



# King George V Primary School

## Curriculum Skills Progression Map

**Subject Area: Science**

Skill	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>WORKING SCIENTIFICALLY</b>						
<b>Planning and Predicting</b>	I can suggest what might happen and ways to test ideas.	<p>With help, I can suggest some ideas and questions.</p> <p>I can think about how to collect evidence.</p> <p>I can suggest what might happen.</p> <p>I can think about and discuss whether comparisons and tests are fair or unfair.</p>	<p>I can respond to suggestions</p> <p>With help, I can put forward ideas about testing.</p> <p>I can make predictions.</p> <p>With help, I can consider what constitutes a fair test.</p> <p>With help, I can plan and carry out a fair test.</p>	<p>I can recognise why it is important to collect data and answer questions.</p> <p>I can suggest questions that can be tested.</p> <p>I can put forward ideas about testing and make predictions.</p> <p>With help, I can consider what constitutes a fair test.</p>	<p>I can recognise that scientific ideas are based on evidence and creative thinking.</p> <p>I can make predictions based on scientific knowledge.</p> <p>I can suggest methods of testing, including a fair test.</p> <p>I can suggest how to collect evidence.</p> <p>I can select suitable equipment.</p>	<p>I can consider how scientists have combined evidence from observation and measurement with creative thinking to suggest new ideas and explanations for phenomena.</p> <p>I can make predictions based on scientific knowledge and understanding.</p> <p>I can suggest methods of testing, including a fair test, and how to collect evidence, ensuring it is sufficient and appropriate.</p>
<b>Investigating and Observing</b>	<p>I can make observations using appropriate senses.</p> <p>I can explore using the five senses.</p> <p>I can make simple comparisons and groupings.</p>	<p>I can make observations and comparisons using simple equipment, following simple instructions.</p> <p>I can use first-hand experience and, with help, simple information sources to answer questions.</p>	<p>I can make observations and comparisons.</p> <p>I can measure length, volume of liquid and time in standard measures using simple measuring equipment.</p> <p>I can use first-hand experience and simple information sources to</p>	<p>I can make relevant observations and comparisons.</p> <p>I can make measurements of temperature, time and force as well as measurements of length.</p> <p>I can begin to think about why measurements of length should be repeated.</p>	<p>I can carry out a fair test, explaining why it is fair.</p> <p>I understand why observations and measurements need to be repeated.</p> <p>I can select information from provided sources.</p>	<p>I can carry out a fair test, identifying key factors to be considered.</p> <p>I can make a variety of relevant observations and measurements using simple apparatus correctly.</p> <p>I can decide when observations and measurements need to be</p>

			answer questions.	With help, I can carry out a fair test, recognising and explaining why it is fair.		checked, by repeating, to give more reliable data.  I can select information from a range of sources.
<b>Recording, Analysing and Evaluating</b>	I can communicate findings in simple ways.  I can collect evidence to try to answer a question.	I can record findings in simple ways, including tables, graphs etc.  I can say whether what happened was expected.  I can draw simple conclusions.	I can communicate findings in a variety of ways.  I can say whether what happened was what was expected.  With help, I can identify simple patterns and suggest explanations.	I can explain what the evidence shows in a scientific way.  I can explain whether the evidence supports my predictions.  I can suggest improvements in my work.	I can communicate findings in a variety of ways.  I can identify simple trends and patterns.  I can communicate findings in tables, bar charts and line graphs, whilst making appropriate use of ICT.  I can identify trends and patterns and offer explanations for these.  I can draw conclusions and communicate them using appropriate scientific language.  I can suggest improvements in my work, giving reasons.	I can communicate findings in tables, bar charts and line graphs, whilst making appropriate use of ICT.  I can identify trends and patterns and results that do not appear to fit the pattern.  I can provide explanations for differences in observations and measurements.  I can draw conclusions and communicate them using appropriate scientific language.  I can make practical suggestions for improving methods in my work, giving reasons.
<b>Unit of Work</b>	<b>PROGRAMME OF STUDY</b>					
<b>Plants</b>	I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.  I can identify and describe the basic structure of a	I can observe and describe how seeds and bulbs grow into mature plants.  I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.  I can explore the requirements of plants for life and growth (air, light, water, nutrients from soil,			

	<p>variety of common flowering plants, including trees.</p>		<p>and room to grow) and how they vary from plant to plant.</p> <p>I can investigate the way in which water is transported within plants.</p> <p>I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>			
<p><b>Animals, Including Humans</b></p>	<p>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>I can identify, name, draw and label the basic parts of the human body and say which part of the body is</p>	<p>I can notice that animals, including humans, have offspring which grow into adults.</p> <p>I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>I can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</p> <p>I can identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p>I can describe the simple functions of the basic parts of the digestive system in humans.</p> <p>I can identify the different types of teeth in humans and their simple functions.</p> <p>I can construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>I can describe the changes as humans develop to old age.</p>	<p>I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>I can recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p> <p>I can describe the ways in which nutrients and water are transported within animals, including humans.</p>

	associated with each sense.					
<p><b>Uses of Everyday Materials (KS1)</b></p> <p><b>States of Matter (Y4)</b></p> <p><b>Properties and Changes of Materials (Y5)</b></p>	<p>I can distinguish between an object and the material from which it is made.</p> <p>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>I can describe the simple physical properties of a variety of everyday materials.</p> <p>I can compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>		<p>I can compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>I can observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (<math>^{\circ}\text{C}</math>).</p> <p>I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</p> <p>I know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>I can demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible,</p>	

					including changes associated with burning and the action of acid on bicarbonate of soda.	
<b>Seasonal Changes</b>	<p>I can observe changes across the four seasons.</p> <p>I can observe and describe weather associated with the seasons and how day length varies.</p>					
<b>Living Things and their Habitats</b>	<p>I can explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>I can identify that most living things live in habitats 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>I can identify and name a variety of plants and animals in their habitats, including microhabitats.</p>			<p>I can recognise that living things can be grouped in a variety of ways.</p> <p>I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>I can recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>I can describe the life process of reproduction in some plants and animals.</p>	<p>I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.</p> <p>I can give reasons for classifying plants and animals based on specific characteristics.</p>

	<p>I can describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>					
<p><b>Rocks</b></p>			<p>I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>I can describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>I can recognise that soils are made from rocks and organic matter.</p>			
<p><b>Light</b></p>			<p>I can recognise that they need light in order to see things and that dark is the absence of light.</p> <p>I can notice that light is reflected from surfaces.</p> <p>I can recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>I can recognise that shadows are formed when</p>			<p>I can recognise that light appears to travel in straight lines.</p> <p>I can use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>I can explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p>

			<p>the light from a light source is blocked by an opaque object.</p> <p>I can find patterns in the way that the size of shadows change.</p>			<p>I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
<p><b>Forces (and Magnets)</b></p>			<p>I can compare how things move on different surfaces.</p> <p>I can notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>I can observe how magnets attract or repel each other and attract some materials and not others.</p> <p>I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>I can describe magnets as having two poles.</p> <p>I can predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>		<p>I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> <p>I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	
<p><b>Sound</b></p>				<p>I can identify how sounds are made, associating some of them with something</p>		

				<p>vibrating.</p> <p>I can recognise that vibrations from sounds travel through a medium to the ear.</p> <p>I can find patterns between the pitch of a sound and features of the object that produced it.</p> <p>I can find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>I can recognise that sounds get fainter as the distance from the sound source increases.</p>		
<p><b>Electricity</b></p>				<p>I can identify common appliances that run on electricity.</p> <p>I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>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.</p> <p>I can recognise that a switch opens and closes a</p>		<p>I can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>I can compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.</p> <p>I can use recognised symbols when representing a simple circuit in a diagram.</p>

				<p>circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>I can recognise some common conductors and insulators, and associate metals with being good conductors.</p>	
<b>Earth and Space</b>					<p>I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>I can describe the movement of the Moon relative to the Earth.</p> <p>I can describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>
<b>Evolution and Inheritance</b>					<p>I can recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>I can recognise that living things produce offspring of the same kind, but normally</p>

offspring vary and are not identical to their parents.

I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.