



St Laurence's CE Primary School
Science Long Term Plan
Year: 5
Academic Year: 2020-2021



Autumn 1 Materials and their properties	Autumn 2 Materials and their properties	Spring 1 Earth and Space	Spring 2 Forces	Summer 1 Life cycles	Summer 2 Animals including humans
Key Content and skills: Knowledge					
<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>To explain that some changes result in the formation of new materials, and that this kind of change</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>Explain why 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>



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<p>is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p>					
Key Content and skills: Working Scientifically					
<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Use test results to make predictions to set up further comparative and fair tests</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs,</p> <p>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>		<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Use test results to make predictions to set up further comparative and fair tests</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs,</p> <p>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>	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Use test results to make predictions to set up further comparative and fair tests</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs,</p> <p>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>	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Use test results to make predictions to set up further comparative and fair tests</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs,</p> <p>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>	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Use test results to make predictions to set up further comparative and fair tests</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs,</p> <p>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>



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<u>Vocabulary:</u>	<u>Vocabulary:</u>	<u>Vocabulary:</u>	<u>Vocabulary:</u>	<u>Vocabulary:</u>	<u>Vocabulary:</u>
Property transparent opaque soluble insoluble solute solution solvent conduct insulate thermal magnetic filter filtrate evaporate gas solid liquid distillation chromatography state burning oxygen particles evaporation dissolving mixing hardness	Property transparent opaque soluble insoluble solute solution solvent conduct insulate thermal magnetic filter filtrate evaporate gas solid liquid distillation chromatography state burning oxygen particles evaporation dissolving mixing hardness	Gravity star planet hemisphere attract attraction weight moon orbit revolve rotation axis equator season winter autumn mass solar system geocentric heliocentric sphere ellipse phases shadow temperature distance	Force newton's gravity friction air resistance up thrust balanced unbalanced Gear lever pulley planet contact non- contact drag thrust lift opposite weight mass acceleration deceleration	Bird fish amphibian reptile mammal invertebrate carnivore herbivore omnivore life cycle reproduction movement respiration sensitivity growth nutrition gestation birth fertilization germination pollination seed dispersal predator prey	Puberty life cycle gestation womb growth asexual reproduction reproduce Sexual reproduction sperm egg foetus baby birth fertilisation