



## Thomas Bullock Curriculum Map for Science

	Autumn	Spring	Summer
Year 1	<u>Everyday Materials (1.1)</u> <ul style="list-style-type: none"> <li>Objects can be made from a variety of materials.</li> <li>Everyday materials include wood, plastic, glass, metal, water, and rock.</li> <li>Different materials have different physical properties.</li> <li>DC1, DC4, DC5, DC7</li> </ul> <p>Future Learning: 2.1, 3.3</p>	<u>Amazing Animals (1.3)</u> <ul style="list-style-type: none"> <li>Animals can be grouped into fish, amphibians, reptiles, birds, and mammals by their structural features.</li> <li>Animals can be grouped into carnivores, herbivores, and omnivores by the food they eat.</li> <li>The human body is made of many different parts; each has its own function.</li> <li>Humans have five senses: sight, hearing, touch, taste, and smell. Each sense uses different body parts.</li> <li>DC1, DC4, DC5</li> </ul> <p>Prior Learning: EYFS ELG 13 Future Learning: 2.2, 4.3</p>	<u>Spring and Summer (1.4)</u> <ul style="list-style-type: none"> <li>There are four seasons—autumn, winter, spring, and summer.</li> <li>Different types of weather are associated with different seasons.</li> <li>Day length varies in different seasons.</li> <li>DC4, DC5, DC6, DC7</li> </ul> <p>Prior Learning: EYFS UtW, 1.2 Future Learning: 3.3</p>
	<u>Autumn and Winter (1.2)</u> <ul style="list-style-type: none"> <li>There are four seasons—autumn, winter, spring, and summer.</li> <li>Different types of weather are associated with different seasons.</li> <li>Day length varies in different seasons.</li> <li>DC1, DC4, DC5, DC6, DC7</li> </ul> <p>Future Learning: 1.4, 3.3, 5.1</p>		<u>Plants (1.5)</u> <ul style="list-style-type: none"> <li>A plant is a living thing.</li> <li>The main parts of a plant are the stem, leaves, and roots.</li> <li>Plants can be grown by people or grow in the wild.</li> <li>DC3, DC4, DC5, DC6, DC7</li> </ul> <p>Prior Learning: 1.2, 1.4 Future Learning: 2.5</p>
Year 2	<u>Uses of Materials (2.1)</u> <ul style="list-style-type: none"> <li>Everyday materials include wood, metal, plastic, glass, brick, rock, paper, and cardboard.</li> <li>The material chosen to make an object or device is based on the suitability of its properties.</li> <li>The shapes of solid objects made from some materials can be changed by squashing, bending, twisting, and stretching.</li> <li>DC1, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 1.1 Future Learning: 3.2, 4.2</p>	<u>Habitats (2.3)</u> <ul style="list-style-type: none"> <li>Things can be living, dead, or never been alive.</li> <li>Plants and animals live in a variety of habitats, including microhabitats.</li> <li>Most living things live in habitats to which they are suited.</li> <li>Habitats provide for the basic needs of different kinds of animals and plants.</li> <li>The living things in a habitat depend on each other for survival.</li> <li>Animals obtain their food from plants and other animals. This can be shown using a simple food chain.</li> <li>DC1, DC4, DC5, DC7, DC8</li> </ul> <p>Prior Learning: 2.2 Future Learning: 4.3</p>	<u>Protecting the Environment (2.4)</u> <ul style="list-style-type: none"> <li>Humans and their activities pose dangers to wildlife, through housing, traffic, waste, and pollution.</li> <li>Where possible materials should be recycled to reduce landfill and pollution.</li> <li>To ensure a sustainable supply of water and energy, these resources must be used efficiently.</li> <li>Trees are a source of food, fuel, oxygen, and timber.</li> <li>Trees provide a habitat for many animals.</li> <li>DC1, DC4, DC5, DC6, DC7</li> </ul> <p>Prior Learning: 2.2 Links: Y1 Geo 'Our Local Area', Y4 Geo 'The Amazon'</p>
	<u>Animals and Survival (2.2)</u> <ul style="list-style-type: none"> <li>Animals, including humans, have offspring which grow into adults.</li> </ul>		<u>Plants and Growth (2.5)</u> <ul style="list-style-type: none"> <li>Seeds and bulbs grow into mature plants.</li> </ul>

	<ul style="list-style-type: none"> <li>The basic needs of animals, including humans, for survival include water, food, and air.</li> <li>To remain healthy: it is important for humans to exercise, eat the right amounts of different types of food, and have good hygiene.</li> <li>DC1, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 1.3 Future Learning: 6.2</p>		<ul style="list-style-type: none"> <li>Plants need water, light, and a suitable temperature to grow and stay healthy.</li> <li>DC1, DC2, DC3, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 1.5 Future Learning: 3.4</p>
Year 3	<p><u>Skeletons, Muscles and Nutrition (3.1)</u></p> <ul style="list-style-type: none"> <li>Animals, including humans, need the right types and amount of nutrition.</li> <li>Animals cannot make their own food; they get nutrition from what they eat.</li> <li>Humans and some other animals have skeletons and muscles for support, protection, and movement.</li> <li>DC1, DC3, DC4, DC5, DC6, DC7</li> </ul> <p>Prior Learning: 1.3 Future Learning: 4.1, 4.3</p>	<p><u>Light and Shadows (3.3)</u></p> <ul style="list-style-type: none"> <li>Light is needed to see things.</li> <li>Darkness is the absence of light.</li> <li>Light is reflected from surfaces.</li> <li>Light from the sun can be dangerous, and eyes should be protected from sunlight.</li> <li>Shadows are formed when the light from a light source is blocked by an opaque object.</li> <li>There are patterns in the way that the size of shadows change.</li> <li>DC1, DC3, DC4, DC5, DC7, DC8</li> </ul> <p>Prior Learning: 1.4 Future Learning: 5.1</p>	<p><u>Plants – Needs for Survival (3.4)</u></p> <ul style="list-style-type: none"> <li>Flowering plants have roots, a stem/trunk, leaves, and flowers.</li> <li>Plants require air, light, water, nutrients from the soil, and room to grow.</li> <li>Water is transported within plants in vessels.</li> <li>Flowers play an important role in the life cycle of flowering plants, including pollination, seed formation, and seed dispersal.</li> <li>DC1, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 2.5 Future Learning: 5.4</p>
	<p><u>Rocks and Fossils (3.2)</u></p> <ul style="list-style-type: none"> <li>Rocks can be grouped by their appearance and simple physical properties.</li> <li>Fossils are formed when things that have lived are trapped within rock.</li> <li>Soils are made from rocks and organic matter.</li> <li>DC3, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 2.2 Future Learning: 4.2</p>		<p><u>Forces and Magnets (3.5)</u></p> <ul style="list-style-type: none"> <li>Objects experience different amounts of friction on different surfaces.</li> <li>Some forces need contact between two objects, but magnetic forces can act at a distance.</li> <li>Some materials are magnetic, meaning they are attracted to a magnet.</li> <li>Magnets have two poles.</li> <li>Magnets can attract or repel each other, depending on which poles are facing each other.</li> <li>DC3, DC4, DC5, DC7, DC8</li> </ul> <p>Prior Learning: 2.2 Future Learning: 5.2</p>
Year 4	<p><u>Teeth and Digestion (4.1)</u></p> <ul style="list-style-type: none"> <li>The human digestive system contains a number of organs including the mouth, stomach, oesophagus, and intestines.</li> <li>The main types of human teeth are incisors, canines, molars, and premolars. Each type of tooth looks different and has a different function.</li> </ul>	<p><u>Living Things and Environments (4.3)</u></p> <ul style="list-style-type: none"> <li>Living things can be grouped in a variety of ways.</li> <li>Classification keys can be used to help group, identify and name living things.</li> </ul>	<p><u>Sound (4.4)</u></p> <ul style="list-style-type: none"> <li>Sounds are made when something vibrates.</li> <li>Vibrations from sounds travel through a medium to the ear.</li> <li>The pitch of a sound is affected by how quickly an object vibrates.</li> </ul>

	<ul style="list-style-type: none"> <li>DC1, DC2, DC3, DC4, DC5, DC7, DC8</li> </ul> <p>Prior Learning: 1.3 Future Learning: 6.5</p>	<ul style="list-style-type: none"> <li>Environments can change and this can sometimes pose dangers to living things.</li> <li>DC1, DC3, DC4, DC5, DC6, DC7, DC8</li> </ul> <p>Prior Learning: 3.1 Future Learning: 6.2</p>	<ul style="list-style-type: none"> <li>The volume of a sound is determined by the strength of the vibrations that produced it.</li> <li>Sounds get fainter as the distance from the sound source increase</li> <li>DC2, DC3, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 1.3, 4.2 Future Learning: KS3</p>
	<p><u>States of Matter (4.2)</u></p> <ul style="list-style-type: none"> <li>Materials can be grouped according to whether they are solids, liquids, or gases.</li> <li>Materials can change state when they are heated or cooled—this happens at different temperatures for different materials.</li> <li>Evaporation and condensation are key processes in the water cycle.</li> <li>Rate of evaporation is affected by temperature.</li> <li>DC1, DC3, DC4, DC5, DC7, DC8</li> </ul> <p>Prior Learning: 3.2 Future Learning: 5.3</p>		<p><u>Electricity (4.5)</u></p> <ul style="list-style-type: none"> <li>Sounds are made when something vibrates.</li> <li>Vibrations from sounds travel through a medium to the ear.</li> <li>The pitch of a sound is affected by how quickly an object vibrates.</li> <li>The volume of a sound is determined by the strength of the vibrations that produced it.</li> <li>Sounds get fainter as the distance from the sound source increase.</li> <li>DC3, DC4, DC5, DC7</li> </ul> <p>Prior Learning: 2.1, 3.3, 4.4 Future Learning: 6.4</p>
Year 5	<p><u>Earth and Space (5.1)</u></p> <ul style="list-style-type: none"> <li>Earth and other planets in the Solar System orbit around the Sun.</li> <li>The Moon orbits round Earth.</li> <li>The Sun, Earth, and the Moon are approximately spherical bodies.</li> <li>The rotation of Earth results in day and night, and the apparent movement of the Sun across the sky.</li> <li>DC4, DC5, DC6, DC7, DC8</li> </ul> <p>Prior Learning: 3.3 Future Learning: 6.1</p> <p><u>Forces (5.2)</u></p> <ul style="list-style-type: none"> <li>Unsupported objects fall towards Earth because of the force of gravity acting between Earth and the falling object.</li> <li>Air resistance, water resistance, and friction act between moving surfaces.</li> <li>Some mechanisms including levers, pulleys, and gears allow a smaller force to have a greater effect.</li> <li>DC1, DC2, DC3, DC4, DC5, DC7, DC8</li> </ul>	<p><u>Materials (5.3)</u></p> <ul style="list-style-type: none"> <li>The properties of materials include their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</li> <li>The particular uses of everyday materials, including metals, wood, and plastic depend on their properties.</li> <li>Some materials will dissolve in liquid to form a solution.</li> <li>Mixtures can be separated using filtering, sieving, and evaporating.</li> <li>Dissolving, mixing, and changes of state are reversible changes.</li> <li>Changes that result in the formation of new materials are not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</li> <li>DC2, DC3, DC4, DC5, DC6, DC7</li> </ul> <p>Prior Learning: 4.2 Future Learning: KS3:</p>	<p><u>Life Cycles (5.4)</u></p> <ul style="list-style-type: none"> <li>There are differences in the life cycles of mammals, amphibians, insects, and birds.</li> <li>Plants and animals produce offspring by the life process of reproduction.</li> <li>DC1, DC4, DC5</li> </ul> <p>Prior Learning: 4.3 Future Learning: 6.2</p> <p><u>Growing Older (5.5)</u></p> <ul style="list-style-type: none"> <li>Humans experience a number of changes as they develop to old age.</li> <li>DC1, DC5, DC7</li> </ul> <p>Prior Learning: 5.4 Future Learning: 6.3</p>

	<p><b>Prior Learning: 3.5</b>  <b>Future Learning: KS3:</b></p>		
Year 6	<p><u>Light (6.1)</u></p> <ul style="list-style-type: none"> <li>• Light travels in straight lines.</li> <li>• Objects are seen because they give out or reflect light into the eye.</li> <li>• We see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</li> <li>• As light travels in straight lines shadows have the same shape as the objects that cast them.</li> <li>• DC1, DC2, DC3, DC4, DC5, DC7</li> </ul> <p><b>Prior Learning: 3.3, 5.1</b></p>	<p><u>Evolution and Inheritance (6.3)</u></p> <ul style="list-style-type: none"> <li>• Living things have changed over time.</li> <li>• Fossils provide information about living things that inhabited Earth millions of years ago.</li> <li>• Living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</li> <li>• Animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li> <li>• DC1, DC2, DC3, DC4, DC5, DC6, DC7</li> </ul> <p><b>Prior Learning: 3.2</b>  <b>Future Learning: KS3</b></p>	<p><u>Electricity (6.4)</u></p> <ul style="list-style-type: none"> <li>• The brightness of a lamp or the volume of a buzzer is associated with the number and voltage of cells used in the circuit.</li> <li>• Switches can be used to turn components on and off in a circuit.</li> <li>• Circuit symbols are used when representing a simple circuit in a diagram.</li> <li>• DC1, DC2, DC3, DC4, DC5, DC7</li> </ul> <p><b>Prior Learning: 4.5</b>  <b>Future Learning: KS3</b></p>
	<p><u>Classification (6.2)</u></p> <ul style="list-style-type: none"> <li>• Living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants, and animals.</li> <li>• DC1, DC4, DC6, DC7</li> </ul> <p><b>Prior Learning: 4.3, 6.3</b>  <b>Future Learning:</b></p>		<p><u>Circulatory System and Lifestyle (6.5)</u></p> <ul style="list-style-type: none"> <li>• The main parts of the human circulatory system include the heart, blood vessels, and blood.</li> <li>• Nutrients and water are transported within animals, including humans, in the blood.</li> <li>• Diet, exercise, drugs, and lifestyle can all affect the way our bodies function.</li> <li>• DC2, DC3, DC4, DC5, DC6, DC7, DC8</li> </ul> <p><b>Prior Learning: 3.1, 4.1</b></p>

The disciplinary concepts we focus on in KS1 and KS2 are:

**DC1:** Ask relevant questions and use different types of scientific enquiries to answer them.

**DC2:** Plan simple scientific enquiries.

**DC3:** Use a range of equipment.

**DC4:** Make careful observations.

**DC5:** Record findings using simple scientific language, drawings, and labelled diagrams.

**DC6:** Present data.

**DC7:** Use results to draw simple conclusions and make predictions. Report on findings from enquiries, including oral and written explanations.

**DC8:** Use models to represent a scientific concept or process.