

Year 5 Units

	Working scientifically	Living things and their habitats	Earth and space	Properties and changes of materials	Animals, including humans	Forces
Children working below age-related expectations will be:	<p>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 simple types of scientific enquiries to answer questions, including recognising and controlling variables taking measurements, using scientific equipment, with attempted accuracy and when prompted take repeat readings recording data and results using scientific diagrams and labels, classification keys, tables and bar graphs using test results to make predictions reporting and presenting findings from enquiries, including conclusions 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. 	<ul style="list-style-type: none"> describe some differences in the life cycles of a mammal, an amphibian, an insect and a bird describe some of the life process of reproduction in some plants and animals. 	<ul style="list-style-type: none"> Begin to describe the movement of the Earth, and other planets, relative to the Sun in the solar system demonstrate the movement of the Moon relative to the Earth describe the Sun, Earth and Moon as approximately spherical bodies using simple language explain day and night and the apparent movement of the Sun across the sky. 	<ul style="list-style-type: none"> group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets know that some materials will dissolve in liquid to form a solution, and observe that some substances can be recovered from a solution use knowledge of solids, liquids and gases to experiment how mixtures might be separated, including through filtering, sieving and evaporating give particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing observe that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning 	<ul style="list-style-type: none"> Describe the changes as humans develop from birth to old age. 	<ul style="list-style-type: none"> Observe that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object observe the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a force to have a greater effect.
Children working at age-related expectations will:	<p>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. 	<ul style="list-style-type: none"> describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some plants and animals. 	<ul style="list-style-type: none"> describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon relative to the Earth describe the Sun, Earth and Moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. 	<ul style="list-style-type: none"> compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. 	<ul style="list-style-type: none"> Describe the changes as humans develop from birth to old age. 	<ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
Children working above age-related expectations will:	<p>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"> chose to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, selecting which range of scientific equipment, with accuracy and precision, taking repeat readings when appropriate select how to record data and results of increasing complexity from a range of scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using and justify test results to make predictions to set up further comparative and fair tests reporting and explain using scientific language to present 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 identify and justify scientific evidence that has been used to support or refute ideas or arguments. 	<ul style="list-style-type: none"> describe and explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe and explain the life process of reproduction in some plants and animals. 	<ul style="list-style-type: none"> Describe and explain the movement of the Earth, and other planets, relative to the Sun in the solar system describe and explain the movement of the Moon relative to the Earth describe using clear scientific language for the Sun, Earth and Moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky and relate to locational knowledge 	<ul style="list-style-type: none"> justify comparisons and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution and explain the process use knowledge of solids, liquids and gases to explain how mixtures might be separated, including through filtering, sieving and evaporating give reasons and justify, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate from real life experience that dissolving, mixing and changes of state are reversible changes explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda and make links to real life situations and objects 	<ul style="list-style-type: none"> Describe and explain the changes as humans develop from birth to old age. 	<ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object and explain relevance to wider world identify and explain the effects of air resistance, water resistance and friction, that act between moving surfaces and apply to wider world recognise and identify that mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect and how it used in everyday mechanisms.