# Progression in Science

| **Key Knowledge Seams** *(These are the themes of knowledge that are returned to each year and build upon what has gone before* | **Key Skills** *(These are any skills that children will develop – they are what they will do with the knowledge they have gained)* | **Foundation** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
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| | | | **Key Stage One** | | **Lower Key stage Two** | | **Upper Key stage Two** | |
| | | | **Body parts and the Senses**<br>**Everyday Materials**<br>**Seasonal Changes**<br>**Comparing Animals**<br>**Identifying Plants and Minibeasts** | **Human Health**<br>**The uses and changes of everyday materials.**<br>**The Environment**<br>**Forces**<br>**Living things and world habitats**<br>**Identifying Plants and Minibeasts** | **Plants**<br>**Animals including humans**<br>**Forces**<br>**Rocks**<br>**Light**<br>**Scientists and their impact** | **Sounds and Vibrations**<br>**States of Matter**<br>**Animals, Living things and their habitats.**<br>**Electricity**<br>**Scientists and Inventors** | **Lifecycles**<br>**Earth and Space**<br>**Properties and changes in Materials**<br>**Forces**<br>**Human Changes**<br>**Scientists and Inventors** | **Heart and Circulation**<br>**Electricity**<br>**Evolution and Inheritance**<br>**Light and Shadow**<br>**Life Processes Clarification.** |
| Materials<br>Everyday materials<br>Properties of materials<br><br>Animals, including humans<br><br>Living Thing s and their habitats.<br><br>Plants<br><br>Electricity<br><br>Light<br><br>**KS2**<br>Earth and Space<br><br>Forces and Magnets<br><br>Evolution and Inheritance | **Questioning and enquiring**<br>**Planning** | **ELG Listening, Attention & Understanding**<br>To listen and **respond** to stories about scientific processes/events/objects.<br>To ask **why.** | To ask simple questions about the world around us. | To ask simple questions about the world around us. | To ask some relevant questions and use different types of scientific enquiries to answer them. | To ask relevant questions and use different types of scientific enquiries to answer them. | To begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. | To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. |
| | **Observing and measuring**<br>**Pattern seeking** | **ELG Playing and Exploring**<br>**ELG Creating & Thinking Critically.**<br><br>To make observations and to talk about similarities and differences. | To use simple observations and ideas to suggest answers to questions. | To observe changes over time and with guidance notice patterns and relationships. | To begin to look for patterns and what data to collect to identify them.<br>To begin to measure accurately using standard units.<br>Beginning to choose from a selection of equipment. | To help to make decisions about what observations to make and for how long.<br>Can see a pattern in results<br>Can choose from a selection of equipment. | To begin to make their own decisions about what observations to make, measurements to use and how long for.<br>Begin to interpret data and find patterns.<br>Begin to take accurate and precise measurements. | To make their own decisions about what observations to make, measurements to use and how long for.<br>Can interpret data and find patterns.<br>Can take accurate and precise measurements. |
| | **Investigating** | **ELG Creating & Thinking Critically.**<br>**Active Learning**<br>**Explore** objects, materials, living things and resources designed to model scientific processes. (How it works) | To perform simple tests with support. | Perform simple tests. | To set up some simple test and to know why a fair test is necessary.<br>To begin to think of one variable factor. | To recognise when a simple fair test is necessary and help how to decide to set it up.<br>To think of one variable factor. | To begin to use test results to set up further comparative and fair tests.<br>Begin to explain which variables need to be controlled and why. Begin to suggest improvements to method and give reasons. | To use test results to make predictions and set up comparative and fair tests.<br><br>To explain which variable needs to be controlled and why.<br>To give improvements to their method, giving reasons. |
| | **Recording and reporting findings** | **ELG Listening, Attention & Understanding**<br>To use simple scientific criteria. | To begin to gather and record data with adult support to help answer questions.<br>To begin to record data in a table. | To gather and record data to help answer questions.<br>To record simple data. | To gather, record and begin to classify and present data in a variety of ways.<br>To begin to record findings using scientific language, diagrams and charts. | To gather, record and to classify and present data in a variety of ways.<br>To record findings using scientific language, diagrams and charts.<br>To choose how to communicate findings. | To begin to record data and results of increasing complexity using scientific diagrams, labels, classifications keys and graphs.<br>To begin to report and present findings and data. | To record data and results of increasing complexity using scientific diagrams, labels, classifications keys and graphs.<br>To report and present findings and data, communicating detailed scientific language. |
| | **Identifying, grouping, and classifying** | E**LG To explore the natural world around them, making observations and drawing pictures of animals and plants.**<br>To **talk** and **sort** using simple scientific criteria. | To begin to identify and classify with some support<br>To begin to observe, identify, compare and describe. | To identify and classify.<br>To observe, identify, compare and describe.<br>To sort and group items with support. | To begin to identify differences, similarities or changes related to simple scientific ideas.<br>To talk about criteria for sorting and to begin to classify using simple keys. | To identify differences, similarities or changes related to simple scientific ideas.<br>To compare and group according to behaviour or properties based on testing. | To begin to use and develop keys and other information records to identify, classify and describe living things and materials. | To use and develop keys and other information records to identify, classify and describe living things and materials. |
| | **Conclusions** | **ELG Speaking**<br>To **explain** simple phenomena. How? Why? | To begin to say what has happened in the investigation. | To say what has happened in the investigation. | To begin to use results to draw simple conclusion, make | To use results to draw simple conclusion, make predictions and suggest improvements. | To begin to report and present findings. | To report and present findings. |

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| | | | To begin to say if they were surprised by the result or if they were change something about their investigation. | To say if they were surprised by the result or if they were change something about their investigation. | predictions and suggest improvements. | To use scientific evidence to answer questions. | To begin to draw conclusions based on data and observations, using evidence to justify their ideas. | to draw conclusions based on data and observations, using evidence to justify their ideas. To use test results to make predictions and a fair test. |
| | **Vocabulary** | **ELG Listening, Attention & Understanding**<br>To begin to use science words. | To begin to use simple scientific language. | To use simple scientific language. | To begin to use scientific language to talk and write about their findings. | To use scientific language to talk and write about their findings. | To begin to use relevant scientific language to discuss, communicate and justify ideas. | To use relevant scientific language to discuss, communicate and justify ideas. |