

## Science Progression Grid Class 2

Autumn 1 Animals Including Humans	Autumn 2 Uses of Everyday Materials	Spring 1 Living Things and Their Habitats	Spring 2 Plants	Summer 1 Environment	Summer 2 Scientists and Inventors
<b>Minimum vocabulary shown in bold</b>			<b>Minimum learning is highlighted in yellow</b>		
<b>What children will know and remember</b>					
<p>To know that animals, including humans, have <b>offspring</b> which grow into adults; lamb and sheep .</p> <p>Offspring- the child of an animal</p>	<p>To know and compare the suitability of a variety of everyday <b>materials</b>, including wood, metal, plastic, glass, <b>brick</b>, rock, paper and <b>cardboard</b> for particular uses;</p> <p>Material- what objects are made form</p> <p>Suitability- having the properties which are right for a specific purpose.</p> <p>Properties-what a material is like and how it behaves.</p>	<p>To know and compare the differences between things that are <b>living, dead</b>, and things that have <b>never been alive</b>;</p> <p>Living- Things that are living have all life processes.</p> <p>Life processes-These are the things that all living things do. They move, breathe, sense, grow, make babies, get rid of waste and get their energy from food.</p> <p>Dead- things that are dead were once living. They did have all the life processes but do not now.</p> <p>Never living- things made out of metal. Plastic or rock were never living. They never had the life processes.</p>	<p>To know and describe how <b>seeds</b> and <b>bulbs</b> produce <b>shoots</b> and grow into mature plants;</p> <p>Seed-grow into new plants</p> <p>Bulb- grow into new plants</p> <p>Shoot- a shoot grows upwards from the seed or plant to find the sunlight.</p> <p>Germination- when the conditions are right, the seed soaks up water and swells, and the tiny new plant bursts out of its shell. This is called germination.</p>	<p>To know what <b>climate</b> change by introducing children to the ecological challenges that face the modern world.</p> <p>Climate-pattern of weather conditions over many years</p> <p>Greenhouse gas- gases in Earth's atmosphere that trap heat.</p>	<p>To know who Tim Smit is and what he helped designed.</p> <p>In 1995 business man and plant designer wanted to showcase plants from tropical rainforests. He designed biomes. These were opened in 2001 to the public. The biomes and the gardens are known as the Eden project.</p> <p>Linked to plants</p> <p>To know what a botanist is and what they study.</p> <p>A botanist is a scientist who studies plants</p> <p>Linked to plants</p>
<p>To know about and describe the basic needs of animals, including humans, for <b>survival</b> (water, hydration, nutrient and air);</p> <p>Survival- staying alive</p> <p>Nutrition- food needed to live</p> <p>Hydration-drinking fluids to keep the body property nourished and functioning at its best.</p>	<p>To know how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>Squash an object by pushing both hands together.</p> <p>Bend an object by grabbing both ends of the object and bringing the ends inwards together.</p> <p>Twist an object by turning your hands in opposite directions.</p> <p>Stretch an object by pulling your hands slowly and gently apart.</p>	<p>To know that <b>most living things live in habitats</b> to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other;</p> <p>Habitat- natural place where something lives. A habitat provides living things with everything they need to survive such as food, shelter and water.</p> <p>Types of habitats- British, Urban, Woodland, Pond, Coastal Rainforest and Mountains.</p>	<p>To know and describe how <b>plants need water, light and a suitable temperature to grow and stay healthy</b>.</p> <p>Temperature- is how warm or cold something or somewhere is. Some plants like cooler temperatures and some like warmer temperatures.</p>	<p>To know about and engage with <b>environmental</b> issues such as renewable energy.</p> <p>Renewable energy- energy that comes from a source that won't run out, wind power, solar power.</p>	<p>To know what was special about Elizabeth Garrett Anderson.</p> <p>Elizabeth Garrett Anderson was an English doctor. She was special because she was the first Englishwoman to qualify as a doctor. Doctors use science all the time, she studied science to become a doctor.</p> <p>Linked to animals including humans</p>

<p>To know the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p>Diet- the food and water that an animals needs</p> <p>Exercise- a physical activity to keep your body fit.</p> <p>Germs- Tiny living things that can cause disease</p> <p>Hygiene- how we keep ourselves and the world around us clean so we can stay healthy and stop germs spreading</p>		<p>To know and name a variety of plants and animals in their habitats, including <b>microhabitats</b>;</p> <p>Microhabitat- is a very small habitat in places like under a rock, under leaves or on a branch. Minibeasts live in microhabitats. The microhabitats have everything they need to survive.</p> <p>Minibeast-small creature like an insect, worm or a spider</p> <p>Minibeasts- caterpillar, ants, worm, spider, ladybirds.</p>		<p>To know the simple changes, we can make to live more <b>sustainable lives</b>.</p> <p>Sustainability is the idea that humans interact with the environment in a way that ensures resources are left for years to come.</p>	<p>To know what Louis Pasteur discovered.</p> <p>He discovered that germs are living things that can spreads between objects and people, through touch or through the air. Linked to animals including humans</p> <p>To know why raincoats are called Mackintoshes, or macs.</p> <p>Charles Macintosh the scientist, invented waterproof fabric. Clothes that people wear to protect them from the rain are waterproof. Raincoats are called Mackintoshes or macs after the inventor. Linked to uses of everyday materials</p>
		<p>To know how animals obtain their food from plants and other animals, using the idea of a simple <b>food chain</b>, and identify and name different sources of food.</p> <p>Food chain- shows how each animal gets it food. Food chains are one of the ways that living things depend on each other to stay alive.</p> <p>Food sources- this is the place a living thing's food comes from.</p>			<p>To know who Rachel Carson was. Rachel Carson was an American scientist who studied the ocean and the environment. Linked to living things and their habitats.</p> <p>To know what a wind turbine is and which scientist used energy from the wind.</p> <p>Wind Turbine- is a device that changes energy from the wind into electrical energy.</p> <p>Hero of Alexandria- Greek scientist used wind wheel to power a musical organ.</p> <p>James Blyth-Scottish scientist invented a mini wind turbine. Linked to the environment.</p>
<b>Disciplinary skills and knowledge</b>					
<p>To use observational skills, through videos or first-hand observation and measurement, how different animals, including humans, grow; asking questions about what things animals need for survival and what humans need to stay healthy; and suggest ways to find answers to their questions.</p>	<p>To compare the uses of everyday materials in and around school with materials found in other places. Observe closely, identifying and classifying the uses of different materials and recording their observations.</p>	<p>To sort and classify things according to whether they are living, dead or were never alive and record finding using charts. Explore questions and talk about ways of answering their questions.</p>	<p>To use observational skills and recording, with some accuracy the growth of a variety of plants as they change from seed or bulb. Complete a comparative test to show that plants need light and water to stay healthy.</p>	<p>To observe closely using simple equipment. Gather and record data to help in answering questions. Recognise changes over time.</p>	<p>To use observations to suggest answers to questions. To use prior knowledge to enhance learning</p>