

Year Group: 5 Term: Summer	Unit Title: Amazonia	Driver Subject/s: Geography and Science
<p>Coherence – What previous learning will this unit connect to and build upon?</p> <p><u>Science:</u></p> <ul style="list-style-type: none"> • Animals can be grouped into vertebrates (and then further into fish, reptiles, amphibians, birds and mammals) and invertebrates • Some examples of life cycles (including those of plants and humans) • The processes of dispersal, fertilisation and germination • Reproduction is one of the seven life processes. • Parts of a plant, their features and what their functions are. <p><u>History:</u></p> <ul style="list-style-type: none"> • Chronology (Time line) <p><u>Geography:</u></p> <ul style="list-style-type: none"> • Examples of some countries around the world and what the climate is like there. • What climate means and how it affects the vegetation in an area. • Different biomes around the world. • The location and names of the continents and oceans • How aerial photos show us a bird's eye view of a location • Longitude and latitude and time zones around the world. • Parts of a river • The difference between urban and rural locations • Climate bands and weathers within these. <p>Knowledge – What will the children know by the end of the unit?</p> <p><u>Geography</u></p> <ul style="list-style-type: none"> • Study some of the countries in the continent of South America include Peru, Bolivia, Venezuela, Colombia, Ecuador, and Brazil • There are different climate zones and biomes in South America. • The Amazon is the longest river in the world and runs through the countries listed above and into the Atlantic Ocean. • The Tropic of Cancer (northern tropic) and the Tropic of Capricorn (southern tropic) mark the most northerly and southerly positions that the sun can be overhead. • Between the tropics the weather is hot all year round. • Use atlases, maps and aerial photographs to find rainforests and explain what the climate is like there. Explain why rainforests cannot be found in the UK. • Label maps to show where rainforests can be located. • Compare the average rainfall in different climate zones, including the rainforest, and draw a graph to represent this. • Compare the sizes of different rainforests and represent them in a table. 	<p><u>Geography cont.</u></p> <ul style="list-style-type: none"> • Explain how the vegetation and animal life changes in the different layers of the rainforest. • Investigate the effects of climate change and pollution on rainforests. Use your knowledge to create a campaign to limit pollution and deforestation. • Explain how deforestation can impact the Earth. • Investigate the natural resources, such as palm oil, that can be found in the rainforest and the role they play in trade routes. • Follow a product through the global supply chain. • Explore indigenous people to the rainforests, where they live and what we can learn from them. <p>Life cycles</p> <p><u>What is reproduction?</u></p> <ul style="list-style-type: none"> • Reproduction is when an animal or plant produces one or more individuals similar to itself: <p><u>Sexual reproduction:</u></p> <ul style="list-style-type: none"> • requires two parents with male and female gametes (cells) • will produce offspring that is similar to but not identical to the parent <p><u>Asexual reproduction:</u></p> <ul style="list-style-type: none"> • will produce offspring that is identical to the parent • requires only one parent <p><u>How do plants reproduce?</u></p> <ul style="list-style-type: none"> • Male gametes can be found in the pollen. • Female gametes can be found in the ovary (they are called ovules). • Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects. • The pollen then travels down and meets the ovule. When this happens, seeds are formed - this is called fertilisation. • Seeds are then dispersed so that germination can begin again. • Some plants, such as daffodils and potatoes, can also produce offspring using asexual reproduction <p><u>What are examples of life cycles?</u></p> <ul style="list-style-type: none"> • The life cycles of mammals, birds, amphibians and insects have similarities and differences. • One difference is that amphibians and insects go through the process of metamorphosis. This is when the structure of their bodies changes significantly as they grow (for example, from tadpole to frog or caterpillar to butterfly). 	<p>Future learning – what 'light touches' for future learning will occur?</p> <p><u>Science:</u></p> <ul style="list-style-type: none"> • Animal characteristics and adaptation <p><u>History:</u></p> <ul style="list-style-type: none"> • <p><u>Geography:</u></p> <p>Longitude and latitude, navigation and time zones</p> <p>Outcomes - What written, creative and technological outcomes will be expected by the end of the unit?</p> <ul style="list-style-type: none"> • Use aerial photographs to compare UK biome with the Amazon rainforest. What is the same? What is different? • Understand the different layers of a rainforest and the wildlife found within each. • Discuss the positive and negative impacts humans have on the rainforest environment. • Debate whether palm oil should be used. • Dissect a flower and identify the different parts of it. Label the different parts and explain their functions. • Compare the life cycles of mammals, amphibians, insects and birds. What is similar about their life cycles? What is different? • Observe life cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. • Compare the life cycles of plants and animals in the local environment with other plants and animals (in the rainforest suggesting reasons for similarities and differences).

<p>Key Vocabulary: Science</p> <p>anther - the part of a stamen that produces and releases the pollen</p> <p>bulb - a root shaped like an onion that grows into a flower or plant</p> <p>cell - the smallest part of an animal or plant that is able to function independently</p> <p>dispersed - scattered, separated, or spread through a large area</p> <p>dissect - to carefully cut something up in order to examine it scientifically</p> <p>embryo - an unborn animal or human being in the very early stages of development</p> <p>fertilisation - male and female gametes meet to form an embryo or seed</p> <p>flower - the part of a plant which is often brightly coloured and grows at the end of a stem</p> <p>flowering - trees or plants which produce flowers</p> <p>function - a useful thing that something does</p> <p>germination - if a seed germinates or if it is germinated, it starts to grow</p> <p>gametes - the reproductive cells of a plant or animal</p> <p>life cycle - the series of changes that an animal or plant passes through from the beginning of its life until its death</p> <p>mature - when something matures, it is fully developed</p> <p>metamorphosis - a person or thing develops and changes into something completely different</p> <p>ovary - a female organ which produces eggs</p> <p>ovule - a small egg</p> <p>petal - thin coloured or white parts which form part of the flower</p> <p>plant - a living thing that grows in the earth and has a stem, leaves, and roots</p> <p>pollen - a fine powder produced by flowers. It fertilises other flowers of the same species so that they produce seeds</p> <p>pollination - to pollinate a plant or tree means to fertilise it with pollen. This is often done by insects</p> <p>reproduction - when an animal or plant produces one or more individuals similar to itself</p> <p>seed - the small, hard part from which a new plant grows</p> <p>stigma - the top of the centre part of a flower which takes in pollen</p> <p>structure - the way in which something is built or made</p>	<p>Key Vocabulary: Geography</p> <p>biome - a natural area of the living world which has its own climate, vegetation and animals</p> <p>climate - the general weather conditions that are typical of a place</p> <p>climate change - changes in the earth's climate, especially the gradual rise in temperature, as a result of human activity</p> <p>climate zone - sections of the Earth that are divided according to the climate. There are three main climate zones; polar, temperate and tropical.</p> <p>deforestation - if an area is deforested, all the trees there are cut down</p> <p>distribution - delivering goods to a number of places</p> <p>economy - a country's economy is the wealth that it gets from business and industry</p> <p>equator - an imaginary line around the middle of the Earth at an equal distance from the North Pole and the South Pole.</p> <p>export - to export products or raw materials means to sell them to another country</p> <p>import - to import products or raw materials means to buy them from another country for use in your own country</p> <p>global - something that happens in all parts of the world or affects all parts of the world</p> <p>indigenous - originating or occurring naturally in one place, native,</p> <p>natural resources - the land, forests, energy sources and minerals existing naturally in a place that can be used by people</p> <p>palm oil - a yellow oil which comes from the fruit of certain palm trees and is used in making soap and sometimes as a fat in cooking</p> <p>pollution - the process of polluting water, air, or land, especially with poisonous chemicals</p> <p>supply chain - the entire process of making and selling goods, including every stage from the supply of materials and the manufacture of the goods through to their distribution and sale</p> <p>sustainability - to maintain at a steady level without exhausting natural resources or causing severe environmental damage</p> <p>trade - the activity of buying, selling, or exchanging goods or services</p> <p>trade route - a route, often covering long distances, that is used by traders</p> <p>tropics - parts of the world that lie between two lines of latitude, the Tropic of Cancer, $23\frac{1}{2}^\circ$ north of the equator, and the Tropic of Capricorn, $23\frac{1}{2}^\circ$ south of the equator. The tropics have a humid climate, where the weather is hot and damp.</p> <p>vegetation - plants, trees and flowers</p>	<p>Local community</p> <ul style="list-style-type: none"> Describe the fair trade in Thornbury Woodland – comparing life cycles and rainforest layers etc. <p>Global citizenship – including significant people and places.</p> <ul style="list-style-type: none"> Describe the fair trade process for some products from the rainforest. Explain sustainability and the role rainforests play. Understand the impact deforestation has on the world. <p>Opportunities for visitors, trips or outdoor learning –</p> <p>Exploring our woodland and making comparisons to a rainforest – layers</p> <p>Life cycles of animals found in our environment – eg: the pond – tadpoles and dragonflies</p> <p>Supporting texts –</p> <p><u>Fiction:</u></p> <p>The Explorer – Katherine Rundell</p> <p>Journey to the River Sea - Eva Ibbotson</p> <p>Running Wild - Michael Morpurgo</p> <p>Pongo - Jesse Hodgson</p> <p><u>Non-Fiction:</u></p> <p>Wild Animals of the South - Dieter Braun</p> <p>Rainforests in 30 Seconds - Jen Green & Stephanie Murphy</p> <p>Lifesize: Rainforest - Anita Ganeri & Stuart Jackson-Carter</p> <p>Mathematical Development –</p> <p>Use a Venn diagram to study the similarities and difference between UK forest and rainforest.</p> <p>Rainfall graphs</p> <p>Fair trade – how does the cost of the product get shared out?</p>
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