

Year group	Working scientifically	
	Learning ladders	National Curriculum and Chris Quigley
1	<ul style="list-style-type: none"> I can identify, group and sort objects or living things I can use simple equipment to help me observe the world closely (e.g. hand lenses) I can ask simple questions and understand they may have a number of different answers 	<p><u>Statutory requirements</u> During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ♣ asking simple questions and recognising that they can be answered in different ways ♣ observing closely, using simple equipment
2	<ul style="list-style-type: none"> I can use appropriate scientific language to communicate my ideas, what I have done and what I found out. I can notice similarities, differences and patterns I can gather and record data to help answer questions I can use my observations and ideas to suggest answers to questions I can perform simple comparative tests 	<ul style="list-style-type: none"> ♣ 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.
3	<ul style="list-style-type: none"> I can talk about criteria for grouping, sorting and classifying, and use a simple key I can identify differences, similarities or changes to simple scientific ideas and processes I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables I can gather, record, classify and present data in a variety of ways to help answer questions 	<p><u>Statutory requirements</u> During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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

Progression of Key Skills in Science (Y1-6)

4	<ul style="list-style-type: none"> • I can set up simple practical enquiries, comparative and fair tests • I can report on findings from enquiries, including oral and written explanations, displays or presentations • I can use results to make simple conclusions, make predictions and suggest improvements • I can use simple scientific evidence to answer questions or to support my findings. 	<p>thermometers and data loggers</p> <ul style="list-style-type: none"> ♣ 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.
5	<ul style="list-style-type: none"> • I can recognise which equipment to use for which investigation • I can plan different types of scientific enquiries to answer questions including recognising and controlling variables • I can use a range of scientific equipment to take measures and repeated readings • I can use scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs to record my data and results • I can make predictions using my test results to set-up comparative and fair tests 	<p><u>Statutory requirements</u> During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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.
6	<ul style="list-style-type: none"> • I can use appropriate scientific language to explain, evaluate and communicate my methods and findings • I can ask questions about the scientific topics I study, and select and plan the most appropriate way to answer these questions • I can report and present my findings in oral and 	

written forms such as displays and other presentations (e.g. explaining and concluding my findings, and explaining the degree of trust in my results)

- I can recognise scientific evidence that can be used to support or refute ideas and arguments