

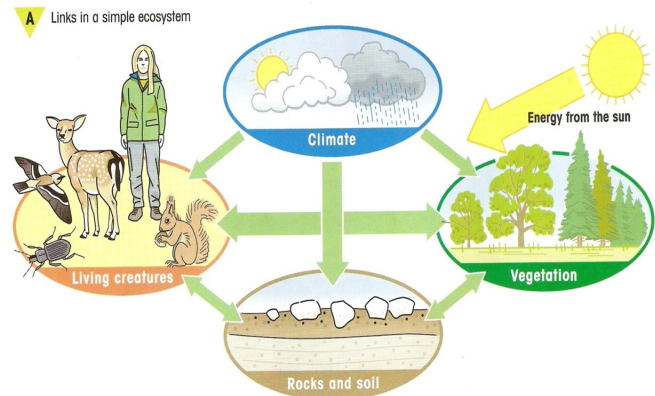
Knowledge organiser: Y7—What makes up planet earth?

KEY VOCABULARY

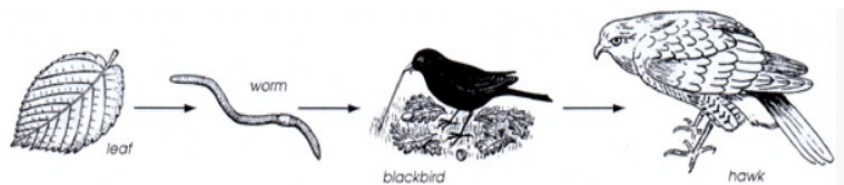
Biodiversity—the number and variety of plants and animals in an area	Temperate—mild climatic conditions, not too hot or not too cold.
Abiotic—the non-living components of an ecosystem	Tropical—characteristic of high temperatures that are constant all year round.
Biotic—the living components of an ecosystem	Ecosystem—a community of living organisms, and their connections with the climate and soil.
Adaptation—a change in a plant or animal that helps it survive in an environment.	Climate—the average weather conditions over a long period of time, usually 30 years.
Fieldwork—Collecting data to investigate a question about the real world.	Biome—a global ecosystem such as tropical rainforest of temperate woodland.

Ecosystems

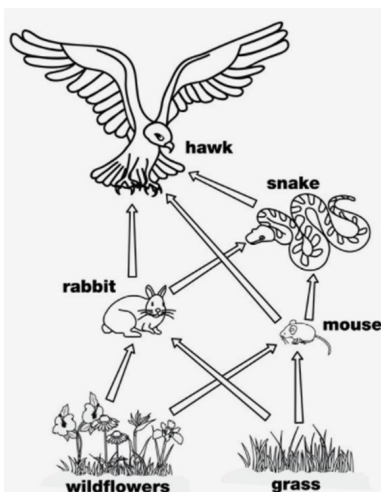
- An ecosystem is a community of living and non living things. It includes all the different spheres.
- An ecosystem is made of abiotic and biotic components that interact.
- The energy in an ecosystem comes from the sun.
- Energy is transferred from sunlight through an ecosystem via food chains.
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- Food chains show how energy is transferred from producers to consumers.
- Producers convert sunlight into energy (plants).
- Consumers eat producers or other consumers for energy.



- A food web shows all the food chains within an ecosystem.



Hedgerows in the UK

- A hedgerow is an example of a small ecosystem.
- A hedgerow is a line of thick, woody bushes that mark the boundaries of fields and properties.
- The biotic components include animals (eg mice, snails and birds) and plants (ash, beech, hazel, holly, rowan, beech, elder)
- A healthy hedgerow includes shrubs and trees, lots of biodiversity, good width and height, no litter.
- Hedgerows are important because:
 - Nesting area for birds
 - Provide food and shelter for many species
 - Reduce risk of flooding
 - Prevent soil erosion.
 - Help store carbon so help fight against climate change

Investigating ecosystems using fieldwork (FW)

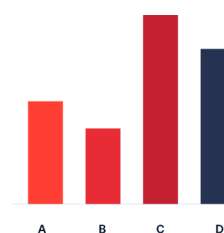
- A fieldwork investigation is where geographers investigate the real world to test out theories and ideas to gain new knowledge.
- Primary data is the name we give to the data we collect ourselves.
- To investigate how healthy hedgerows are at Meadowhead we collected primary data on the number of species and amount of litter there was at 5 sites around the school.
- The data was presented as a bar graph so we could easily see how the biodiversity of the hedges.

Stages of fieldwork enquiry

1. Generate a question to investigate
2. Collect data that will help us answer the question
3. Present the data we have collected
4. Analyse and interpret the data to reach conclusions that answer our original question.
5. Reflect on our fieldwork – are we confident our fieldwork is accurate?

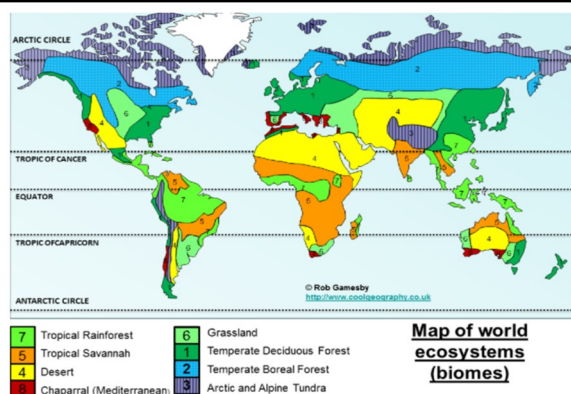
Y7 Biodiversity Fieldwork - Hedgerow Survey Recording Sheet

	Plant species identified	Animal species identified	Litter Tally
Site 1			



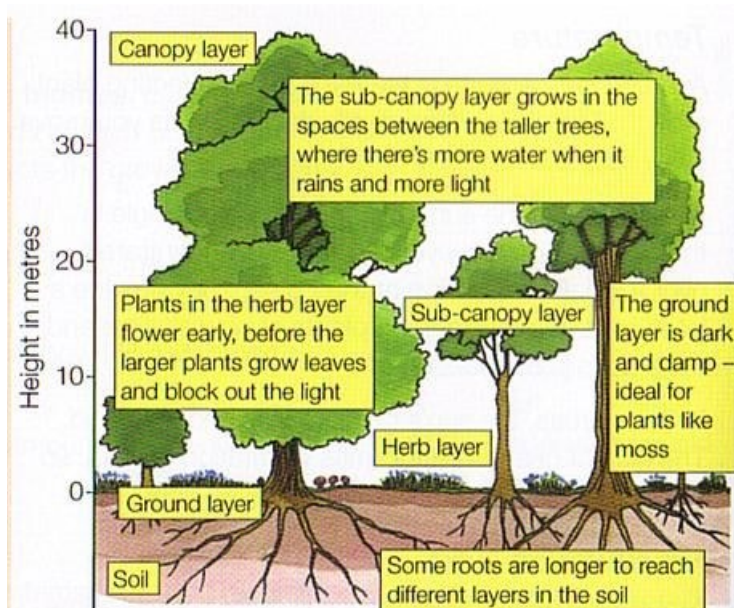
Global Ecosystems

- A large ecosystem is called a biome.
- It is hot and wet along the equator creating tropical rainforest.
- Along the tropics it is hot and dry creating hot deserts.
- Near the poles it is cold creating tundra and polar biomes.
- The main biome in the UK is temperate woodland.



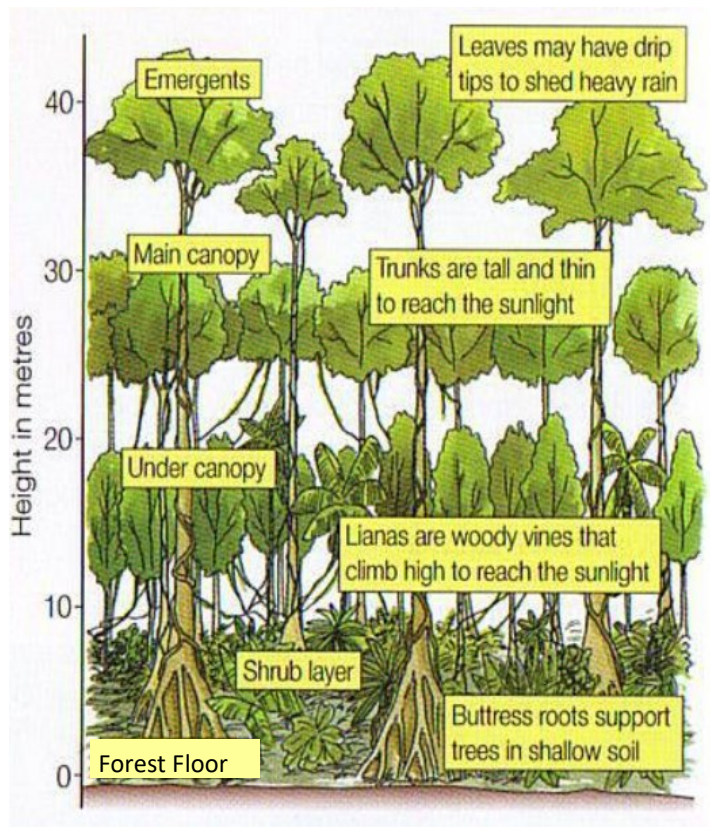
Temperate Woodland

- Found in the northern hemisphere EG: North America, Europe and central Asia.
- The climate is variable (it changes) with 4 seasons: spring, summer, autumn and winter.
- Average temperature is 10 degrees and rainfall is 75-150mm a year.
- Vegetation grows in spring and summer.
- Plants lose their leaves in autumn and winter when it is colder (deciduous trees)
- There are 4 layers of vegetation.
- Ecclesall woods is an example of temperate woodland.
- Humans uses include walking, timber, cycling, conservation.
- Humans damage woodlands by dropping litter or damaging the ground.



Tropical Rainforests

- Tropical rainforests are hot (27 degrees) and wet (2000+mm of rain a year).
- The vegetation is adapted to the climate and 5 layers have developed.
- Tropical rainforests provide everyone around the world with lots of resources so they are important.
- The rainforest vegetation takes in carbon dioxide and gives out oxygen. This balances the gases in the atmosphere.
- The high rainfall creates river networks that can provide transport and water supply.
- They provide medicines - a quarter of all natural medicines were discovered here.
- Topical oils are key ingredients in cosmetics, soaps and shampoos.
- Food, eg vanilla, chocolate, nuts, ginger and pepper
- Natural resources such as wood, rubber, bamboo and minerals are found in rainforests.



Want to know more or check your learning? Use these websites to help!

Seneca Learning:

<https://senecalearning.com/en-GB/seneca-certified-resources/geography-ks3-1/>



Oak Academy KS£3 lessons—hosted by United Learning

<https://continuityoak.org.uk/lessons>



BBC Bitesize—biomes

<https://www.bbc.co.uk/bitesize/guides/zh2p34j/revision/2>



BBC Bitesize—longitude & latitude

<https://www.bbc.co.uk/bitesize/guides/ztqtyrd/revision/1>

