

Science Progression of skills Year 6

National Curriculum objectives: In this unit, children will be taught to:	
<p>Year 5 and 6 Working Scientifically Use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> • WS1 planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • WS2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • WS3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • WS4 using test results to make predictions to set up further comparative and fair tests • WS5 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 • WS6 identifying scientific evidence that has been used to support or refute ideas or arguments. • WS7 explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. • WS8 recognise that scientific ideas change and develop over time. • WS9 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. • WS10 Pupils should read, spell and pronounce scientific vocabulary correctly. 	<p>Living things and their Habitats</p> <ul style="list-style-type: none"> • LTH1 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 • LTH2 give reasons for classifying plants and animals based on specific characteristics. • LTH3 know that broad groupings, such as micro-organisms, plants and animals can be subdivided. • LTH4 should classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals). • LTH5 find out about significance of the work of scientists such as Carl Linnaeus, a pioneer of classification. <p>Animals, including Humans</p> <ul style="list-style-type: none"> • AIH1 identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • AIH2 recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • AIH3 describe the ways in which nutrients and water are transported within animals, including humans. • AIH4 explore questions to understand how the circulatory system enables the body to function. • AIH5 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. • AIH6 explore the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health. <p>Evolution and Inheritance</p>

	<ul style="list-style-type: none"> • E11 recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • E12 recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • E13 identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. • E14 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. • E15 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. • E16 find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution. <p>Light</p> <ul style="list-style-type: none"> • L1 recognise that light appears to travel in straight lines • L2 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 • L3 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 • L4 use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. • L5 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. • L6 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). <p>Electricity</p>
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