

<b>SPRING TERM NEW CURRICULUM YEAR 6</b> <b>Main focus: GEOGRAPHY</b> <b>Title:</b>		
<b>NC Requirements</b> <b>GEOGRAPHY</b>	<b>Knowledge</b>	<b>Skills</b>
<b>Human and physical geography</b> <ul style="list-style-type: none"> <li>describe and understand key aspects of: physical geography, including: climate zones, biomes and vegetation belts</li> </ul>	Link to Nursery-Ourselfes Link to Nursery-Living Things Link to Reception-Ourselfes Link to Nursery-Farming Link to Y1-Animals Link to Y1 - Seaside Link to Y2-Rainforests (Animals including humans) Link to Y3- Animals Link to Y4 – South America Link to Y4-Human Body Link to Y5-Rivers  <b>Key Vocabulary</b> <b>Biome</b> – A large, natural occurring community of plants and animals that have common characteristics for the environment they exist in. <b>Vegetation</b> – Plants considered collectively, especially those found in a particular area or habitat <b>Continents</b> – Any of the world’s main continuous expanses of land <b>Environment</b> – The surroundings or conditions in which a person, animal or plant lives or operates <b>Key knowledge</b> <b>Classifying different environments: ecosystems and biomes</b> <ul style="list-style-type: none"> <li>Group areas that share characteristics such as the ecosystem of the area. An ecosystem is a group of living organisms interacting with the non-living parts of an environment. Ecosystems can vary in size, eg a single hedgerow or a whole rainforest.</li> <li>The type of plants and animals found in each ecosystem depends on the type of climate and soils.</li> <li>The harsh conditions of an extreme environment mean that only plants and animal species that have adapted are able to survive in the area.</li> <li>The vegetation, climate and soils are closely linked with one another.</li> </ul> <b>Biomes -</b> <ul style="list-style-type: none"> <li>A biome is a large region of Earth that has a certain type of climate and certain living things (ecosystem). The same biome can be seen in different parts of the world where the conditions are replicated.</li> <li>Plants and animals in each biome have traits or characteristics that help them survive in that particular biome.</li> <li>Climate, soil, the ability of soil to hold water, and the slope, or angle, of the land all determine what types of plants will grow in a particular region.</li> </ul>	<ul style="list-style-type: none"> <li>I can answer questions by using a map</li> <li>I can describe how some places are similar and dissimilar in relation to their human, physical and economic features</li> <li>I can use maps, aerial photographs, plans and e-resources to describe what a locality might be like</li> </ul>

**Locational knowledge:**

- identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)

**Some of the major biomes/ vegetation belts of the world include:**

- **Tropical rainforest** 23.5° north - 23.5° south of the equator. Hot and wet all year. Rich in plants and animals. Poor soils.
- **Tropical grassland or savanna** Within the tropics. Mainly between 5° and 15° north and south of the equator. Hot with a wet and dry season. Mainly grass and a few specially adapted trees.
- **Desert** 15-30° north and south of the equator. Very hot and dry. Limited plants.
- **Mediterranean** 30-40° north and south of the equator. West coasts. Hot, dry summers and warm, wet winters. Mainly scrub vegetation - plants adapted to summer drought.
- **Deciduous forest** 40-60° north and south of the equator. Cool summers and mild winters. Rain throughout the year. Rich deciduous woodlands.
- **Temperate grassland** 40-60° north and south of the equator. Warm summer and very cold winter. Quite low rainfall. Mainly grassland vegetation.
- **Coniferous forest (Taiga)** 60° north of the equator and on mountains. Long, cold winters. Short, mild summer. Limited rainfall. Coniferous trees.
- **Tundra** Far north. Below freezing for most of the year. Ground permanently frozen. Light snow.
- **Mountain** Very cold. Thin soils. Limited vegetation.
- **Polar** Very cold all year round. Permanent or semi-permanent layer of ice.
- Mainly found in the Arctic and Antarctic.

**The world's time zones**

- measured from a starting point of 0° Longitude, centred at the Greenwich Observatory in London. This point is known as the Greenwich Meridian or the Prime Meridian. Time at the Greenwich Meridian is known as Greenwich Mean Time (GMT). Greenwich Mean Time (GMT) began to be used locally in Greenwich in 1675, when the Royal Observatory at Greenwich was built, to help ships navigate using lines of longitude. At that time, each city in England used its own local time.
- GMT was adopted nationally, predominantly to enable railway timetabling, and became officially recognised as the standard in Britain in 1880. Now, every place in the world is divided into time zones and the terminology of Greenwich Mean Time in international time zones has been replaced by Co-ordinated Universal Time (UTC). GMT remains in use as the name of the time zone that the UK is in. UTC is also measured from the Prime Meridian.
- On the opposite side of the world to the Prime Meridian is the International Date Line. The Prime Meridian and the International Date Line divide the world into the Eastern and Western hemispheres.
- As Earth rotates towards the East, a full day for everywhere on Earth starts at the International Date Line and continues to the west past the Prime Meridian and on round to the International Date Line.
- International time (UTC) is measured from the Prime Meridian, and is shown as either + or - UTC. The time zones to the east of the Prime Meridian round to the International Date Line are plus hours (the east encounters daytime before the Prime Meridian), and the time zones to the west of the Prime Meridian round to the International Date Line are minus hours (the west encounters daytime after the Prime Meridian). For example, at 12.00 in

- I can identify and name the Arctic and Antarctic Circles
- I can name and locate most countries and their capital cities across Europe and some around the world
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- I can explain how time zones work and calculate time differences around the world

	<p>London, UK, it is 23.00 (UTC+1) in Sydney, Australia, and 04.00 (UTC-8) in Los Angeles, USA.</p> <ul style="list-style-type: none"> <li>• Times in certain places can vary during the year due to local adjustments. For example, in the UK during British Summer Time, the clocks go forward one hour so the UK time becomes UTC+1. When the clocks go back one hour in the autumn, the UK reverts back to UTC.</li> </ul> <p><b>Know the significance of longitude and latitude – any location on Earth is described by 2 numbers</b></p> <ul style="list-style-type: none"> <li>• <b>Longitude</b> – east or west of Prime meridian, lines sometimes called meridians. Divides the earth in eastern and western hemispheres.</li> <li>• <b>Latitude</b> – north or south of the equator, measured every 20 degrees.</li> <li>• <b>Equator</b> is 0 degrees and separates the northern and southern hemispheres.</li> </ul>	
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<b>NC Requirements HISTORY</b>	<b>Knowledge</b>	<b>Skills</b>
<p>Identify historically significant people and events in situations</p>	<p>Link to Nursery-Ourselfes  Link to Nursery-Living Things  Link to Reception-Ourselfes  Link to Nursery-Farming  Link to Y1-Animals  Link to Y1 - Seaside  Link to Y2-Rainforests (Animals including humans)  Link to Y3- Animals  Link to Y4 – South America  Link to Y4-Human Body  Link to Y5-Rivers  Link to Y6-Ancient Greece (Evolution)</p> <p>Carl Linnaeus was a Swedish scientist who believed it was very important to have a standard system of classification. At the time he was alive, in the 1700s, there was no agreed standard method. Linnaeus collected and examined over 40,000 specimens of plants, animals and shells. In 1735, he published his first edition of 'Systema Naturae', which described his system for classifying living things. Over the next several years, Linnaeus continued to publish new editions of 'Systema Naturae' that included more species of living things. His tenth edition was published in 1758 and is considered to be the most important edition.</p> <p>Linnaeus' original system of classification classified everything in nature into a hierarchy. Three large groups, called kingdoms - plants, animals and minerals, into which the whole of nature could fit. He then split each kingdom into smaller and smaller groups, or levels.</p> <p>Today, the Linnaean system is only used to classify living things, so it does not include minerals. Furthermore, as new living things have been discovered, scientists have had to add additional levels in the hierarchy. A new level above kingdom, called domain, has also been introduced.</p>	<ul style="list-style-type: none"> <li>• I can devise questions to help me understand.</li> <li>• I can show that I understand how knowledge of the past is constructed from a range of sources.</li> <li>• I can select and organise relevant historical information.</li> <li>• I can recognise the importance of significant individuals and their impact.</li> </ul> <p><b>Skills vocabulary</b></p> <p>Deduction  Inference  Organising  Information  Chronology  Comparison  Observation  Discussion  Research  Reflection  Interpretation  Questioning – historically valid  Perceptive questions</p>

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NC Requirements SCIENCE	Knowledge	Skills
<p><b>Living things and their habitats</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals</li> <li>give reasons for classifying plants and animals based on specific characteristics</li> </ul>	<p>Link to Nursery-Ourselfs Link to Nursery-Living Things Link to Reception-Ourselfs Link to Nursery-Farming Link to Y1-Animals Link to Y1 - Seaside Link to Y2-Rainforests (Animals including humans) Link to Y3- Animals Link to Y4 – South America Link to Y4-Human Body Link to Y5-Rivers Link to Y6-Ancient Greece (Evolution)</p> <p><b>Key vocabulary</b> Classify, sort, group, similarities, differences, compare Carl Linnaeus, Linnaean, classification, standard, domain, kingdom, phylum, class, order, family, genus, species. mammals, reptiles, amphibians, fish, birds or insects, microorganisms, sub-groups of vertebrates/invertebrates. Fungi, mould, cells. Infectious, virus, nucleus</p> <p>Know how to classify living things (animals) into these groups - mammals, reptiles, amphibians, fish, birds or insects - according to their features. Begin to understand how the Linnean system of classification works and how it was developed. <b>Recall learning from Y4 on invertebrates and vertebrates.</b> Recall that vertebrates have a backbone, and invertebrates don't have a backbone Know that groups of <b>invertebrates</b> include insects, arachnids, annelids, molluscs, crustaceans and echinoderms <b>Vertebrates</b> can be sorted into mammals, birds, fish, reptiles and amphibians.</p> <p><b>Microorganisms</b> Microorganisms are very tiny living things, so small that they are not visible to the naked eye, so a microscope is needed to see them. Can be found all around us. Can live on and in our bodies, in the air, in water and on the objects around us. They can be found in almost every habitat on Earth. Some animals and plants are microorganisms eg: dust mites and plankton</p> <p>Know that other microorganisms are fungi, such as mould, yeast and Penicillium fungus. That all microorganisms share similarities and differences, and can be classified using the Linnaean taxonomic system. All living things are initially grouped into 3 domains: archaea, bacteria and eukaryotes. The</p>	<p><b>INVESTIGATIONS</b> Use classification systems or keys to identify some animals and plants in the immediate environment</p> <p><b>WORKING SCIENTIFICALLY</b> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests</p> <p>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>

living things in the archaea and bacteria domains are collectively known as the prokaryotes. Fungi, plants and animals are all eukaryotic kingdoms. Eukaryotic microorganisms include mould and yeast, as well as microscopic animals and plants such as dust mites or plankton. Bacteria are prokaryotic microorganisms. Viruses are not classified using the standard classification system

Bacteria are single-celled microorganisms. Found in diverse habitats all over the Earth. Sometimes viruses are called microorganisms, but they are not really alive. They are infectious agents that can replicate only inside the cells of living things.

Microorganisms can be helpful or harmful and their spread needs to be controlled or contained. eg Bacteria are used to ferment milk as part of the cheese making process. Eg Food poisoning can be caused by bacteria that grow on uncooked or undercooked food.

Know that mould is a type of fungus. The tiny cells of mould are called spores but when the mould spores land on a host, they grow and thrive by feeding off the food they land on. Mould spores feed themselves by producing chemicals that break the composition of the food down so the spores can grow while the food rots away. There are many more conditions that will cause mould to grow.

Eukaryotic cells, such as the mould cells contain smaller parts called organelles. A very important organelle in eukaryote cells is the nucleus. It acts as the control centre of the cell and includes all the genetic information of the cell, which is known as its DNA. The DNA is organised inside the nucleus. Prokaryotic cells such as bacteria do not usually contain any organelles. They do not have a nucleus and their DNA is not organised or contained within any structure in the cell.

### **Plants**

Know particular groups of plants and use a key for identification – **Flowering** and **Non-flowering** plants include mosses, ferns and conifers.