blue whale, lives in the ocean.

The average temperature of the ocean is around 39 degrees F.

The main plants are algae, sea grass, phytoplankton and kelp.

