





# Science Progression Map

## Years 1 – 6



	Autumn	Spring	Summer
<b>Year 1</b> 	<p><b>Materials</b>  <b>Children working at the expected standard:</b>            I can identify and name different materials.            I can talk about some of the properties of materials.            I can compare, sort and group materials by their properties.</p> <p><b>Children working at greater depth:</b>            I can use ambitious vocabulary relevant to my age and stage, to talk about my understanding of materials and their properties.            I can apply knowledge, skills and understanding from previous learning with security and accuracy without recall to the teacher, to be able to give reasons for my sorting.            I can use more ambitious vocabulary to give reasons for my sorting.</p> <p><b>Children working at the expected standard:</b>            I can talk about the weather in Autumn.            I can talk about the season of Autumn.            I can observe, record and measure the weather.            I can identify and talk about different type of weather.            I can talk about the weather data I have recorded.            I can ask questions about the weather</p> <p><b>Children working at greater depth:</b>            I can make links and give reasons to how the weather affects us.            I can measure with accuracy.            I can use oracy effectively to enhance my work, talking about patterns I can see.</p> <p><b>Materials</b>  <b>Children working at expected standard:</b>            I can experiment, observe and record which material is the most waterproof.            I can use findings to make conclusions.            I can use knowledge of materials to make reasonable predications            I can compare my predictions to my findings to of which materials are good at keeping things warm.            I can use my observations to answers questions.</p> <p><b>Children working at greater depth</b>            I can <b>give reasons</b> why some materials are waterproof.            I can <b>compare</b> different materials and talk about which materials would be best.            I can add <b>more detailed reasons</b> for my predictions.</p>	<p><b>Humans</b>  <b>My Amazing Body</b>  <b>Children working at the expected standard:</b>            I can talk about different body parts.            I can label body parts correctly.            I can talk about different body parts that are inside of me, I can label them correctly.            I can name the five senses.            I can say which body part matches each sense.            I can take part in a test and use my observations to sort using my senses.            I can ask and find an answer to a question.            I can use my sense to sort and group crisps            I can talk about how I classified crisps using my senses.</p> <p><b>Children working at greater depth:</b>            Extend understanding by labelling more body parts.            Extend understanding by recording / talking about why each part is important and how we can care for it.            Independently extend understanding to give reasons why not having one of the senses could affect you.</p> <p><b>Seasonal Change</b>  <b>Children working at the expected standard:</b>            I can talk about the weather / season in Winter. I can observe, record and measure the weather. I can identify and talk about different type of weather.</p> <p><b>Children working at greater depth:</b>            I can make links and give reasons to how the weather affects us.            I can measure with accuracy.            I can use oracy effectively to enhance my work, talking about patterns I can see.</p> <p><b>Animals</b>  <b>Children working at expected standard:</b>            I can identify animal groups. I can sort animals into their groups.            I can think of a question to find the answer to. I can observe and classify animals.            I can name animals that are carnivore, herbivore or omnivore.            I can sort into living and not living. I can talk about how an animal is suited to its environment.</p> <p><b>Children working at greater depth:</b>            I can extend my understanding using class books.            I can apply knowledge, skills and understanding from previous learning with security and accuracy without recall to the teacher.            I can give reasons why living things need certain things to stay alive, using ambitious vocabulary relevant to age and stage of the child.            I can compare showing similarities and differences.</p>	<p><b>Plants</b>  <b>Children working at the expected standard:</b>            Can name the different parts of a plant.            Can name and talk about some of the plants and trees in our school grounds.            Can name different parts of a tree.            Know the difference between deciduous and evergreen.            Can help create a test to find the best growing conditions for plants.            Can gather data and use this to answer questions.</p> <p><b>Children working at greater depth:</b>            Can compare different plants and talk about what I notice.            Can independently extend understanding using books / internet resources.            Can give more detailed reasons and make links when answering questions.            Uses ambitious vocabulary relevant to age and stage of the child            Accurately and effectively link learning from previous lessons</p> <p><b>Seasonal Change</b>  <b>Children working at the expected standard:</b>            Can talk about the weather in Spring.            Can talk about the season of Spring.            Can observe, record and measure the weather.            Can talk about the weather data they have recorded.            Can ask and answer questions about the weather</p> <p><b>Children working at greater depth:</b>            Can use data to show the effect of seasonal change and give reasons to how the weather affects us.            Can measure with accuracy.            Can talk about patterns they see.</p>
<b>Year 2</b> 	<p><b>Materials</b>  <b>Children working at the expected standard:</b>            I can identify, name and compare a range of every day materials. I can talk about their properties.            I can show how some materials change shape when they are, stretched.            I can say why a material is suitable / unsuitable.            I can give reasons for my thinking.            I can carry out a test, observe using simple equipment; find and answer and share my conclusion.</p> <p><b>Children working at greater depth:</b>            Use more accurate vocabulary to talk about changes to the molecules between liquid, solid and gases.            I can apply my learning to show which material would be suitable for different purposes.            I can use more accurate vocabulary effectively, and explain my understanding in more detail.</p>	<p><b>Animals incl. Humans</b>  <b>Children working at the expected standard:</b>            I know the difference between living and non living.            I can compare and sort things that are living, dead and have never been alive.            I can use my knowledge of living processes to help me classify and sort.            I can talk about life cycles and food chains with understanding.            I know the importance of healthy eating            I can perform a test and take simple measurements and talk about what they tell me.</p> <p><b>Children working at greater depth:</b>            I can use more ambitious scientific vocabulary            I can accurately and effectively link learning from previous lessons.            I can be a learning buddy to others and explain my understanding in more detail.            I can begin to think about why some activities had more effect (cause and effect).</p>	<p><b>Habitats</b>  <b>Children working at the expected standard:</b>            I can identify why an animal is suited to the habitat. I can talk about food, water and shelter.            I can identify different mini – beasts. I can identify some features of a habitat.            I can think of an idea to answer a question. I can perform a test and gather data.            I can sort and group animals by the habitat they belong to.            I can talk about my sorting giving simple reasons.</p> <p><b>Children working at greater depth:</b>            I can draw on previous learning using Mrs Gren to give further explanation.            I can make an inference by saying what I think data is telling us.            I can return to an aspect of learning and still work with confidence and accuracy.</p>

	<p><b>Children working at the expected standard:</b>  I can explain what raw materials and manufactured materials are. I know the difference.  I can find an answer to a question using secondary sources. I can present my findings clearly.  I can use my knowledge of suitable properties of materials to identify a material to match with an object.  I can ask a question to find an answer to.  I can plan out what to do and how to use simple equipment.  I can use simple equipment to find an answer.</p> <p><b>Children working at greater depth:</b>  I can make an inference from my observations and reflect on caring for the world.  I can be a learning buddy to others and help them measure accurately.  Accurately and effectively link learning from previous lessons.</p>	<p><b>Plants</b>  <b>Children working at the expected standard:</b>  I can understand the difference between seeds and bulbs, and that they germinate.  I know the life cycle of a plant and that many produce seeds  I can name and sort leaves that I find using a criteria.  I can identify and name plants.  I can use my observations to look for changes.  I can use measure in standard units.  I can make a block graph using my results data,  I can say which growing condition was the best and why.</p> <p><b>Children working at greater depth:</b>  I can confidently explain the processes taking place in germination.  I can use more ambitious vocabulary to explain what happens.  I can extend my own learning by naming more plants independently.  I can extend own understanding by thinking of other conditions that they could investigate.</p>	<p><b>Summer 2</b>  <b>Revision of Key Learning from KS1</b></p>		
	<b>Topic 1</b>	<b>Topic 2</b>	<b>Topic 3</b>	<b>Topic 4</b>	<b>Topic 5</b>
<p><b>Year 3</b></p> 	<p><b>Topic 1 – Animals Including Humans</b>  I can explain how plants and animals obtain food in different ways.  I can identify the right types of nutrients for animals including humans.  I can name the different types of skeleton as well as identify and categorise animals based on the type of skeleton it has.  I can identify the main bones in the body and how a skeleton protects, supports and helps the body move.  I can explain how pairs of muscles work together to enable movement.</p>	<p><b>Topic 2 – Light</b>  I know how light is needed to see things and that dark is the absence of light.  I know how light is reflected from different surfaces.  I know how light from the sun can be dangerous and that there are ways to protect my eyes.  I understand the idea that shadows are formed when the light from a light source is blocked.  I can understand whether there are patterns in the way that the size of shadows change.</p>	<p><b>Topic 3 – Rocks</b>  I can compare different types of rocks.  I can group rocks based on their properties.  I can explain how fossils are formed.  I can recognise the work of Mary Anning and palaeontology.  I can explain how soil is formed.</p>	<p><b>Topic 4 – Forces and Magnets</b>  I can explain how different things move on different surfaces.  I can explain how different forces act, including magnetic forces.  I can explain how magnets attract or repel each other and attract some materials and not others.  I understand the idea that magnets have two poles.  I understand whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p><b>Topic 5 – Plants</b>  I can understand the function of different parts of flowering plants.  I can know about the requirements of plants for life and growth.  I can understand the way in which water is transported in plants.  I can explain the part that flowers play in the life cycle of flowering plants.  I can explain how seeds are dispersed.</p>
<p><b>Year 4</b></p> 	<p><b>Topic 1 – Living Things and Their Habitats</b>  I can recognise that living things can be grouped in a variety of ways.  I can identify that most living things live in habitats to which they are best suited.  I can classify animals into a group according to their characteristics.  I can investigate the habitat conditions of mini-beasts.  I can recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p><b>Topic 2 – The Human Body and States of Matter</b>  I can understand that there are different types of teeth and explain their functions.  I can explain how different substances damage our teeth.  I can describe the simple functions of the basic parts of the digestive system in humans.  I can identify and group materials into solids, liquids and gases.  I can describe the change from ice to water, then water to ice.  I can demonstrate that some changes of state are reversible changes.  I can observe that some materials change state when they are heated or cooled, and measure accurate temperature.  I can identify the part played by evaporation and condensation in the water cycle and make a link between rate of evaporation with temperature.</p>		<p><b>Topic 4 – Sound</b>  I can identify how sounds are made, associating some of them with something vibrating.  I can recognise that vibrations from sounds travel through a medium to the ear.  I can find patterns between the pitch of a sound and features of the object that produced it.  I can find patterns between the volume of a sound and the strength of the vibrations that produced it.</p>	<p><b>Topic 5 – Electricity</b>  I can identify common appliances that run on electricity.  I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.  I can identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.  I can draw simple circuit diagrams.  I can recognise some common conductors and insulators, and associate metals with being good conductors</p>

