

### Linking Science Topics with National Curriculum Content- Year 5

Term	Topic	National Curriculum Knowledge Content	National Curriculum Working Scientifically Skills
Autumn	Materials and their Properties Including Separating mixtures	<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>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</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>Identify scientific evidence that has been used to support or refute ideas or arguments</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeated measurements where appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classifications keys, tables, scatter graphs, bars and line graphs</p> <p>Report and 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</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Use test results to make predictions to set up further comparative and fair tests</p>
Spring	Forces  Space	<p>Explain that unsupported objects fall towards 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 movement of the Earth, and the 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 objects</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>Identify scientific evidence that has been used to support or refute ideas or arguments</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeated measurements where appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classifications keys, tables, scatter graphs, bars and line graphs</p> <p>Report and 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</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Use test results to make predictions to set up further comparative and fair tests</p>
Summer	Lifecycles  Growing and Changing	<p>Describe the differences in the life cycle 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>Describe the life process of reproduction in some plants and animals</p> <p>Describe the changes as humans develop to old age</p>	<p>Identify scientific evidence that has been used to support or refute ideas or arguments</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeated measurements where appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classifications keys, tables, scatter graphs, bars and line graphs</p> <p>Report and 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</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Use test results to make predictions to set up further comparative and fair tests</p>