

SCIENCE YEARLY PLANNER

Year group: Year 4

Term	Topic	Statutory requirements	Time	Content
Autumn	Living Things and their Habitats	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ☑ recognise that living things can be grouped in a variety of ways ☑ explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment ☑ recognise that environments can change and that this can sometimes pose dangers to living things. 	9 weeks	<ul style="list-style-type: none"> ➤ Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. ➤ They should identify how the habitat changes throughout the year. ➤ Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. ➤ Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects. <p>(Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses.)</p> <ul style="list-style-type: none"> ➤ Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and

	States of Matter	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ☑ compare and group materials together, according to whether they are solids, liquids or gases ☑ 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 (°C) ☑ identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	6 weeks	<ul style="list-style-type: none"> ➤ development, litter or deforestation. ➤ using and making simple guides or keys to explore and identify local plants and animals; making a guide to local living things; raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched ➤ Pupils should explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container). ➤ Pupils should observe water as a solid, a liquid and a gas and should note the changes to water when it is heated or cooled. ➤ grouping and classifying a variety of different materials; exploring the effect of temperature on substances such as chocolate, butter, cream ➤ They could research the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid. ➤ Explore reversible changes of state ➤ Observe and record evaporation over a period of time, for example, a puddle in the playground or washing on a line, and investigate the effect of temperature on
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				washing drying or snowmen melting.
Spring	Animals, including humans	Pupils should be taught to:		
		☐ describe the simple functions of the basic parts of the digestive system in humans	4 weeks	<ul style="list-style-type: none"> ➤ introduced to the main body parts associated with the digestive system, (mouth, tongue, teeth, oesophagus, stomach and small and large intestine) ➤ explore questions that help them to understand their special functions.
		☐ identify the different types of teeth in humans and their simple functions	4 weeks	<ul style="list-style-type: none"> ➤ comparing the teeth of carnivores and herbivores, and suggesting reasons for differences; ➤ finding out what damages teeth and how to look after them- identify particular foods <i>eg sticky sweet foods</i> as damaging and others <i>eg carrots, apples</i> as less damaging ➤ identify the three types of milk teeth, either from drawings or models, and explain the function of each type of tooth
		☐ construct and interpret a variety of food chains, identifying producers, predators and prey.	4 weeks	<ul style="list-style-type: none"> ➤ identify food of a specific animal <i>eg the privet hawk moth prefers privet</i> ➤ state that predators eat other animals ➤ identify animals which are predators and their prey <i>eg birds feed on insects, foxes feed on rabbits, herons feed on fish</i> ➤ state that many animals which are prey live on green plants ➤ sequence valid food chains relating to the local habitats using the arrow convention correctly

Summer	Sound	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ☐ identify how sounds are made, associating some of them with something vibrating ☐ recognise that vibrations from sounds travel through a medium to the ear ☐ find patterns between the pitch of a sound and features of the object that produced it ☐ find patterns between the volume of a sound and the strength of the vibrations that produced it ☐ recognise that sounds get fainter as the distance from the sound source increases. 	5 weeks	<ul style="list-style-type: none"> ➤ Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world ➤ Learn about how the pitch and volume of sounds can be changed in a variety of ways. ➤ find patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. ➤ investigate which material provides the best insulation against sound. Learn how to muffle sound ➤ Learn how sound travels ➤ Explore how to prevent sound travelling ➤ Pitch in stringed instruments ➤ Pitch in wind instruments
	Electricity	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ☐ identify common appliances that run on electricity ☐ construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers ☐ 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 ☐ recognise that a switch opens and 	5 weeks	<ul style="list-style-type: none"> ➤ Pupils should construct simple series circuits to try different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. ➤ Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols at this stage; ➤ To learn about how to handle electricity safely ➤ To differentiate between mains and battery power ➤ To learn about insulators and conductors

		<p>closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>☑ recognise some common conductors and insulators, and associate metals with being good conductors</p>		
	Living things and their habitats	<p>Pupils should be taught to:</p> <p>☑ recognise that environments can change and that this can sometimes pose dangers to living things</p>	2 weeks	<ul style="list-style-type: none"> ➤ Explore habitats in the school grounds. ➤ Make observations about changes in the appearance and role of the environment. ➤ Explore food chains in the summer. ➤ Learn about how animals and plants adapt across the seasons