



St Laurence's CE Primary School  
 Science  
 Long Term Plan  
 Year: 5



Autumn Materials and their properties	Spring 1 Earth and Space	Spring 2 Forces	Summer 1 Life cycles	Summer 2 Animals including humans
<b>Key Content and skills: Knowledge</b>				
<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</p> <p>To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>To use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>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.</p>	<p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>Describe the movement of the Moon relative to the Earth</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>	<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Describe the changes as humans develop to old age.</p> <p>Investigating human growth</p> <p>Understand changes during puberty (<i>Link to RSE</i>)</p> <p>Research gestation periods of different animals</p>
<b>Key Content and skills: Working Scientifically</b>				
<p style="color: red;">Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p style="color: red;">Use test results to make predictions to set up further comparative and fair tests</p>				



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Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs,

Report and present findings from enquiries, including conclusions, causal relationships and explanations results, explanations of and degree of trust in results, in oral and written forms such as displays and other presentations

Identify scientific evidence that has been used to support or refute ideas or arguments.

<p><b>Vocabulary:</b> Materials Properties conductor insulator sieve filter evaporate condense dissolve reversible</p>	<p><b>Vocabulary:</b> Earth and space sphere orbit gravity heliocentric geocentric rotation axis phases</p>	<p><b>Vocabulary:</b> Forces and energy force gravity newtons resistance balanced acceleration deceleration friction</p>	<p><b>Vocabulary:</b> The natural world life cycle dispersal germination pollination fertilisation reproduction propagation metamorphosis</p>	<p><b>Vocabulary:</b> Anatomy of the human body life cycle adolescent puberty menstruation reproduction gestation foetus life expectancy</p>
<p><b>Assessment Against the National Curriculum</b> Pupils should be taught to: use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p>	<p><b>Assessment Against the National Curriculum</b> Pupils should be taught to: 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.</p> <p>Report and present findings from enquiries</p>	<p><b>Assessment Against the National Curriculum</b> Pupils should be taught to: identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Use test results to make predictions to set up further comparative and fair tests Take measurements...taking repeat readings when appropriate</p>	<p><b>Assessment Against the National Curriculum</b> Pupils should be taught to: describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>describe the life process of reproduction in some plants and animals.</p> <p>Record data and results of increasing complexity using scientific diagrams and labels...and line graphs</p>	<p><b>Assessment Against the National Curriculum</b> Pupils should be taught to: describe the changes as humans develop to old age.</p> <p>Report and present findings from enquiries, including conclusions</p>



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