



BOLD = National Curriculum Objectives

Italics = Concepts

Year 1 expected			
Working scientifically	Chemistry	Biology	Physics
<p><u>Planning Investigations</u></p> <p><i>Pupils can ask questions</i> Ask simple questions when prompted</p> <ul style="list-style-type: none"> With prompting, ask simple questions that can be tested, e.g. about plants growing in their habitat. <p><i>Pupils can plan an enquiry</i> Suggest ways of answering a question</p> <ul style="list-style-type: none"> Offer ways of gathering evidence to answer a question, e.g. by deciding on the best material to use for a particular application. 	<p><u>Rocks</u></p> <p><i>Materials have physical properties which can be investigated and compared</i> Distinguish between an object and the material from which it is made</p> <ul style="list-style-type: none"> Correctly identify both object and material <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock</p> <ul style="list-style-type: none"> Identify and name a range of materials. 	<p><u>Plants</u></p> <p><i>Life exists in a variety of forms and goes through cycles</i> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <ul style="list-style-type: none"> Identify a range of local plants. <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p> <ul style="list-style-type: none"> Name parts of a range of familiar plants. 	<p><u>Seasonal Change</u></p> <p><i>Day, night, month, seasonal change & year are caused by the position and movement of the Earth</i> Observe changes across the four seasons</p> <ul style="list-style-type: none"> Describe seasonal changes. <p>Observe and describe weather associated with the seasons and how day length varies</p> <ul style="list-style-type: none"> Relate weather patterns and day length to seasons.
<p><u>Conducting experiments</u></p> <p><i>Pupils can use equipment to take Measurements</i> Make relevant observations</p> <ul style="list-style-type: none"> Examine objects to note key features, e.g. observe growth of plants they have planted. <p>Conduct simple tests, with support</p> <ul style="list-style-type: none"> With support, conduct simple tests, e.g. comparing the properties of different materials 	<p>Describe the simple physical properties of a variety of everyday materials</p> <ul style="list-style-type: none"> Describe a range of properties of a variety of materials. <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties</p> <ul style="list-style-type: none"> Classify a variety of materials into groups based on physical properties. 	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <ul style="list-style-type: none"> Compare and contrast a collection of items, sorting into categories: 'living', 'dead' and 'things that have never been alive'. 	



<p><u>Recording evidence</u></p> <p><i>Pupils record work with diagrams and label them</i></p> <p>With prompting, suggest how findings could be recorded</p> <ul style="list-style-type: none"> • With prompting, identify what might usefully be recorded, e.g. drawing structures of plants or recording changing day length. 		<p><u>Animals including humans</u></p> <p><i>Life exists in a variety of forms and goes through cycles – Animals</i></p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <ul style="list-style-type: none"> • Name a variety of common animals. 	
<p><u>Reporting findings</u></p> <p><i>Pupils process findings to develop conclusions and identify causal relationships</i></p> <p>Recognise findings</p> <ul style="list-style-type: none"> • Identify key findings from an enquiry, e.g. noting how plants have changed over time. 		<p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <ul style="list-style-type: none"> • Recognise the difference between carnivores, herbivores and omnivores. <p><i>The human body has a number of systems, each with its own function</i></p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p>	
<p><u>Conclusions and predictions</u></p> <p><i>Pupils can analyse data</i></p> <p>Gather and record data</p> <ul style="list-style-type: none"> • Collect data, e.g. comparing and contrasting familiar plants. <p><i>Pupils can draw conclusions</i></p> <p>Use observations to suggest answers to questions</p> <ul style="list-style-type: none"> • Suggest answers to enquiry questions using data, e.g. describe how to group plants. 		<ul style="list-style-type: none"> • Identify key features of a range of common animals. <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p> <ul style="list-style-type: none"> • Relate each of the human senses to organs. 	



Year 1 challenging			
Working scientifically	Chemistry	Biology	Physics
<p><u>Planning Investigations</u></p> <p><i>Pupils can ask questions</i> Ask simple questions when prompted</p> <ul style="list-style-type: none"> Ask simple questions that can be tested. <p><i>Pupils can plan an enquiry</i> Suggest ways of answering a question</p> <ul style="list-style-type: none"> Suggest different ways of answering question. 	<p><u>Rocks</u></p> <p><i>Materials have physical properties which can be investigated and compared</i> Distinguish between an object and the material from which it is made</p> <ul style="list-style-type: none"> Compare the same object made from different materials in terms of its effectiveness. <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock</p> <ul style="list-style-type: none"> Identify typical uses of a range of materials. <p>Describe the simple physical properties of a variety of everyday materials</p> <ul style="list-style-type: none"> Compare the physical properties of different everyday materials. <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties</p> <ul style="list-style-type: none"> Use simple physical properties to suggest classification of materials. 	<p><u>Plants</u></p> <p><i>Life exists in a variety of forms and goes through cycles</i> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <ul style="list-style-type: none"> Identify and notice similarities between various local plants. <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p> <ul style="list-style-type: none"> Identify and notice similarities in the structure of various local plants. <p>Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <ul style="list-style-type: none"> Research further examples to add to the categories: 'living', 'dead' and 'things that have never been alive'. 	<p><u>Seasonal Change</u></p> <p><i>Day, night, month, seasonal change & year are caused by the position and movement of the Earth</i> Observe changes across the four seasons</p> <ul style="list-style-type: none"> Recognise changes within seasons as well as between seasons. <p>Observe and describe weather associated with the seasons and how day length varies</p> <ul style="list-style-type: none"> Make and test predictions relating to changing day length and weather patterns.
<p><u>Conducting experiments</u></p> <p><i>Pupils can use equipment to take Measurements</i> Make relevant observations</p> <ul style="list-style-type: none"> Examine carefully, e.g. using a hand lens. <p>Conduct simple tests.</p> <ul style="list-style-type: none"> Conduct simple tests. 			
<p><u>Recording evidence</u></p> <p><i>Pupils record work with diagrams and label them</i> With prompting, suggest how findings could be recorded</p> <ul style="list-style-type: none"> Draw and label diagrams. 		<p><u>Animals including humans</u></p> <p><i>Life exists in a variety of forms and goes through cycles – Animals</i> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <ul style="list-style-type: none"> Identify common features of the main groups of vertebrates. 	



<p><u>Reporting findings</u></p> <p><i>Pupils process findings to develop conclusions and identify causal relationships</i></p> <p>Recognise findings</p> <ul style="list-style-type: none">• Identify and group key outcomes from an enquiry.		<p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <ul style="list-style-type: none">• Suggest whether an unfamiliar animal might be a carnivore, herbivore or omnivore. <p><i>The human body has a number of systems, each with its own function</i></p>	
<p><u>Conclusions and predictions</u></p> <p><i>Pupils can analyse data</i></p> <p>Gather and record data</p> <ul style="list-style-type: none">• Collect data relevant to the answering of questions. <p><i>Pupils can draw conclusions</i></p> <p>Use observations to suggest answers to questions</p> <ul style="list-style-type: none">• Answer enquiry questions using data and ideas.		<p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <ul style="list-style-type: none">• Compare key features of familiar and unfamiliar animals. <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p> <ul style="list-style-type: none">• Suggest how the senses are used in an activity such as eating.	