

## KEY STAGE 2

<b>Knowledge, Skills and Understanding breakdown for Working Scientifically</b>		
<b>Year 4</b>		
Planning	Obtaining and presenting evidence	Considering evidence and evaluating
<p>Can they set up a simple fair test to make comparisons?</p> <p>Can they plan a fair test and isolate variables and explain why it was fair and explain which variables have been isolated?</p> <p>Can they suggest improvements and predictions?</p> <p>Can they decide which information needs to be collected and decide which is the best way for collecting it?</p> <p>Can they use their findings to draw a simple conclusion?</p>	<p>Can they take measurements using different equipment and units of measure and record what they have found in a range of ways?</p> <p>Can they make accurate measurements using standard units?</p> <p>Can they explain their findings in different ways (display, presentation, writing) ?</p>	<p>Can they find any patterns in their evidence or measurements?</p> <p>Can they make a prediction based on something they have found out?</p> <p>Can they record and present what they have found using scientific language, drawings, labelled diagrams, bar charts and tables?</p>
<b>Year 4 (Challenging)</b>		
Planning	Obtaining and presenting evidence	Considering evidence and evaluating
<p>Can they plan and carry out an investigation by controlling variables fairly and accurately?</p> <p>Can they use test results to make further predictions and set up further</p>	<p>Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models?</p>	<p>Can they report findings from the investigations through written explanations and conclusions?</p> <p>Can they use a graph or diagram to answer scientific questions?</p>

comparative tests?		
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## Knowledge, Skills and Understanding breakdown for Life Processes and Living Things

### Year 4

Animals, including humans	All Living things
<p>Can they identify and name the basic parts of the human digestive system?</p> <p>Can they describe the function of the organs of the human digestive system?</p> <p>Can they identify the simple function of different types of human teeth?</p> <p>Can they compare the teeth of herbivores and carnivores?</p> <p>Can they explain what a simple food chain shows?</p>	<p>Can they use a classification key to group a variety of living things? (plants, vertebrates, invertebrates)</p> <p>Can they compare the classification of common plants and animals to living things found in other places? (under the sea, prehistoric)</p> <p>Can they name and group a variety of living things based on feeding patterns? ( producer, consumer, predator, prey, herbivore, carnivore, omnivore)</p> <p>Do they recognise that environments can change and this can sometimes pose a danger to living things?</p>

### Year 4 (Challenging)

Animals, including humans	All living Things
<p>Can they classify living things and non-living things by a number of characteristics that they have thought of?</p> <p>Can they explain how people, weather and the environment can affect living things?</p> <p>Can they explain how certain living things depend on one another to survive?</p>	<p>Can they give reasons for how they have classified animals and plants, using their characteristics and how they are suited to their environment?</p> <p>Can they explore the work of pioneers in classification? (e.g Carl Linnaeus)</p>

## **Knowledge, Skills and Understanding breakdown for Materials and their Properties**

### **Year 4**

#### States of Matter

Can they compare and group materials based on their states of matter, ie, liquid, solid or gas?

Can they explain what happens to materials when they are heated or cooled?

Can they measure the temperature at which different materials change state?

Can they use measurements to explain changes to the state of the water?

Can they explain the part that evaporation and condensation has in the water cycle?

### **Year 4 (Challenging)**

#### States of Matter

Can they group and classify a variety of materials according to the impact of temperature on them?

Can they explain what happens over time to materials such as puddles on the playground or washing hanging on a line?

Can they relate temperature to change of state of materials?

## Knowledge, Skills and Understanding breakdown for Physical Processes

### Year 4

Sound	Electricity
<p>Can they describe a range of sounds and explain how they are made?</p> <p>Can they compare sources of sound and explain how the sound and explain how the sounds differ?</p> <p>Can they explain how to change a sound (louder/softer)?</p> <p>Can they describe and explain how a sound travels from a source to our ears?</p> <p>Can they explain what happens to sound as it travels away from its source?</p> <p>Can they explain how you could change the pitch of a sound?</p> <p>Can they investigate how different materials can affect the pitch and volume of sounds?</p>	<p>Can they explain how electricity is useful to us?</p> <p>Can they construct a simple circuit?</p> <p>Can they explain what a conductor is and test materials for conductivity?</p> <p>Can they explain closed and open circuits?</p> <p>Can they construct a circuit with a switch?</p> <p>Can they recognise some common conductors and insulators?</p>

### Year 4 (Challenging)

Sound	Electricity
<p>Can they explain why sound gets fainter or louder according to the distance?</p> <p>Can they explain how pitch and volume can be changed in a variety of ways?</p> <p>Can they work out which materials give the best insulation for sound?</p>	<p>Can they explain how a bulb might get lighter?</p> <p>Can they recognise if all metals are conductors of electricity?</p> <p>Can they work out which metals can be used to connect across a gap in a circuit?</p>