Science- Progression of Skills – Working Scientifically

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Planning and prediction	*Explore the world around them and begin to ask simple questions* *Choose ways to try and answer questions with support* *Make simple predictions if appropriate (based on observations but without an explanation)*	*Explore the world around them and ask simple questions* *Choose ways to try to ask and answer questions* *Take some guided planning decisions* *Make simple prediction if appropriate (based on observations)* *Recognise when simple test is unfair*	*From scientific experiences, begin to raise relevant questions* *Start to make own decisions about which type of scientific enquiry to use when answering questions* *Make simple predictions based on everyday knowledge* *Set up simple practical enquiries* *Set up simple comparative tests* *Set up simple fair tests with support*	*From scientific experiences, raise a range of relevant questions* *Use different types of scientific enquiries to answer questions* *Set up simple practical enquiries* *Set up simple comparative tests* *Set up simple fair tests* *Make simple predictions based on everyday knowledge*	*Use experiences to raise questions* *Plan different types of scientific enquiries to answer questions* *Plan a fair test* *Recognise and control variables where necessary* *Predict the outcome of an investigation providing a simple explanation*	*Use experiences & ideas to raise variety of questions* *Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions* *Recognise when and how to set up fair tests* *Explain which variables need to be controlled and why when carrying out fair tests* *Recognise when and how to set up comparative tests* *Predict the outcome of an investigation providing a scientific explanation*
Carrying out the investigation	*Make own suggestions on how to collect data with support* *Able to observe closely* *Use simple measurements and equipment (for example, hand lenses, egg timers) to gather data with support* *Use simple features to compare objects, materials and living things and, with*	*Make own suggestions on how to collect data* *Able to observe closely* *Use simple measurements and equipment (for example, hand lenses, egg timers) to gather data with increasing confidence*	*Begin to make careful observations* *Take measurements using standard units (where appropriate)* *Use a range of equipment, including thermometers and data loggers*	*Make systematic and careful observations* *Where appropriate, take accurate measurements using standard units* *Use a range of equipment confidently, including thermometers and data loggers*	*Take measurements using a range of scientific equipment* *Make their own decisions about what observations to make* *Use scientific equipment to make measurements and explain how to use it most accurately*	*Take measurements precisely and accurately using a range of scientific equipment* *Choose the most appropriate equipment to make measurements and explain how to use it accurately* *Make their own decisions about what observations to make*

	help, decide how to sort and group them *Talk about what they have done in their investigation*	*Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them* *Talk about what they have done in their investigation* *Begin to notice patterns and relationships*			*Take repeat readings when appropriate*	*Make their own decisions about what measurements to use and how long to make them for* *Take repeat readings and find averages when appropriate*
Recording and classification	*Gather and record data with support* *Draw pictures of an experiment* *Help create a graph* *Describe simple observations*	*Gather and record data* *Draw labelled pictures of an experiment* *Make a block diagram, simple pictogram or simple table to show results* *Begin to use simple scientific language in recording their observations*	*Record findings using simple scientific language* *Record findings using simple drawings and labelled diagrams* *Record findings using simple keys* *Record findings using simple bar charts and tables* *Present data in a variety of ways to help in answering questions*	*Record findings using scientific language* *Record findings using drawings and labelled diagrams* *Record findings using keys* *Record findings using bar charts, and tables* *Gather, record, classify and present data in a variety of ways to help in answering questions*	*Record data and results using scientific diagrams and labels* *Record data and results using classification keys* *Record data and results using bar and line graphs*	*Record data and more complex results using scientific diagrams and labels* *Record data and more complex results using classification keys* *Record data and more complex results using scatter graphs* *Record data and more complex results using bar and line graphs*

Reviewing and evaluating	*Describe observations* *Able to say what they found out*	*Describe observations confidently* *Able to say what they found out and how they found out* *Able to say whether results are what they expected*	*Use results to draw simple conclusions* *Make predictions for new values, suggest improvements and raise further questions* *Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions* *Use straightforward scientific evidence to answer questions or to support their findings* *Identify differences, similarities or changes related to simple scientific ideas and processes*	*See patterns, similarities and differences in data to draw conclusions* *Make predictions for new values, suggest improvements and raise further questions* *Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions* *Use straightforward scientific evidence to answer questions or to support their findings* *Identify differences, similarities or changes related to simple scientific ideas and processes* *Recognise where secondary sources may help to answer questions that can't be answered through practical investigation*	*Report and present findings from enquiries, including causal relationships and explanations* *Report and present conclusions from enquiries* *Consider degree of trust in results, in oral and written forms such as displays and other presentations* *Use test results to make predictions to set up further comparative and fair tests* *Identify scientific evidence that has been used to support or refute ideas or arguments*	*Report and present findings from enquiries, including conclusions, causal relationships and explanations* *Report and present conclusions from enquiries* *Consider degree of trust in results, in oral and written forms such as displays and other presentations* *Use test results to make predictions to set up further comparative and fair tests* *Identify scientific evidence that has been used to support or refute ideas or arguments* *Make own decision on repeating experiments and offer explanations for it*