

✓ Coverage of non-statutory guidance and working scientifically

Year 4

	<u>Tick as appropriate</u>		<u>Activities we currently do</u>
<p><u>Animals, including humans</u> Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them to understand their special functions. Pupils might work scientifically by: comparing the teeth of carnivores and herbivores, and suggesting reasons for differences; finding out what damages teeth and how to look after them. They might draw and discuss their ideas about the digestive system and compare them with models or images.</p>	Observing over time		Draw and label digestive system and explain functions. Comprehension of digestive system Make predictions based on teeth and explanations linked to vocab: carnivore/herbivore Look at the structure of the tooth – vocab
	Identifying and classifying	✓	
	Pattern seeking		
	Comparative and fair testing		
	Research using secondary resources	✓	
<p><u>States of Matter</u> 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. Note: Teachers should avoid using materials where heating is associated with chemical change, for example, through</p>	Observing over time	✓	Group materials based on states of matter Ice investigation – heating ice using different materials Research the water cycle and investigate practically – evaporation
	Identifying and classifying	✓	
	Pattern seeking		

<p>baking or burning.</p> <p>Pupils might work scientifically by: grouping and classifying a variety of different materials; exploring the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice-cream for a party). They could research the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid. They might 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 washing drying or snowmen melting.</p>	Comparative and fair testing	✓	<p>Heating and cooling chocolate</p> <p>Observing substances melting and monitor temperature</p>
	Research using secondary resources		
<p>Sound</p> <p>Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways.</p> <p>Pupils might work scientifically by: finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. They might make earmuffs from a variety of different materials to investigate which provides the best insulation against sound. They could make and play their own instruments by using what they have found out about pitch and volume.</p>	Observing over time		<p>Explore how sound is made with musical instruments</p> <p>Make own guitars – investigate how to change pitch</p> <p>Make telephones using paper cups and string – investigate how sound travels</p> <p>Investigate how distance affects volume</p>
	Identifying and classifying	✓	
	Pattern seeking	✓	
	Comparative and fair testing	✓	
	Research using secondary resources		
<p>Electricity</p> <p>Pupils should construct simple series circuits, trying different components, for example, bulbs, buzzers and</p>	Observing over time		<p>Construct circuits and incorporate into lighthouse design</p> <p>Draw/label circuits</p>

<p>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; these will be introduced in year 6. Note: Pupils might use the terms current and voltage, but these should not be introduced or defined formally at this stage. Pupils should be taught about precautions for working safely with electricity. Pupils might work scientifically by: observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.</p>	Identifying and classifying	✓	Identify hazards in the home and precautionary measures Investigate conductors and insulators – identify patterns Investigate the brightness of bulbs in relation to different variables e.g.no of bulbs
	Pattern seeking	✓	Classify objects: mains, battery etc
	Comparative and fair testing		
	Research using secondary resources		