

Year 5 - Progression of Knowledge and Skills Science

Term	Knowledge	Skills
<p style="text-align: center;">Autumn 1 Topic: Forces</p>	<ul style="list-style-type: none"> • Explain that unsupported objects fall towards Earth because of the force of gravity acting between the Earth and the falling object. • Describe the effects of air resistance, water resistance and friction, that act between moving surfaces • I can recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect 	<ul style="list-style-type: none"> • Research the effects of gravity and Sir Isaacs equipment. • Plan different types of enquiry to answer a question. • Conduct a fair test to explore the effects of air resistance on a falling object. • Conduct a comparative test to investigate water resistance. • Conduct a fair test to investigate friction. • Take measurements using a range of scientific equipment. • Record results in a table and identify patterns. • Interpret and communicate results from data using scientific vocabulary.

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<p style="text-align: center;">Autumn 2 Topic: Properties of materials</p>	<ul style="list-style-type: none"> • Compare and group together everyday materials based on their properties, including hardness, solubility, transparency, conductivity 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 solid, liquid and gas to decide how mixtures might be separated including through filtering, sieving and evaporation. • Give reasons based on evidence from comparative tests for the particular uses of everyday materials including metals, wood and plastic. • Explain that some changes result in the formation of new materials and 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"> • Demonstrate that dissolving, mixing and changes of state are reversible changes. • I learn about famous scientists and what major discoveries they have made. • Identify different materials and classify based on its properties. • Identify the properties of different materials. • I can make predictions. • I can use scientific language and illustrations to discuss, communicate and justify ideas. • I can make observations over time. • I can compare how reversible and irreversible materials act when heated and cooled. • I can record results in a table and notice patterns. • Draw conclusions from my results.

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<p style="text-align: center;">Spring 1 Topic: Space</p>	<ul style="list-style-type: none"> • Name the planets of the solar system. • 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 approximate spherical bodies. • Use Earth rotation to explain day and night due to the apparent movement of the sun across the sky. 	<ul style="list-style-type: none"> • Use research and secondary sources to find out about the moon. • Look for patterns in day light hours. • Record my work using scientific diagrams and labels. • Use a model to discuss, communicate and justify scientific ideas using scientific vocabulary.
<p style="text-align: center;">Spring 2 Topic: Science Week</p>	<ul style="list-style-type: none"> • Identify scientific evidence that has been used to support or refute ideas or arguments. 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • 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

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<p style="text-align: center;">Spring 2 Topic: Science Week</p>		<ul style="list-style-type: none"> • scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Use test results to make predictions to set up further comparative and fair tests. • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.
<p style="text-align: center;">Summer 1 Topic: Living things and habitats</p>	<ul style="list-style-type: none"> • Describe the differences in 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"> • Identify and classify. • Ask relevant questions and find ways to answer them. • I can make accurate and relevant predictions. • I can plan and carry out a fair test accurately. • Report and present findings from research. • Record results in a variety of different ways to help answer my

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<p>Summer 1 Topic: Living things and habitats</p>		<p>questions.</p> <ul style="list-style-type: none"> • I can look for patterns when considering gestation periods of animals. • Use oral and written forms to report conclusions.
<p>Summer 2 Topic: Animals including humans</p>	<ul style="list-style-type: none"> • Describe the changes as humans develop from birth to old age. 	<ul style="list-style-type: none"> • Use research and own subject knowledge to order stages of human development. • Make predictions on gestation periods. • Make careful observations as we grow older. • Identify changes in the human body. • Look for patterns in gestation periods. • Notice changes over time. • Record data using scatter graphs. • Record learning using scientific diagrams. • Interpret findings. • Evaluate my learning and suggest improvements.