

Key Stage 2 YEAR 6 SCIENCE

National Curriculum KS2 Programme of Study	Chris Quigley Essential Skills Milestone 3	
<p><u>Working Scientifically</u> During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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. 	<p>1. To work scientifically</p>	<ul style="list-style-type: none"> • Plan enquiries, including recognising and controlling variables where necessary. • Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. • Take measurements, using a range of scientific equipment, with increasing accuracy and precision. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models. • Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. • Present findings in written form, displays and other presentations. • Use test results to make predictions to set up further comparative and fair tests. • Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.

<p><u>Living things and their habitats</u> Pupils should be taught to:</p> <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. 	<p>To investigate living things</p>	<p>Explain the classification of living things into broad groups according to common, observable characteristics and based on similarities and differences, including plants, animals and micro-organisms.</p>
<p><u>Animals, including humans</u> Pupils should be taught to:</p> <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 	<p>To understand animals and humans</p>	<p>Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood (including the pulse and clotting).</p>
<ul style="list-style-type: none"> 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. 	<p>To investigate living things</p>	<p>Recognise the impact of diet, exercise, drugs and lifestyle on the way human bodies function.</p>
<p><u>Evolution and inheritance</u> Pupils should be taught to:</p> <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. 	<p>To understand evolution and inheritance</p>	<p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Describe how adaptation in humans and plants leads to evolution. (e.g. human skeleton.)</p>

<p><u>Light</u> Pupils should be taught to:</p> <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 	<p>To understand light and seeing</p>	<p>Understand that light appears to travel in straight lines.</p> <ul style="list-style-type: none"> • Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eyes.
<p><u>Electricity</u> Pupils should be taught to:</p> <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. 	<p>To understand electrical circuits</p>	<p>Identify and name the basic parts of a simple electrical circuit, including cells, wires, bulbs, switches and buzzers.</p> <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.