



Science: Progression of knowledge and skills

Science: Key Stage 1									
	Biology			Chemistry	Physics				
	Animals including humans	Living things and their habitats (North Yorkshire)	Plants	Everyday materials/ Use of everyday materials	Seasonal change	Light And dark (North Yorkshire)	Sound (North Yorkshire)	Electricity (North Yorkshire)	Forces and magnets (North Yorkshire)
Year 1	<ul style="list-style-type: none"> • Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds • Know and 		<ul style="list-style-type: none"> • Know and name a variety of common wild and garden plants • Know and name the 	<ul style="list-style-type: none"> • Know the name of the materials an object is made from • Know about the properties 	<ul style="list-style-type: none"> • Name the seasons and know about the type of weather in each season 	<ul style="list-style-type: none"> • Recognise that we see with our eyes and that light helps us see things • Identify a variety of light sources. 	<ul style="list-style-type: none"> • Identify sounds that people think are nice or nasty • Recognise that sounds can be loud or soft • Recognise that 		

	<p>classify animals by what they eat (carnivore, herbivore and omnivore)</p> <ul style="list-style-type: none">• Know how to sort by living and non living things• Know the name of parts of the human body that can be seen		<p>petals, stem, leaves and root of a plant</p> <ul style="list-style-type: none">• Know and name the roots, trunk, branches and leaves of a tree	<p>of everyday materials</p>		<ul style="list-style-type: none">• Recognise that light sources can vary in brightness and colour• Recognise that without light it is dark• Recognise that it is dangerous to look at the sun and that the sun gives us daylight	<p>sounds are heard when they enter our ears</p> <ul style="list-style-type: none">• Recognise that sounds can be used to indicate when something is happening or is about to happen• Recognise that most objects can be made to make sounds• Recognise that sounds can be made by striking, shaking, scraping, plucking and blowing		
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Year 2	Animals including humans	Living things and their habitats (North Yorkshire)	Plants	Everyday materials/ Use of everyday materials	Seasonal change	Light And dark (North Yorkshire)	Sound (North Yorkshire)	Electricity (North Yorkshire)	Forces and magnets (North Yorkshire)
	<i>Animal reproduction</i> <i>Healthy living</i> <i>Basic needs</i>	<i>Alive or dead</i> <i>Habitats</i> <i>Adaptations</i> <i>Food chains</i>	<i>Plant and seed growth</i> <i>Plant reproduction</i> <i>Keeping plants healthy</i>	<i>Identify different materials</i> <i>Name everyday materials</i> <i>Properties of materials</i> <i>Compare the use of different materials</i> <i>Compare movement on different surfaces</i>					
	<ul style="list-style-type: none"> Know the basic stages in a life cycle for animals, (including humans) Know why exercise, a 	<ul style="list-style-type: none"> Classify things by living, dead or never lived Know how a specific habitat 	<ul style="list-style-type: none"> Know and explain how seeds and bulbs grow into plants Know what 	<ul style="list-style-type: none"> Know how materials can be changed by squashing, bending, twisting and 				<ul style="list-style-type: none"> Know that electricity can be dangerous Know that batteries produce electricity Know that 	<ul style="list-style-type: none"> Know that pushing, pulling and twisting can change an objects shape Recognise that pushes and

	<p>balanced diet and good hygiene are important for humans</p>	<p>provides for the basic needs of things living there (plants and animals)</p> <ul style="list-style-type: none"> • Match living things to their habitat • Name some different sources of food for animals • Know about and explain a simple food chain 	<p>plants need in order to grow and stay healthy (water, light & suitable temperature)</p>	<p>stretching</p> <ul style="list-style-type: none"> • Know why a material might or might not be used for a specific job 				<p>batteries can make bulbs, buzzers and motors work</p> <ul style="list-style-type: none"> • Know that electricity travels through wires • Use drawings as a representing a simple electrical circuit 	<p>pulls make objects move, speed up, slow down, change direction and stop</p> <ul style="list-style-type: none"> • Know that objects fall downwards • Know that push and pull are forces
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Science: Lower Key Stage 2

Science: Lower Key Stage 2										
	Biology			Chemistry		Physics				
	Animals including humans	Living things and their habitats	Plants	States of matter	Rocks	Light	Sound	Electricity	Forces and Magnets	Earth and Space (North Yorkshire)
	<i>Skeleton and muscles</i> <i>Nutrition</i> <i>Exercise and health</i>		<i>Plant life</i> <i>Basic structure and functions</i> <i>Life cycle</i> <i>Water transportation</i>		<i>Fossil formation</i> <i>Compare and group rocks</i> <i>Soil</i>	<i>Reflections</i> <i>Shadows</i>			<i>Different Forces</i> <i>Magnets</i>	
Year 3	<ul style="list-style-type: none"> Know about the importance of a nutritious, balanced diet Know how nutrients, water and oxygen are 		<ul style="list-style-type: none"> Know the function of different parts of flowering plants and trees Know how water is transported within 		<ul style="list-style-type: none"> Compare and group rocks based on their appearance and physical properties, giving reasons Know how soil is made 	<ul style="list-style-type: none"> Know that dark is the absence of light Know that light is needed in order to see and is reflected from a 			<ul style="list-style-type: none"> Know about and describe how objects move on different surfaces Know how a simple pulley 	<ul style="list-style-type: none"> Observe how the sun appears to move across the sky from East to West Observe how the sun appears to move and how this

	<p>transported within animals and humans</p> <ul style="list-style-type: none"> Know about the skeletal and muscular system of a human 		<p>plants</p> <ul style="list-style-type: none"> Know the plant life cycle, especially the importance of flowers 		<p>and how fossils are formed</p> <ul style="list-style-type: none"> Know about and explain the difference between sedimentary, metamorphic and igneous rock 	<p>surface</p> <ul style="list-style-type: none"> Know and demonstrate how a shadow is formed and explain how a shadow changes shape Know about the danger of direct sunlight and describe how to keep protected 			<p>works and use to on to lift an object</p> <ul style="list-style-type: none"> Know how some forces require contact and some do not, giving examples Know about and explain how magnets attract and repel Predict whether magnets will attract or repel and give a reason 	<p>causes shadows to change</p> <ul style="list-style-type: none"> Describe how we see the moon because the Sun's light reflects off it Describe how the Earth and Moon go around the Sun in one year Recognise that humans have been to the moon
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Year 4	Animals including humans	Living things and their habitats	Plants	States of matter	Rocks	Light	Sound	Electricity	Forces and Magnets	Earth and Space (North Yorkshire)
	<p><i>Digestive system</i></p> <p><i>Teeth</i></p> <p><i>Food chains</i></p>	<p><i>Grouping living things</i></p> <p><i>Classification keys</i></p> <p><i>Adaptation of living things</i></p>		<p><i>Compare and group materials</i></p> <p><i>Solids, liquids and gases</i></p> <p><i>Changing state</i></p> <p><i>Water cycle</i></p>			<p><i>How sounds are made</i></p> <p><i>Sound vibrations</i></p> <p><i>Pitch and Volume</i></p>	<p><i>Uses of electricity</i></p> <p><i>Simple circuits and switches</i></p> <p><i>Conductors and insulators</i></p>		
	<ul style="list-style-type: none"> Identify and name the parts of the human digestive system Know the functions of the organs in the human digestive system Identify and know the 	<ul style="list-style-type: none"> Use classification keys to group, identify and name living things Know how changes to an environment could endanger living things 		<ul style="list-style-type: none"> Group materials based on their state of matter (solid, liquid, gas) Know the temperature at which materials change 			<ul style="list-style-type: none"> Know how sound is made, associating some of them with vibrating Know how sound travels from a 	<ul style="list-style-type: none"> Identify and name appliances that require electricity to function Construct a series circuit Identify and name the components in a 		

	<p>different types of human teeth</p> <ul style="list-style-type: none"> • Know the functions of different human teeth • Use and construct food chains to identify producers, predators and prey 			<p>state</p> <ul style="list-style-type: none"> • Know about and explore how some materials can change state • Know the part played by evaporation and condensation in the water cycle 			<p>source to our ears</p> <ul style="list-style-type: none"> • Know the correlation between pitch and the object producing a sound • Know the correlation between the volume of a sound and the strength of the vibrations that produced it • Know 	<p>series circuit (including cells, wires, bulbs, switches and buzzers)</p> <ul style="list-style-type: none"> • Predict and test whether a lamp will light within a circuit • Know the function of a switch • Know the difference between a conductor and an insulator; giving examples of each 		
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							what happens to a sound as it travels away from its source		
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Science: Upper Key Stage 2

Science: Upper Key Stage 2								
	Biology			Chemistry	Physics			
	Animals including humans	Living things and their habitats	Evolution and inheritance	Properties and changing materials	Light	Electricity	Forces	Earth and space
	<i>Changes as humans develop from birth to old age</i>	<i>Life cycles – plants and animals</i> <i>Reproductive processes</i> <i>Famous naturalists</i>		<i>Compare properties of everyday materials</i> <i>Soluble/ dissolving</i> <i>Reversible and irreversible substances</i>			<i>Gravity</i> <i>Friction</i> <i>Forces and motion of mechanical devices</i>	<i>Movement of the Earth and the planets</i> <i>Movement of the Moon</i> <i>Night and day</i>
Year 5	<ul style="list-style-type: none"> Create a timeline to indicate stages of growth in humans 	<ul style="list-style-type: none"> Know the life cycle of different living things e.g. mammal, amphibian, insect and bird Know the differences between different life cycles Know the process of reproduction in plants 		<ul style="list-style-type: none"> Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets Know and explain how a material dissolves to 			<ul style="list-style-type: none"> Know what gravity is and its impact on our lives Identify and know the effect of air and water resistance Identify and know the effect of friction Explain how levers, pulleys and 	<ul style="list-style-type: none"> Know about and explain the movement of the Earth and other planets relative to the Sun Know about and explain the movement of the Moon relative to the Earth

		<ul style="list-style-type: none">• Know the process of reproduction in animals		<p>form a solution</p> <ul style="list-style-type: none">• Know and show how to recover a substance from a solution• Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating)• Know and demonstrate that some changes are reversible and some are not• Know how some changes result in the formation of a new material and that this is usually			<p>gears allow a smaller force to have a greater effect</p>	<ul style="list-style-type: none">• Know and demonstrate how night and day are created• Describe the Sun, Earth and Moon (using the term spherical)
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				irreversible				
Year 6	Animals including humans	Living things and their habitats	Evolution and inheritance	Properties and changing materials	Light	Electricity	Forces	Earth and space
	<i>The circulatory system</i> <i>Water transportation</i> <i>Impact of exercise on body</i>	<i>Classification of living things and the reasons for it</i>	<i>Identical and non identical off-spring</i> <i>Fossil evidence and evolution</i> <i>Adaptation and evolution</i>		<i>How light travels</i> <i>Reflection</i> <i>Ray models of light</i>	<i>Electrical components</i> <i>Simple circuits</i> <i>Fuses and voltage</i>		
	<ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system Know the function of the heart, blood vessels and blood Know the impact of diet, exercise, drugs and lifestyle on 	<ul style="list-style-type: none"> Classify living things into broad groups according to observable characteristics and based on similarities and differences Know how living things have been classified Give reasons for classifying plants and 	<ul style="list-style-type: none"> Know how the Earth and living things have changed over time Know how fossils can be used to find out about the past Know about reproduction and offspring (recognising that offspring normally vary 		<ul style="list-style-type: none"> Know how light travels Know and demonstrate how we see objects Know why shadows have the same shape as the object that casts them Know how simple optical instruments 	<ul style="list-style-type: none"> Compare and give reasons for why components work and do not work in a circuit Draw circuit diagrams using correct symbols Know how the number and voltage of cells in a 		

	<p>health</p> <ul style="list-style-type: none">• Know the ways in which nutrients and water are transported in animals, including humans	<p>animals in a specific way</p>	<p>and are not identical to their parents)</p> <ul style="list-style-type: none">• Know how animals and plants are adapted to suit their environment• Link adaptation over time to evolution• Know about evolution and can explain what it is		<p>work e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.</p>	<p>circuit links to the brightness of a lamp or the volume of a buzzer</p>		
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