



BIOLOGY Key Concepts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Living things can be classified according to observable features				I can suggest different ways of sorting the same group of living things. I can use classification keys to group and identify members from a range of familiar and less familiar living things. I can describe examples of living things that are threatened by changes to environments.		I can use similarities and differences in observable features to decide how living things should be grouped. I can explain why certain features are useful in classifying living things (<i>eg backbones in animals and flowers in plants</i>).
Habitats provide living things with what they need		I can explain how, for a named animal or plant, it gets what it needs from its habitat. I can identify a range of living things in habitats of various sizes. I can construct a simple food chain and identify what is eating what. I can explore and identify what plants need to thrive .	I can explain what all plants need to flourish and recognise how these vary in amount.			
Living things exhibit variation and adaptation and these may lead to evolution.						I can recognise that offspring normally vary from each other and from their parents. I can describe examples of a living thing that has adapted to live in a particular habitat and evolved as a result. I can use fossils as evidence that living things have changed over time.

Life exists in a variety of forms and goes through cycles – Plants	I can identify a range of local plants. I can name parts of a range of familiar plants. I can compare and contrast a collection of items, sorting into categories: 'living', 'dead' and 'things that have never been alive'.	I can describe the stages of development of a full-grown plant.	I can describe what each part of a flowering plant does. I can explain, with the aid of a diagram or plant, how water is carried up from the soil. I can explain how pollination, seed formation and seed dispersal play a role in the reproduction of flowering plants.			
Life exists in a variety of forms and goes through cycles – Animals	I can name a variety of common animals. I can identify and group a range of familiar animals.	I can describe the relationship between adult animals and their offspring. I can identify a human's basic needs.	I can describe why animals, including humans, depend on the correct nutrition.		I can identify similarities and differences in two different life cycles. I can describe the changes as humans develop to old age.	
The human body has a number of systems, each with its own function	I can identify key features of a range of common animals. I can relate each of the human senses to organs.	I can describe the importance of a healthy diet and exercise.	I can explain which parts of the skeleton provide support and protection, and how they allow for movement.	I can use a food chain to represent predator-prey relationships. I can describe the function of each type of tooth in the human skull. I can identify what each of the principal organs in the digestive system do.	I can describe in sequence the stages of reproduction in some plants and animals.	I can describe what the heart, blood vessels and blood do. I can suggest how their bodies are affected by substances and actions. I can describe, with the aid of diagrams, the route that water takes within animals (circulatory systems).
CHEMISTRY Key Concepts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Different rocks have different properties, and the formation of soil & fossils can be explained			I can explain how different rocks are formed. I can explain how fossils are formed. I can describe how soil is made.			
Materials have physical properties which can be investigated and compared	I can correctly identify both object and material. I can identify and name a range of materials. I can describe a range of properties of a variety of materials.	I can describe changes achieved by applying forces in different directions.	I can examine and test rocks, grouping them according to the results.	I can group materials according to their state of matter.	I can test and sort a range of materials based on their physical properties. I can describe how some materials will dissolve and can be retrieved. I can justify separation techniques, with reference	

	I can classify a variety of materials into groups based on physical properties.				to materials being separated. I can identify chemical changes and recognise these as being irreversible.	
The physical properties of materials determine their uses		I can select and justify a material for a particular use.			I can use evidence to justify the selection of a material for a purpose.	
Materials can exist in different states and that these states can sometimes be changed				I can identify changes of state and research values of degrees Celsius at which changes happen. I can describe how evaporation and condensation happen in the water cycle, and how temperature affects evaporation.		
PHYSICS Key Concepts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
There are contact and non-contact forces; these affect the motion of objects			I can compare how an object will move on different surfaces. I can recognise the difference between contact and non-contact forces. I can describe how magnets attract or repel each other, identifying the poles of the magnet. I can predict outcomes of a particular arrangement of magnets. I can group materials on the basis of testing for being magnetic.		I can explain that gravity causes objects to fall towards Earth. I can describe how motion may be resisted by air resistance, water resistance or friction. I can describe how some devices may turn a smaller force into a larger one.	
Day, night, month, seasonal change & year are caused by the position and movement of the Earth	I can describe seasonal changes. I can relate weather patterns and day length to seasons.				I can draw a diagram or use a model to describe planetary orbits. I can describe the Sun, Earth and Moon as spheres.	

					<p>I can use a diagram or model to explain why the Sun seems to travel across the sky, and what causes day and night.</p> <p>I can draw a diagram or use a model to describe the Moon's orbit around the Earth.</p>	
<p>Light & sound can be reflected & absorbed and enable us to see & hear</p>			<p>I can relate being able to see to the presence of light.</p> <p>I can describe how some objects reflect light.</p> <p>I can explain how shadows are made.</p> <p>I can describe how to change the size of a shadow.</p>	<p>I can explain, with reference to vibrations, how an object makes a sound.</p> <p>I can describe the role of a medium in the transmission of sound.</p> <p>I can explain, with reference to a particular object, how the pitch and volume of sounds can be changed.</p> <p>I can describe the effect of moving further from the sources of a sound.</p> <p>I can</p>		<p>I can represent light using straight line ray diagrams.</p> <p>I can draw diagrams using straight lines showing light travelling to the eye.</p> <p>I can explain how we can see an object by referring to light travelling into the eye.</p> <p>I can draw a diagram showing an object, shadow, and light to relate object shape to shadow shape.</p>
<p>Electricity can make circuits work and can be controlled to perform useful functions</p>				<p>I can list examples of appliances that run on electricity.</p> <p>I can construct a simple circuit and name its components.</p> <p>I can predict whether a particular arrangement of components will result in a bulb lighting.</p> <p>I can sort materials into conductors and insulators.</p> <p>I can predict how the operation of a switch will affect bulbs lighting.</p>		<p>I can explain how the number and voltage of cells affects the lamp or buzzer.</p> <p>I can explain the use of switches, how bulbs can be made brighter and buzzers made louder.</p> <p>I can represent a circuit that has been constructed using symbols.</p>
WORKING SCIENTIFICALLY Key Concepts	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Planning investigations	I can, with prompting, ask simple questions that can be tested.	I can ask simple questions that can be tested.	I can, with support, develop relevant, testable questions.	I can develop relevant, testable questions.	I can, with support, answer questions using evidence gathered from	I can answer questions using evidence gathered

	I can offer ways of gathering evidence to answer a question.	I can suggest different ways of answering a question.	I can plan and set up a comparative or fair test.	I can plan investigations using different types of scientific enquiry. I can set up comparative and fair tests.	different types of scientific enquiry. I can, with prompting, identify and manage variables.	from different types of enquiry. I can identify and manage variables.
Conducting experiments	I can examine objects to note key features. I can, with support, conduct simple tests.	I can examine carefully using a range of simple equipment. I can conduct simple comparative tests.	I can use a variety of equipment as instructed. I can use standard units of measurement when taking measurements.	I can use various equipment, as instructed, repeatedly and with care. I can recognise the importance of using standard units and measures accurately.	I can, following discussion of alternatives, select appropriate equipment I can take measurements that are precise as well as accurate. I can know how to process repeat readings (<i>eg when timing falling objects</i>).	I can use appropriate equipment to take measurements. I can consider how, by modifying instrument or technique, measurements can be improved. I can identify situations in which taking repeat readings will improve the quality of evidence (<i>eg investigating the behaviour of components in a circuit</i>).
Recording evidence	I can, with prompting, identify what might usefully be recorded.	I can, with assistance, draw and label diagrams.	I can, with prompting, draw and label diagrams. I can, with prompting, use tables to record evidence. I can, with prompting, gather and display evidence in various ways.	I can use words and diagrams to record findings. I can use various ways to record evidence. I can use various ways to record, group and display evidence.	I can start to use labelled diagrams to show more complex outcomes (<i>eg comparing the time of day at different places on Earth</i>). I can, with prompting, use various ways to record complex evidence. I can use a line graph to record basic data.	I can use labelled diagrams to show complex outcomes (<i>eg relating specific adaptations of organisms to environmental factors</i>). I can use various ways, as appropriate, to record complex evidence. I can use line graphs to display complex data (<i>eg size of object in relation to the size of the shadow it casts</i>).
Reporting findings	I can identify key findings from an enquiry.	I can identify and group key outcomes from an enquiry (<i>eg describing conditions in different habitats and how these affect the type of plants and animals that live there</i>).	I can, with prompting, write a conclusion based on evidence. I can indicate findings from an enquiry that could be reported (<i>eg answering questions about how rocks are formed</i>).	I can write a conclusion based on evidence. I can present findings either orally or in writing.	I can, with prompting, write a conclusion using evidence and identifying causal links (<i>eg what makes a parachute fall quicker</i>). I can, with support, display and present key findings from enquiries orally and in writing. I can, with support, indicate why some results may not be entirely trustworthy (<i>eg when timing falling objects</i>).	I can write a conclusion using evidence and identifying causal links. I can display and present key findings from enquiries orally and in writing. I can, in conclusions, indicate how trustworthy results/data are (<i>eg relating brightness of bulb to voltage</i>).
Conclusions and predictions	I can collect data. I can suggest answers to enquiry questions using data.	I can collect data relevant to the answering of questions.	I can, with prompting, recognise patterns that relate to scientific ideas (<i>eg</i>	I can recognise patterns that relate to scientific ideas (<i>eg investigating the</i>	I can show how evidence supports a conclusion. I can suggest further relevant comparative or	I can identify how an idea is supported or refuted by evidence.

		<p>I can answer enquiry questions using data and ideas.</p>	<p><i>investigating the behaviour of magnets.</i> I can, with support, use evidence to produce a simple conclusion.</p>	<p><i>relationship between volume and vibrations.</i> I can use evidence to produce a simple conclusion <i>(eg the effect of temperature on different substances).</i> I can use evidence to suggest further relevant investigations <i>(eg making own instruments using ideas about pitch and volume).</i></p>	<p>fair tests <i>(eg when testing materials for various properties to determine their suitability).</i></p>	<p>I can use evidence to suggest further comparative or fair tests that would develop the investigation <i>(eg in the design of rear-view mirrors for cars).</i></p>
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