



Science Overview – Key Learning for Biology



	Plants	Animals, inc Humans	Living Things & Habitats	Evolution & Inheritance
Reception	<ul style="list-style-type: none">- Plants and trees are full of green leaves during Summer.- The weather is hot in summer with lots of sunshine.- There are no leaves on the trees or on the ground in winter.- Daffodils, lambs and other new life begins to grow in spring.- Flowers have roots, stems, leaves and petals.	<ul style="list-style-type: none">- Animals change and grow just like humans.- Tadpoles turn into frogs.	<ul style="list-style-type: none">- Woodland animals stay in hibernation in winter months.- Animals live under the sea and can breathe under water.- Some animals can breathe on land and under the sea such as; crabs, turtles, seals, otters	
Year 1	<ul style="list-style-type: none">- Know what is needed to plant a bean/seed.- Plants need water, soil and sunlight in order to grow.- Plants have different parts – leaves, stem, roots, petals etc.- Trees have different parts – trunk, branches, leaves, roots, bark etc.- There are two main types of trees – evergreen and deciduous	<ul style="list-style-type: none">- Know the names of our body parts.- Humans have five senses. They are sight, sound, taste, smell, touch. Senses are associated with different parts of the body.- Animals vary in many ways having different structures e.g. wings, tails, ears- Animals have different skin coverings e.g. scales, feathers,		

		<p>hair. These key features can be used to identify them.</p> <ul style="list-style-type: none"> - Animals eat different things and can be Herbivores, Carnivores and Omnivores. 		
Year 2	<ul style="list-style-type: none"> - All plants need light from the sun and water to grow - Plants make their own food in their leaves using sunlight. - The inside of a plant has a seed store, a baby plant and seed coat. - Germination is when the seed soaks up water and swell, and the tiny new plant bursts out of its shell. - Seed dispersal is when the seeds move away from the parent plant. 	<ul style="list-style-type: none"> - Humans and animals have babies e.g. a cow has a calf, a duck has a duckling. - All young animals change through the different stages of their life cycle and grow into adults. - To stay alive, all animals need water, shelter, food and air. - To grow into a healthy adult, you must eat the right types of food in the right amount and exercise regularly. - Food gives our bodies the energy it needs to move and to grow. 	<ul style="list-style-type: none"> - There are a variety of habitats – woodland, urban, coastal, rainforest, artic, desert, oceans, rivers and mountains. - There are microhabitats – short grass, flowers, inside rotten, under leaves and in/on soil. - A food chain shows how each animal gets its food. - Life processes are all living things do- move breathe, sense, grow, make babies, get rid of waste and get energy from food. - Things can be living, dead, or have never been alive. 	
Year 3	<ul style="list-style-type: none"> - Plants have 4 main parts – flower, leaf, stem, roots - Plants need water, sunlight and warmth to survive - Water can move through a plant - Pollination is how plants reproduce 	<ul style="list-style-type: none"> - Skeletons support our muscles and protect our organs - Muscles work with the skeleton to help us to move - There are different types of skeleton – internal and external - Some animals don't have skeletons and some animals have shells 		

	<ul style="list-style-type: none"> - The life cycle of a plant has 5 sections – germination, growing and flowering, pollination, fertilisation and seed dispersal 	<ul style="list-style-type: none"> - There are 5 food groups – fats and sugars, carbohydrates, protein, fruit and vegetables, dairy 		
Year 4	-	<ul style="list-style-type: none"> - The main parts of the digestive system include mouth, oesophagus, small intestine, large intestine and rectum. - The body extracts nutrients and waste through excretion. - Humans have four types of teeth, molars, premolars, canines and incisors. - Different teeth have different functions, the functions include: biting and cutting, tearing and ripping, holding and crushing and grinding. - A food chain includes producer, predators and prey. 	<ul style="list-style-type: none"> - Living things can be grouped (classified) in different ways according to their features. - Classification keys can be used to identify and name living things. - Living things live in a habitat which provides an environment. - Environments may change naturally e.g. through flooding, fire, earthquakes etc. Humans also cause the environment to change. - Environments can also change with the seasons; different living things can be found in a habitat at different times of the year. 	-
Year 5	-	<ul style="list-style-type: none"> - The human body goes through stages of change – prenatal, infancy, childhood, adolescence, early adulthood, middle adulthood and late adulthood (old age). - Gestation is the period between conception and birth. A human gestation period is around nine months/40 weeks. 	<ul style="list-style-type: none"> - Some plants reproduce sexually (need a male and female) and others asexually (only need one parent). - The parts of a plant and how they reproduce. - Compare life cycles of mammals to understand the similarities and differences. 	-

		<ul style="list-style-type: none"> - A human pregnancy can be split into three trimesters, in which an embryo will go through various stages of development. - During adolescence both male and females bodies change to prepare for reproduction (puberty and menstruation). - In later adulthood cells do not regenerate as quickly which affects the extent to which the human body can function normally. 	<ul style="list-style-type: none"> - Know some animals go through metamorphosis. - Describe a cycle of metamorphosis. 	
Year 6	-	<ul style="list-style-type: none"> - The heart pumps deoxygenated blood to the lungs to get oxygen and oxygenated blood around the rest of the body. - Water and nutrients are transported around the body in blood cells. - Different blood cells have different functions: red carry oxygen around the body, white fight infections and platelets clot and repair cuts. - Lifestyle choices such as smoking, drugs and unhealthy eating can damage the body and cause diseases such as cancer or heart attacks. - Lifestyle changes such as exercise and healthy eating can help to make our body healthier 	<ul style="list-style-type: none"> - The Linnaeus system is used to organise plants and animals by scientists. - Animals can be grouped into mammals, reptiles, birds, fish and amphibians by looking at their characteristics. - Fungi, virus and bacteria are living things cannot be seen with the naked eye. - Some bacteria do helpful jobs such as digest food in the stomach and break down plant matter. - We need to make sure virus' do not spread through being hygienic. 	<ul style="list-style-type: none"> - Living things have changed over time and fossils provide information about living things that inhabited the Earth millions of years ago. - Living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. - Animals and plants are adapted to best survive their environment in different ways. - If the environment changes quickly some

				<p>animals or plants will die out.</p> <ul style="list-style-type: none">- Charles Darwin came up with the Theory of Evolution (Survival of the Fittest) after travelling the world and studying different species very closely.
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