

Progression in Scientific Enquiry

Early Years	KS1	LKS2	UKS2
<p>Characteristics of Effective Learning</p> <ul style="list-style-type: none"> • Show curiosity about objects, events and people • Engage in open-ended activity • Take a risk, engage in new experiences and learn by trial and error • Find ways to solve problems / find new ways to do things / test their ideas • Develop ideas of grouping, sequences, cause and effect • Use senses to explore the world around them • Make links and notice patterns in their experience <p>Understanding the World</p> <ul style="list-style-type: none"> • Know about similarities and differences in relation to places, objects, materials and living things • Make observations of animals and plants and explain why some things occur, and talk about changes • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world <p>PSE/SCSA</p> <ul style="list-style-type: none"> • Choose the resources they need for their chosen activities <p>Communication and Language</p> <ul style="list-style-type: none"> • Develop their own narratives and explanations by connecting ideas or events • Answer how and why questions about their experiences 	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests reporting and presenting 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 • identifying scientific evidence that has been used to support or refute ideas or arguments.