

Progression of Knowledge by Class

Year A

	Kirkstead/Tintern <u>EYFS</u> <b>(Rec)</b>	Tintern <b>(Rec/Y1)</b>	Crowland/ <u>Regent</u> <b>(Y1/Y2)</b>	Westminster/ <u>St James</u> <b>(Y2/Y3)</b>	Fountains/ <u>Central</u> <b>(Y3)</b>	Lindisfarne <b>(Y4)</b>	Sempringham <b>(Y4/Y5)</b>	Kelso <b>(Y5/Y6)</b>	Ramsey <b>(Y6)</b>	
<b>Seasons</b>	<p><b>Children should:</b> Know and name the four seasons. Know it is hot in summer and cold in winter. Know we celebrate Christmas in Winter. Know we go on summer holidays in Summer. <u>And, from Development Matters/Understanding the World</u> Talk about what they see, using a wide vocabulary (3-4) Know that some trees lose their leaves in Autumn. Know that some plants grow in spring.  Explore the natural world around them (4-5) Describe what they see, hear and feel when outside (4-5) Recognise some environments are different from the one in which they live (4-5) Understand the effect of the changing seasons on the natural world around them (4-5)</p>	<p><b>Children should:</b> <del>Know and name the four seasons.</del> <del>Know it is hot in summer and cold in winter.</del> <del>Know we celebrate Christmas in Winter.</del> <del>Know we go on summer holidays in Summer.</del> <del>Know that some trees lose their leaves in Autumn.</del> <del>Know that some plants grow in spring.</del>  <b>Know there are 12 months.</b> <b>Know there are four seasons.</b> <b>Relate each month to a different season.</b> <b>Know the key features of each season.</b> <b>Know that plants and flowers grow in spring.</b> <b>Know that they are dormant in winter.</b> <b>Know that rainfall is higher in spring and winter.</b>  <b>Know it is hotter in summer.</b> <b>Know that there are more hours of daylight in summer</b> <b>Describe how the weather changes across the seasons</b> <b>Describe day length in autumn</b> Observe and describe the weather in autumn. <b>Collect and record data about the weather in Autumn.</b> <b>Identify signs of autumn.</b>  <b>Know that the sun can be dangerous to your eyes</b> <b>Know how the tilt of the earth causes the seasons</b></p>	<p><b>Children should:</b> Know there are 12 months. Know there are four seasons. Relate each month to a different season. Know the key features of each season. Know that plants and flowers grow in spring. Know that they are dormant in winter. Know that rainfall is higher in spring and winter.  Know it is hotter in summer. Know that there are more hours of daylight in summer Describe how the weather changes across the seasons Describe day length in autumn Observe and describe the weather in autumn. Collect and record data about the weather in Autumn. Identify signs of autumn. Describe how day length varies from Autumn to Winter. Identify changes in the trees and in clothes that we wear from Autumn to Winter. Observe and describe the weather in winter. Collect and record data about the weather in Winter. <i>(Year 2 – see Animal including humans)</i></p>	<p><b>Children should:</b> <u>Describe how the weather changes across the seasons</u> <u>Describe day length in autumn</u> Observe and describe the weather in autumn. <u>Collect and record data about the weather in Autumn.</u> <u>Identify signs of autumn.</u> <u>Describe how day length varies from Autumn to Winter.</u> <u>Identify changes in the trees and in clothes that we wear from Autumn to Winter.</u> <u>Observe and describe the weather in winter.</u> <u>Collect and record data about the weather in Winter.</u> <u>Know that the sun can be dangerous to your eyes</u> <u>Know how the tilt of the earth causes the seasons</u></p>						
<b>Plants</b>	<p><b>Children should:</b> Know what a plant is, Know some common garden plants Know what happens to leaves in winter <u>And, from Development Matters/Understanding the World</u> Plant seeds and care for growing plants (3-4) Understand the key features of the life cycle of a plant and an animal (3-4) Begin to understand the need to respect and care for the natural environment and all living things (3-4) Explore the natural world around them (4-5)</p>	<p><b>Children should:</b> Know what a plant is, Know a variety of common garden plants. Consider why plants are appealing to people. Know the names of a variety of wild plants. Know the names of some trees. Know the differences between deciduous and evergreen trees. Know the main parts of a variety of plants. Know ways in which a plant changes over time. <b>Children should:</b></p>	<p><b>Children should:</b> Know what a plant is. Know a variety of common garden plants. Know and identify some of the features of a plant. Consider why plants are appealing to people. Know the names of a variety of wild plants. Know how wild plant seeds come to be there. Know the names of some trees. Know the differences between deciduous and evergreen trees. Know the main parts of a variety of plants. Know and describe the functions of a plant. Know ways in which a plant changes over time. <b>Children should:</b></p>	<p><b>Children should:</b> Know the four main parts of a plant leaves, flower, stem and shoots. Know about the life cycle of a simple flowering plant - germination, growth, flowering and seed production. Identify the different part of food plants including roots, tubers, stem, bulb, trunk, branch, leaf, flower and fruit. Know which parts of the plant we normally eat. Know the function of these parts of the plant. Know how to compare the growth of different plants. Know about the four stages in the life cycle of a flowering plant - germination, growth, flowering and fertilisation or seed production. Know that different seed dispersal methods evolved by</p>	<p><b>Children should:</b> Know the different parts of foodplants, including roots, tuber, stem, bulb, trunk, branch, leaf, flower, and fruit. Know the function of the flower, stem, leaves and roots. Know the differences in plants when grown in sand rather than compost. Know about the 4 stages in the life cycle of a flowering plant - germination, growth, flowering, and fertilisation/seed production. Know that pollination is vital to flowering plant reproduction. Know there are different dispersal methods evolved by plants including dispersal by</p>					

Formatted: Bottom: 6.25 cm

Formatted Table

Formatted: Font: Bold

Formatted: Font: Twinkl Cursive Looped, Not Bold

Formatted: Font: Twinkl Cursive Looped, Not Bold

Formatted: Font: Not Bold

Formatted: Font: Not Bold

Formatted: Font: Not Bold

Formatted: Font: Not Bold

	<a href="#">Understand the effect of the changing seasons on the natural world around them (4-5)</a> <a href="#">Explore the world around them, making observations and drawing pictures of animals and plants (ELG)</a>			plants including dispersal by gravity, by wind, by water and by animals.	<a href="#">gravity, by wind, by water, and by animals</a>				
<b>Animals in Humans</b>	<p><b>Children should:</b>  <a href="#">Know there are five senses and can name them.</a>  <a href="#">Know they use their eyes to see and their ears to hear.</a>  <a href="#">Know they can feel objects and describe by touch.</a>  <a href="#">Describe an object using all five senses</a>  <b>Children should:</b>  <a href="#">Know that we keep some animals as pets.</a>  <a href="#">Know the names of some pets.</a>  <a href="#">Know some ways of looking after pets.</a>  <a href="#">Know that some animals live in the wild.</a>  <a href="#">Know what a fish is.</a>  <a href="#">Know what a mammal is.</a>  <a href="#">Know what a bird is.</a>  <b>Children should:</b>  <a href="#">Know that humans are animals</a>  <a href="#">Know that animals need food to eat and water to drink</a>  <a href="#">Know that animals need to breathe and some can get air from water.</a>  <a href="#">Know what makes a balanced diet</a>  <b>Children should:</b>  <a href="#">Know that we keep some animals as pets.</a>  <a href="#">Know the names of some pets.</a>  <a href="#">Know some ways of looking after pets.</a>  <a href="#">Know that some animals live in the wild</a>  <a href="#">Know what a fish is.</a>  <a href="#">Know what a mammal is.</a>  <a href="#">Know what a bird is</a></p> <p><b>And, from Development Matters/Understanding the World</b>  <a href="#">Understand the key features of the life cycle of a plant and an animal (3-4)</a>  <a href="#">Explore the natural world around them (4-5)</a></p>	<p><b>Children should:</b>  <a href="#">Know that there are five senses. Know that they use their eyes to see. Know they can see in the light but they can't see in the dark.</a>  <a href="#">Know the difference between loud and soft noises.</a>  <a href="#">Know that some people cannot hear.</a>  <a href="#">Know that they use their tongue to taste.</a>  <a href="#">Know that there are different tastes.</a>  <a href="#">Know that they can recognise some objects from their smell alone.</a>  <a href="#">Know they can recognise some objects using touch alone</a>  <b>Children should:</b>  <a href="#">Know that humans need water to drink to survive</a>  <a href="#">Know that humans need food to survive.</a>  <a href="#">Know that humans need air to breathe</a>  <a href="#">Know that they need to exercise to keep healthy</a>  <b>Children should:</b>  <a href="#">Know how to identify, name and describe a variety of common animals kept as pets.</a>  <a href="#">Know how to identify a variety of mammals and compare and describe some of their features.</a>  <a href="#">Know the characteristics of a variety of birds and reptiles.</a>  <a href="#">Know the similarities and differences between some fish and amphibians.</a>  <a href="#">Know what a variety of different animals eat.</a>  <a href="#">Know how to sort animals using Venn diagrams or tables.</a>  <a href="#">Know the needs of a variety of animals, and can explain how best to care for them.</a>  <b>Children should:</b>  <a href="#">Know that we keep some animals as pets.</a>  <a href="#">Know the names of some pets.</a>  <a href="#">Know some ways of looking after pets.</a>  <a href="#">Know that some animals live in the wild.</a>  <a href="#">Know what a fish is.</a>  <a href="#">Know what a mammal is.</a>  <a href="#">Know what a bird is.</a>  <b>Know that mammals give birth to live young.</b>  <b>Know the difference between mammals and non-mammals.</b>  <b>Know about the characteristics that mammals have in common.</b></p>	<p><b>Children should:</b>  <a href="#">Know that there are five senses. Know that they use their eyes to see.</a>  <a href="#">Know they can see in the light but not dark.</a>  <a href="#">Know that an optician helps them see.</a>  <a href="#">Know that they use their ears to hear.</a>  <a href="#">Know the difference between loud and soft noises.</a>  <a href="#">Know that some people cannot hear.</a>  <a href="#">Know that they use their tongue to taste.</a>  <a href="#">Know that there are different tastes and different children will like different things.</a>  <a href="#">Know that they use their nose to smell.</a>  <a href="#">Know that they can recognise some objects from their smell alone.</a>  <a href="#">Know that the sense of touch is associated with the whole body, rather than a particular organ.</a>  <a href="#">Know they can recognise some objects using touch alone.</a>  <b>Children should:</b>  <a href="#">Know that humans need water to drink to survive</a>  <a href="#">Know that humans need food to survive.</a>  <a href="#">Know that humans need air to breathe</a>  <a href="#">Know that germs can damage your health</a>  <a href="#">Know that they need to exercise to keep healthy</a></p> <p><b>(F4) Children should:</b>  <a href="#">Know that animals need food water and shelter to live.</a>  <a href="#">Know what a habitat is.</a>  <a href="#">Know how to match a range of animals to their habitats.</a>  <a href="#">Know what these habitats provide the animals with.</a>  <a href="#">Know what adaptations are.</a>  <a href="#">Know some other adaptations that enable each animal to survive in their habitat.</a>  <a href="#">Know that some animals change colour in winter.</a>  <b>Know that there are different food groups.</b>  <b>Know that animals eat different foods.</b>  <b>Know what we mean by herbivore, carnivore and omnivore.</b>  <b>Know that animals obtain their food from the local habitat.</b>  <b>Children should</b>  <a href="#">Know that humans need water to drink to survive</a>  <a href="#">Know that humans need food to survive.</a>  <a href="#">Know that humans need air to breathe</a>  <a href="#">Know that food needs to be clean to eat</a></p>	<p><b>Children should:</b>  <a href="#">Know the 5 food groups - bread, cereals and potatoes (carbohydrates), meat and fish, fruit and vegetables, milk and dairy, and fats and sugars.</a>  <a href="#">Know some food which belong to each of these groups.</a>  <a href="#">Know that animals can be classified as herbivores, carnivores or omnivores based on their diet.</a>  <a href="#">Know that all living things ultimately get their energy from the sun, either directly as a producer (plant) or indirectly as a consumer (animal)</a>  <a href="#">Know how to create a complex food web containing 7 organisms.</a>  <a href="#">Know that the arrows on food chain and food web diagrams indicate the energy flow through an ecosystem.</a>  <a href="#">Know about the role of the human digestive system.</a>  <a href="#">Know about the functions of the mouth, oesophagus, stomach, small intestine and large intestine.</a></p> <p><b>Children should:</b>  <a href="#">Know the role of the human digestive system.</a>  <a href="#">Know about the functions of the mouth, oesophagus, stomach, small intestine and large intestine.</a>  <a href="#">Know that humans have 2 sets of teeth.</a>  <a href="#">Know that teeth can be classified into different groups.</a>  <a href="#">Know about the number, location and function of the incisors, canines and molars.</a>  <a href="#">Know that teeth are made up of different materials (enamel, dentine, pulp)</a>  <a href="#">Know that teeth are embedded in the gums and skull/jawbone.</a>  <a href="#">Know how to compare the teeth of carnivores and herbivores.</a>  <a href="#">Know some reasons for differences</a>  <a href="#">Know about the stages of tooth decay</a>  <a href="#">Know how it can be caused.</a></p>	<p><b>Children should:</b>  <a href="#">Know what a food chain is.</a>  <a href="#">Know that the arrow shows energy flow within an ecosystem.</a>  <a href="#">Know how to create food chains with 2 and 3 organisms.</a>  <a href="#">Know if each organism is a predator, prey, consumer or producer.</a>  <a href="#">Know that a food web is a way of showing the energy flow in an ecosystem in a more complex way.</a>  <a href="#">Know how to create a food web containing 8 different organisms.</a>  <a href="#">Know how to identify and label each organism as a consumer, producer, predator, prey, and apex predator.</a>  <a href="#">Add their own arrows to show energy flow through the food web.</a></p> <p><b>Children should:</b>  <a href="#">Know the role of the human digestive system.</a>  <a href="#">Know about the functions of the mouth, oesophagus, stomach, small intestine and large intestine.</a>  <a href="#">Know that humans have 2 sets of teeth.</a>  <a href="#">Know that teeth can be classified into different groups.</a>  <a href="#">Know about the number, location and function of the incisors, canines and molars.</a>  <a href="#">Know that teeth are made up of different materials (enamel, dentine, pulp)</a>  <a href="#">Know that teeth are embedded in the gums and skull/jawbone.</a>  <a href="#">Know how to compare the teeth of carnivores and herbivores.</a>  <a href="#">Know some reasons for differences</a>  <a href="#">Know about the stages of tooth decay</a>  <a href="#">Know how it can be caused.</a></p> <p><b>Children should:</b>  <a href="#">Know the role of the human digestive system.</a>  <a href="#">Know about the functions of the mouth, oesophagus, stomach, small intestine and large intestine.</a>  <a href="#">Know that humans have 2 sets of teeth.</a>  <a href="#">Know that teeth can be classified into different groups.</a>  <a href="#">Know about the number, location and function of the incisors, canines and molars.</a>  <a href="#">Know that teeth are made up of different materials (enamel, dentine, pulp)</a>  <a href="#">Know that teeth are embedded in the gums and skull/jawbone.</a>  <a href="#">Know how to compare the teeth of carnivores and herbivores.</a>  <a href="#">Know some reasons for differences</a>  <a href="#">Know about the stages of tooth decay</a>  <a href="#">Know how it can be caused.</a></p>	<p><b>Children should:</b>  <a href="#">Know what a food chain is.</a>  <a href="#">Know that the arrow shows energy flow within an ecosystem.</a>  <a href="#">Know how to create food chains with 2 and 3 organisms.</a>  <a href="#">Know if each organism is a predator, prey, consumer or producer.</a>  <a href="#">Know that a food web is a way of showing the energy flow in an ecosystem in a more complex way.</a>  <a href="#">Know how to create a food web containing 8 different organisms.</a>  <a href="#">Know how to identify and label each organism as a consumer, producer, predator, prey, and apex predator.</a>  <a href="#">Add their own arrows to show energy flow through the food web</a></p> <p><b>Children should:</b>  <a href="#">Know the role of the human circulatory system.</a>  <a href="#">Know that the human circulatory system is composed of 2 parts</a>  <a href="#">Know the difference between the systemic circulation and the pulmonary circulation.</a>  <a href="#">Know about the role of the heart, blood vessels, platelets and plasma.</a>  <a href="#">Know how blood flows through its double pumps system to the lungs and all around the body</a>  <a href="#">Know the heart acts by supplying oxygen and removing waste products</a>  <a href="#">Know that red blood cells carry oxygen,</a>  <a href="#">Know that white blood cells fight infection,</a>  <a href="#">Know platelets help to prevent bleeding,</a>  <a href="#">Know that plasma is the medium in which these components are suspended.</a>  <a href="#">Know to measure their heart rate in beats per minute (bpm) by taking their radial pulse</a>  <b>Children should:</b>  <a href="#">Know about the active ingredient in alcoholic drinks (alcohol or ethanol), and that the strength of a beverage can be measured as the percentage alcohol by volume (% ABV).</a>  <a href="#">Know about the short and long-term effects of alcohol consumption.</a></p>	<p><b>Children should:</b>  <a href="#">Know that the human circulatory system is composed of 2 parts</a>  <a href="#">Know the difference between the systemic circulation and the pulmonary circulation.</a>  <a href="#">Know about the role of the heart, blood vessels, platelets and plasma.</a>  <a href="#">Know how blood flows through its double pumps system to the lungs and all around the body</a>  <a href="#">Know the heart acts by supplying oxygen and removing waste products</a>  <a href="#">Know that red blood cells carry oxygen,</a>  <a href="#">Know that white blood cells fight infection,</a>  <a href="#">Know platelets help to prevent bleeding,</a>  <a href="#">Know that plasma is the medium in which these components are suspended.</a>  <a href="#">Know to measure their heart rate in beats per minute (bpm) by taking their radial pulse</a>  <b>Children should:</b>  <a href="#">Know about the active ingredient in alcoholic drinks (alcohol or ethanol), and that the strength of a beverage can be measured as the percentage alcohol by volume (% ABV).</a>  <a href="#">Know about the short and long-term effects of alcohol consumption.</a></p>		

Formatted: Font: Not Bold

Formatted: Font: Bold

Formatted: Font: Not Bold

		<p>Know about groups of animals including birds, mammals, reptiles, fish and amphibians. Know the key features of each group</p> <p>Know the term carnivore, herbivore and omnivore.</p> <p>Know that most animals have an internal skeleton</p> <p>Know that people are animals</p>	<p>Know how to identify a variety of mammals and compare and describe some of their features.</p> <p>Know the characteristics of a variety of birds and reptiles.</p> <p>Know the similarities and differences between some fish and amphibians.</p> <p>Know what a variety of different animals eat.</p> <p>Know how to sort animals using Venn diagrams or tables.</p> <p>Know the needs of a variety of animals, and can explain how best to care for them.</p> <p><b>Children should:</b></p> <p>Know that mammals give birth to live young.</p> <p>Know the difference between mammals and non-mammals.</p> <p>Know about the characteristics that mammals have in common.</p> <p>Know about groups of animals including birds, mammals, reptiles, fish and amphibians.</p> <p>Know the key features of each group</p> <p>Know the term carnivore, herbivore and omnivore</p> <p>Know that most animals have an internal skeleton</p> <p>Know that people are animals</p>	<p>Know that germs can damage your health</p> <p>Know that they need to exercise to keep healthy</p> <p>Know about the 5 food groups - bread, cereals and potatoes (carbohydrates), meat and fish, fruit and vegetables, milk and dairy, and fats and sugars.</p> <p>Know how to identify some food which belong to each of these groups</p> <p>Know that animals can be classified as herbivores, carnivores or omnivores based on their diet.</p> <p>Know how to identify a variety of mammals and compare and describe some of their features.</p> <p>Know the characteristics of a variety of birds and reptiles.</p> <p>Know the similarities and differences between some fish and amphibians.</p> <p>Know what a variety of different animals eat.</p> <p>Know how to sort animals using Venn diagrams or tables.</p> <p>Know the needs of a variety of animals, and can explain how best to care for them.</p> <p>Know what an endoskeleton is.</p> <p>Know the major bones, such as skull ribs, tusk, pelvis and spine.</p> <p>Know the different types of animal skeleton.</p>		<p>Know how tooth decay can be prevented and treated</p> <p><b>Children should:</b></p> <p>Know that a human baby takes 40 weeks to develop in the womb.</p> <p>Create a timeline showing the ages at which a certain child could perform different activities</p> <p>Know about how Children develop physically, mentally and emotionally as they get older.</p> <p>Know that puberty is the period when a child begins to change into an adult. Know about some of the difficulties involved with old age, as people's minds and bodies get more frail. Know the changes which take place during the course of a human life.</p>	<p>Know that a human baby takes 40 weeks to develop in the womb.</p> <p>Create a timeline showing the ages at which a certain child could perform different activities</p> <p>Know about how Children develop physically, mentally and emotionally as they get older.</p> <p>Know that puberty is the period when a child begins to change into an adult. Know about some of the difficulties involved with old age, as people's minds and bodies get more frail. Know the changes which take place during the course of a human life.</p>	
Materials	<p><b>Children should:</b></p> <p>Know what some common items are made from</p> <p>Know how to describe some materials</p> <p>Know what makes things float and sink</p> <p><b>And, from Development matters/Understanding the World</b></p> <p>Explore collections of materials with similar and/or different properties (3-4)</p> <p>Talk about what they see, using a wide vocabulary (3-4)</p> <p>Explore and talk about different forces they can feel (3-4)</p> <p>Talk about different materials and the changes they notice (3-4)</p> <p>Explore the natural world around them (4-5)</p>	<p><b>Children should:</b></p> <p>Know that objects are made from materials.</p> <p>Know the name of some common materials (wood, plastic, paper, metal, wool, fabric)</p> <p>Know that different materials have different properties</p> <p>Know some materials sink and some float, some are absorbent and some are not, some are strong and some are not etc</p> <p>Know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock by matching a material to its name.</p> <p>Know how to describe a material using their senses</p> <p>Know that materials have different properties.</p> <p>Know and name different properties- hard/soft/permeable, impermeable/flexible/rigid/float/sink.</p> <p>Know how to sort objects by their properties</p> <p><b>Children should:</b></p> <p>Know and name the different properties- hard/soft/permeable, impermeable/flexible/rigid/float/sink.</p>	<p><b>Children should:</b></p> <p>Know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock by matching a material to its name.</p> <p>Know how to describe a material using their senses.</p> <p>Know that materials have different properties.</p> <p>Know and name different properties- hard/soft/permeable, impermeable/flexible/rigid/float/sink.</p> <p>Know how to sort objects by their properties</p> <p><b>Children should:</b></p>	<p><b>Children should:</b></p> <p>Know that materials have different properties.</p> <p>Know and name different properties- hard/soft/permeable, impermeable/flexible/rigid/float/sink.</p> <p>Know how to sort objects by their properties</p> <p>Know the materials from which common objects are made.</p> <p>Know how to carry out an investigation into the properties of small objects.</p> <p>Know how to predict and test whether a material is magnetic, transparent, floats, or can be squashed or stretched.</p> <p>Know why materials are suitable in different situations.</p> <p>Know how to group objects by material.</p> <p>Know about three inventors of new materials - John Dunlop, John McAdam, and Charles Macintosh.</p> <p><b>Children should:</b></p>			<p><b>Children should:</b></p> <p>Know that materials have different uses depending on their properties and state. Know there are three states (liquid, solid, gas).</p> <p>Know that properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets.</p> <p>Know that some materials will dissolve in a liquid and form a solution.</p> <p>Know that some materials are insoluble and form sediment.</p> <p>Know that mixtures can be separated by filtering, sieving and evaporation.</p> <p>Know that some changes to materials such as dissolving, mixing and changes of state are</p>	<p><b>Children should:</b></p> <p>Know that materials have different uses depending on their properties and state. Know there are three states (liquid, solid, gas).</p> <p>Know that properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets.</p> <p>Know that some materials will dissolve in a liquid and form a solution.</p> <p>Know that some materials are insoluble and form sediment.</p> <p>Know that mixtures can be separated by filtering, sieving and evaporation.</p> <p>Know that some changes to materials such as dissolving, mixing and changes of state are</p>

Formatted: Font: Not Bold

Formatted: Font: Not Bold

Formatted: Font: Not Bold





<b>States of Matter</b>						<p><b>Children should:</b>          Know about the differences between solid, liquids and gases          Know how each can be identified.          Know how to group some materials as solid, liquids or gases.          Know which materials were most difficult to group          Know how temperature can affect whether it is a solid, liquid or a gas. Know what the particle model represents          Know about the different states of matter (solids, liquids, and gases).          Know how the amount of energy that the particles have affects the state of the material.          Know how to investigate the melting point of familiar materials          Know how effective different materials are at insulating a cold drink and slowing its increase in temperature.          Know about the water cycle and that water is not created or lost, but simply moved around the Earth. Know that heat from the Sun drives the water cycle Know that solar heating of water-laden soil causes some water to evaporate.</p>	<p><b>Children should:</b>          Know about the differences between solid, liquids and gases          Know how each can be identified.          Know how to group some materials as solid, liquids or gases.          Know which materials were most difficult to group          Know how temperature can affect whether it is a solid, liquid or a gas. Know what the particle model represents          Know about the different states of matter (solids, liquids, and gases).          Know how the amount of energy that the particles have affects the state of the material.          Know how to investigate the melting point of familiar materials          Know how effective different materials are at insulating a cold drink and slowing its increase in temperature.          Know about the water cycle and that water is not created or lost, but simply moved around the Earth. Know that heat from the Sun drives the water cycle Know that solar heating of water-laden soil causes some water to evaporate.</p>	<p><b>Children should:</b>          Know that materials have different uses depending on their properties and state. Know there are three states (liquid, solid, gas). Know that properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets. Know that some materials will dissolve in a liquid and form a solution          Know that some materials are insoluble and form sediment.          Know that mixtures can be separated by filtering, sieving and evaporation. Know that some changes to materials such as dissolving, mixing and changes of state are Reversible. Know that some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible.</p>	<p><b>Children should:</b>          Know that materials have different uses depending on their properties and state. Know there are three states (liquid, solid, gas). Know that properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets. Know that some materials will dissolve in a liquid and form a solution          Know that some materials are insoluble and form sediment.          Know that mixtures can be separated by filtering, sieving and evaporation. Know that some changes to materials such as dissolving, mixing and changes of state are Reversible. Know that some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible.</p>
<b>Sound</b>						<p><b>Children should:</b>          Know that sounds are caused by vibrations. They know that sounds travel from an object, through a medium (usually the air), travel into the ear where they are carried down the ear canal and processed by the brain          Know that different materials vary in effectiveness at blocking sound. Know the difference between pitch and volume. Know how a string instrument makes a sound. They know how length</p>	<p><b>Children should:</b>          Know that sounds are caused by vibrations. They know that sounds travel from an object, through a medium (usually the air), travel into the ear where they are carried down the ear canal and processed by the brain          Know that different materials vary in effectiveness at blocking sound. Know the difference between pitch and volume. Know how a string instrument makes a sound. They know how length affects the pitch of each string. Know that pitch and volume are two</p>		

**Formatted:** Font: Bold

**Formatted:** Left

**Formatted:** Font color: Auto

**Formatted:** Font: Bold

**Formatted:** Font color: Auto

**Formatted:** Font: Not Bold, Font color: Auto

						affects the pitch of each string. Know that pitch and volume are two different properties of sounds. Know that distance affects hearing sounds.	different properties of sounds. Know that distance affects hearing sounds.		
Electricity					<p><b>Children should:</b>  <u>Know what electrical conductors and insulators are.</u>  <u>Know which materials are electrical conductors and which are insulators. Know about 6 different electrical components - bulb, switch, cell, battery, switch, buzzer and bell. Know what an electrical circuit is.</u>  <u>Know how to attempt to create different circuits from an illustration. Know how to create a circuit diagram for each Explain what happens when each circuit is completed.</u>  <u>Explain how a circuit that does not light can be changed so that the bulb will light.</u>  <u>Know how to draw a circuit diagram for their improved circuits.</u>  <u>Know what an electrical switch is and how it works, by opening and closing a break in a circuit.</u>  <u>Know that mains electricity is more dangerous than the electricity used in Primary Science lessons.</u>  <u>Know that the human body, metal, and water all conduct electricity.</u>  <u>Look at illustrations of different dangerous situations and identify what the danger is and how it can be made safe</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know how electricity is created.</u>  <u>Know the difference between renewable and non-renewable energy sources.</u>  <u>Know how solar power works. Know how nuclear energy produces electricity.</u>  <u>Know how geothermal energy is created.</u>  <u>Know how hydro and wind power are created children know how to identify electrical and nonelectrical appliances.</u>  <u>Know how a circuit works.</u>  <u>Name at least two electrical conductors and insulators.</u>  <u>Know how to create a simple series circuit both with and without a switch. Know why a circuit is incomplete.</u>  <u>Generalise about types of materials that conduct electricity.</u>  <u>Sort appliances based on whether they use mains or batteries.</u>  <u>Explain how a switch turns the electric current on and off.</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know how electricity is created.</u>  <u>Know the difference between renewable and non-renewable energy sources.</u>  <u>Know how solar power works.</u>  <u>Know how nuclear energy produces electricity. Know how geothermal energy is created.</u>  <u>Know how hydro and wind power are created children know how to identify electrical and nonelectrical appliances.</u>  <u>Name at least two electrical conductors and insulators.</u>  <u>Know how to create a simple series circuit both with and without a switch. Know why a circuit is incomplete.</u>  <u>Generalise about types of materials that conduct electricity.</u>  <u>Sort appliances based on whether they use mains or batteries.</u>  <u>Explain how a switch turns the electric current on and off.</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know the main circuit symbols and use these to draw circuit diagrams</u>  <u>Know how major discoveries led to the widespread use of electricity</u>  <u>Explain the effect of increasing or decreasing the voltage on different parts of a circuit</u>  <u>Know how our understanding of electricity has changed over time</u>  <u>Know how to draw circuit diagrams using the correct symbols and label the voltage</u>  <u>Know how to represent circuits using symbols in a diagram.</u>  <u>Know about two of the most important scientific inventors in the field of electricity – Thomas Edison and Nikola Tesla.</u>  <u>Know what electricity is and how to measure it.</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know the main circuit symbols and use these to draw circuit diagrams</u>  <u>Know how major discoveries led to the widespread use of electricity</u>  <u>Explain the effect of increasing or decreasing the voltage on different parts of a circuit</u>  <u>Know how our understanding of electricity has changed over time</u>  <u>Know how to draw circuit diagrams using the correct symbols and label the voltage</u>  <u>Know how to represent circuits using symbols in a diagram.</u>  <u>Know about two of the most important scientific inventors in the field of electricity – Thomas Edison and Nikola Tesla.</u>  <u>Know what electricity is and how to measure it.</u>  <b>Children should:</b></p>

Formatted: Font: Not Bold, Font color: Auto

Formatted: Font: Not Bold, Font color: Auto

Formatted Table

<p><b>Living things and their habitats</b></p>			<p><b>Children should:</b>          Know what we mean by living.          Know what we mean by non-living.          Name somethings which have never been alive.          Know what a food chain is.          Know there is a food producer.</p>	<p><b>Children should:</b>          Know what we mean by living.          Know what we mean by non-living.          Name somethings which have never been alive.          Know what a food chain is.          Know there is a food producer.</p>	<p><b>Children should:</b>  <u>Know about different groups of animals - fish, amphibians, reptiles, bird, and mammals - and how we can identify them from their body features, behaviour, and life cycles</u>  <u>Know that animals can be classified as vertebrates (having a spine) or invertebrates (lacking a spine)</u>  <u>Know that a dichotomous key (a branching classification key in which each question has exactly two answers) can be used to identify organisms</u>  <u>use a dichotomous classification key to identify different types of invertebrate (centipede, slug, worm, snail, ant, beetle, woodlouse, spider and millipede)</u>  <b>Children should:</b>  <u>Know about the life cycles of 3 different amphibians - frogs, salamanders and axolotls</u>  <u>Know about the life cycles of 3 different mammals - the human, the kangaroo, and the platypus.</u>  <u>Know about the lifecycle of the butterfly and two different species of bee - the honey bee and the mason bee.</u>  <u>Know about the life cycles of the chicken and the common cuckoo</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know that animals reproduce sexually.</u>  <u>Know that each individual requires a male and a female parent.</u>  <u>Know that offspring inherit various traits.</u>  <u>Know the process of animal reproduction, including the stages of sperm and egg production, mating, fertilisation, and the growth of a zygote into an embryo.</u>  <u>Know about the purpose of a flower and its basic structures, including petal, anther, sepal, carpel, stigma, style, ovary, pollen grain, pollen tube and ovule.</u>  <u>Know that pieces broken off from plants can grow into another individual organism.</u>  <b>Children should:</b>  <u>Know about the life cycles of 3 different amphibians - frogs, salamanders and axolotls</u>  <u>Know about the life cycles of 3 different mammals - the human, the kangaroo, and the platypus.</u>  <u>Know about the lifecycle of the butterfly and two different species of bee - the honey bee and the mason bee.</u>  <u>Know about the life cycles of the chicken and the common cuckoo</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know that animals reproduce sexually.</u>  <u>Know that each individual requires a male and a female parent.</u>  <u>Know that offspring inherit various traits.</u>  <u>Know the process of animal reproduction, including the stages of sperm and egg production, mating, fertilisation, and the growth of a zygote into an embryo.</u>  <u>Know about the purpose of a flower and its basic structures, including petal, anther, sepal, carpel, stigma, style, ovary, pollen grain, pollen tube and ovule.</u>  <u>Know that pieces broken off from plants can grow into another individual organism.</u>  <b>Children should:</b>  <u>Know about the life cycles of 3 different amphibians - frogs, salamanders and axolotls</u>  <u>Know about the life cycles of 3 different mammals - the human, the kangaroo, and the platypus.</u>  <u>Know about the lifecycle of the butterfly and two different species of bee - the honey bee and the mason bee.</u>  <u>Know about the life cycles of the chicken and the common cuckoo</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know that a dichotomous classification key has exactly two answers to each question.</u>  <u>Know that Carl Linnaeus developed a classification system which placed organisms into hierarchical groups.</u>  <u>Know about binomial nomenclature.</u>  <u>Know that evolutionary taxonomy is the most modern way of grouping organisms.</u>  <u>Know that it is a development of Linnaeus' system, but is superior because it shows how closely organisms are related to each other.</u>  <u>Know that animals can be classified as vertebrates (those that have a spinal column) and invertebrates.</u>  <u>Know that vertebrates have a common ancestor and comprise the fish and tetrapods.</u>  <u>Know that arthropods are a large and diverse phylum (group), comprising insects, arachnids, crustaceans and myriapods.</u>  <u>Know that all arthropods have a segmented body, a hard exoskeleton, and jointed legs.</u>  <u>Know that one way of identifying trees is by examining their leaves.</u>  <u>Know terms used to describe leaves, such as pinnate, palmate, simple, compound and lobed</u>  <b>Children should:</b></p>	<p><b>Children should:</b>  <u>Know that a dichotomous classification key has exactly two answers to each question.</u>  <u>Know that Carl Linnaeus developed a classification system which placed organisms into hierarchical groups.</u>  <u>Know about binomial nomenclature.</u>  <u>Know that evolutionary taxonomy is the most modern way of grouping organisms.</u>  <u>Know that it is a development of Linnaeus' system, but is superior because it shows how closely organisms are related to each other.</u>  <u>Know that animals can be classified as vertebrates (those that have a spinal column) and invertebrates.</u>  <u>Know that vertebrates have a common ancestor and comprise the fish and tetrapods.</u>  <u>Know that arthropods are a large and diverse phylum (group), comprising insects, arachnids, crustaceans and myriapods.</u>  <u>Know that all arthropods have a segmented body, a hard exoskeleton, and jointed legs.</u>  <u>Know that one way of identifying trees is by examining their leaves.</u>  <u>Know terms used to describe leaves, such as pinnate, palmate, simple, compound and lobed</u>  <b>Children should:</b></p>
<p><b>Earth and Space</b></p>								<p><b>Children should:</b>  <u>Know how the Moon moves around the Earth.</u>  <u>Know about theories of the Moon's formation, and that it has been explored.</u>  <u>Know that ancient astronomers developed the geocentric model because it was the best explanation available at the time.</u></p>	<p><b>Children should:</b>  <u>Know how the Moon moves around the Earth.</u>  <u>Know about theories of the Moon's formation, and that it has been explored.</u>  <u>Know that ancient astronomers developed the geocentric model because it was the best explanation available at the time.</u>  <u>Know that the heliocentric model superseded it for</u></p>

								<p><a href="#">Know that the heliocentric model superseded it for scientific reasons - because it agrees more closely with observations.</a></p> <p><a href="#">Know about the modern theory for the formation of the solar system. Know that a cloud of gas and dust collapsed under its own gravity, compressing the centre until thermonuclear fusion began and the Sun was formed.</a></p> <p><a href="#">Know that the planets and other bodies accreted from smaller objects over time because of gravity.</a></p> <p><a href="#">Know that day and night are caused by the rotation of the Earth, and that the Sun only appears to move across the sky.</a></p>	<p><a href="#">scientific reasons - because it agrees more closely with observations.</a></p> <p><a href="#">Know about the modern theory for the formation of the solar system. Know that a cloud of gas and dust collapsed under its own gravity, compressing the centre until thermonuclear fusion began and the Sun was formed.</a></p> <p><a href="#">Know that the planets and other bodies accreted from smaller objects over time because of gravity.</a></p> <p><a href="#">Know that day and night are caused by the rotation of the Earth, and that the Sun only appears to move across the sky.</a></p>
All Living Things						<p><a href="#">Children should: Know what deforestation is. Know why humans deliberately choose to cut down trees and destroy forests.</a></p> <p><a href="#">Know the negative effects of deforestation.</a></p> <p><a href="#">Know what pollution is and how this can impact on animals and vegetation.</a></p> <p><a href="#">Know what endangered means and the impact humans can have on animal life.</a></p> <p><del>Children should:</del></p>	<p><a href="#">Children should: Know what deforestation is. Know why humans deliberately choose to cut down trees and destroy forests.</a></p> <p><a href="#">Know the negative effects of deforestation.</a></p> <p><a href="#">Know what pollution is and how this can impact on animals and vegetation.</a></p> <p><a href="#">Know what endangered means and the impact humans can have on animal life.</a></p> <p><del>Children should:</del></p>		
Evolution							<p><b>Children should:</b></p> <p>Know about the life and work of the early palaeontologist, Mary Anning.</p> <p>Know what fossils are and how they are formed.</p> <p>Know how palaeontologists build up a picture of the past using incomplete evidence.</p> <p>Know most organisms die without leaving a fossil trace.</p> <p>Know about stratigraphy, and that organisms found in lower layers of rock tend to have died earlier..</p> <p>Know about Charles Darwin, his early life, his role in the voyage of the HMS Beagle, his relationship with Alfred</p>	<p><b>Children should:</b></p> <p>Know about the life and work of the early palaeontologist, Mary Anning.</p> <p>Know what fossils are and how they are formed.</p> <p>Know how palaeontologists build up a picture of the past using incomplete evidence.</p> <p>Know most organisms die without leaving a fossil trace.</p> <p>Know about stratigraphy, and that organisms found in lower layers of rock tend to have died earlier..</p> <p>Know about Charles Darwin, his early life, his role in the voyage of the HMS Beagle, his relationship with Alfred Russel Wallace, and how he</p>	

								<p>Russel Wallace, and how he developed and published his theory of natural selection</p> <p>Know about the process of evolution by natural selection.</p> <p>Know that offspring inherit traits of their parents.</p> <p>Know that they might occasionally carry a random mutation which gives them a survival advantage and that they pass on to their own offspring.</p> <p>Know that this process can change a population over time.</p> <p>Know that offspring inherit traits from their parents.</p> <p>Know that organisms that reproduce sexually combine traits from two parents.</p> <p>Know about human-created hybrids.</p> <p>Create a simple family tree for a range of organisms - the labradoodle, the mule, the zonkey and the loganberry,</p> <p>Know which traits they have inherited from their different-species parents.</p>	<p>developed and published his theory of natural selection</p> <p>Know about the process of evolution by natural selection.</p> <p>Know that offspring inherit traits of their parents.</p> <p>Know that they might occasionally carry a random mutation which gives them a survival advantage and that they pass on to their own offspring.</p> <p>Know that this process can change a population over time.</p> <p>Know that offspring inherit traits from their parents.</p> <p>Know that organisms that reproduce sexually combine traits from two parents.</p> <p>Know about human-created hybrids.</p> <p>Create a simple family tree for a range of organisms - the labradoodle, the mule, the zonkey and the loganberry,</p> <p>Know which traits they have inherited from their different-species parents.</p>
<b>Working Scientifically</b>	<p><b>Children should:</b></p> <p>Comments and asks questions about why things happen and the natural world around them.</p> <p>Engage in a new experience by trial and error.</p> <p>Find ways to solve problems.</p> <p>Develop ideas of grouping and sequencing linking to cause and effect.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Make links and notice patterns in experiences.</p> <p>Use their senses to explore the world around them.</p> <p>Choose the resources they need for their chosen activity.</p> <p>Handle equipment and tools safely.</p> <p>Create simple representations.</p>	<p><b>Children should:</b></p> <p>Comments and asks questions about why things happen and the natural world around them.</p> <p>Engage in a new experience by trial and error.</p> <p>Find ways to solve problems.</p> <p>Develop ideas of grouping and sequencing linking to cause and effect.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Make links and notice patterns in experiences.</p> <p>Use their senses to explore the world around them.</p> <p>Choose the resources they need for their chosen activity.</p> <p>Handle equipment and tools safely.</p> <p>Create simple representations.</p> <p>Answer how and why questions about their experiences.</p> <p>Make observations of animals and plants.</p> <p>Explain why some things occur.</p> <p><i>Ask simple questions</i></p>	<p><b>Children should:</b></p> <p>Ask simple questions</p> <p>Recognise a question can be answered in different ways.</p> <p>Observe closely using simple equipment.</p> <p>Perform simple tests</p> <p>Identify and classify in simple ways</p> <p>Use their observations and ideas to suggest answers to questions.</p>	<p><b>Children should:</b></p> <p>Ask simple questions</p> <p>Recognise a question can be answered in different ways.</p> <p>Observe closely using simple equipment.</p> <p>Perform simple tests</p> <p>Identify and classify in simple ways</p> <p>Use their observations and ideas to suggest answers to questions.</p> <p><i>Ask relevant questions.</i></p> <p><i>Use different types of enquiry to answer them.</i></p> <p><i>Set up simple practical enquiries (including comparative and fair tests).</i></p> <p><i>Make systematic and careful observation.</i></p> <p><i>Take accurate measurements using standard measurements (where appropriate)</i></p> <p><i>Use a range of equipment including thermometers and data loggers.</i></p> <p><i>Gather, record, classify and present data in a variety of ways to help in answering questions</i></p> <p><i>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</i></p>	<p><b>Children should:</b></p> <p>Ask relevant questions.</p> <p>Use different types of enquiry to answer them.</p> <p>Set up simple practical enquiries (including comparative and fair tests).</p> <p>Make systematic and careful observation.</p> <p>Take accurate measurements using standard measurements (where appropriate)</p> <p>Use a range of equipment including thermometers and data loggers.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Report on findings from enquiries, including oral and written explanations, displays</p>	<p><b>Children should:</b></p> <p>Ask relevant questions.</p> <p>Use different types of enquiry to answer them.</p> <p>Set up simple practical enquiries (including comparative and fair tests).</p> <p>Make systematic and careful observation.</p> <p>Take accurate measurements using standard measurements (where appropriate)</p> <p>Use a range of equipment including thermometers and data loggers.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Report on findings from enquiries, including oral and</p>	<p><b>Children should:</b></p> <p>Ask relevant questions.</p> <p>Use different types of enquiry to answer them.</p> <p>Set up simple practical enquiries (including comparative and fair tests).</p> <p>Make systematic and careful observation.</p> <p>Take accurate measurements using standard measurements (where appropriate)</p> <p>Use a range of equipment including thermometers and data loggers.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Report on findings from enquiries, including oral and</p>	<p><b>Children should:</b></p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs</p> <p>Use test results to make predictions to set up further comparative and fair tests</p> <p>Report and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations</p>	<p><b>Children should:</b></p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs</p> <p>Use test results to make predictions to set up further comparative and fair tests</p> <p>Report and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations</p>

	<p>Answer how and why questions about their experiences.          Make observations of animals and plants.          Explain why some things occur.</p>	<p><i>Recognise a question can be answered in different ways.          Observe closely using simple equipment.          Perform simple tests          Identify and classify in simple ways          Use their observations and ideas to suggest answers to questions.</i></p>		<p><i>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions          Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions          Identify differences, similarities or changes related to simple scientific ideas and processes          Use straightforward scientific evidence to answer questions or to support their findings.</i></p>	<p>or presentations of results and conclusions          Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions          Identify differences, similarities or changes related to simple scientific ideas and processes          Use straightforward scientific evidence to answer questions or to support their findings.</p>	<p>written explanations, displays or presentations of results and conclusions          Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions          Identify differences, similarities or changes related to simple scientific ideas and processes          Use straightforward scientific evidence to answer questions or to support their findings.</p>	<p>or presentations of results and conclusions          Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions          Identify differences, similarities or changes related to simple scientific ideas and processes          Use straightforward scientific evidence to answer questions or to support their findings.  <i>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary          Take measurements, using a range of scientific equipment, with increasing accuracy and precision          Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs          Use test results to make predictions to set up further comparative and fair tests          Report and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations          Identify scientific evidence that has been used to support or refute ideas or arguments.</i></p>	<p>oral and written forms such as displays and other presentations          Identify scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p>
--	--	---	--	--	--	---	---	--	---