

Science Key Skills Y6

Area	Key Skill
Science Skills	<ul style="list-style-type: none"> • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments • explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically • recognise that scientific ideas change and develop over time • draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings • read, spell and pronounce scientific vocabulary correctly
Living things and their Habitats	<ul style="list-style-type: none"> • describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals • give reasons for classifying plants and animals based on specific characteristics • Know that broad groupings, such as micro-organisms, plants and animals can be subdivided • classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals) • find out about significance of the work of scientists such as Carl Linnaeus, a pioneer of classification
Evolution and Inheritance	<ul style="list-style-type: none"> • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution • be introduced to the idea that characteristics are passed from parents to their offspring, i.e. different breeds of dogs, and what happens when, for example, Labradors are crossed with poodles • appreciate that variation in offspring over time can make animals more or less able to survive in particular environments, for example, by exploring how giraffes' necks got longer • find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution

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Animals including humans	<ul style="list-style-type: none">• identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood• recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function• describe the ways in which nutrients and water are transported within animals, including humans• explore questions to understand how the circulatory system enables the body to function• learn how to keep their bodies healthy and how their bodies might be damaged –including how some drugs and other substances can be harmful to the human body• explore the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.
Light	<ul style="list-style-type: none">• recognise that light appears to travel in straight lines• use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye• explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes• use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them• work scientifically by: deciding where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works• look at a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters (they do not need to explain why these phenomena occur)
Electricity	<ul style="list-style-type: none">• associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit• compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches• use recognised symbols when representing a simple circuit in a diagram• construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors• learn how to represent a simple circuit in a diagram using recognised symbols.