Disciplinary knowledge To be a scientist children need to be able to……						
Year group	**Questioning**	**Observing & Recording**	**Testing**	**Sorting & Classifying**	**Presenting & Concluding**	**Summarise and analyse**
1 & 2	• Ask **simple questions** and recognising that they can be answered in different ways.	• **Observe closely**, using simple equipment.	• Perform **simple tests**	• **Organise** objects or materials into groups.	• Use observations and ideas to **suggest answers** to different questions.	• Gather and record data to help **answer questions**.
3 & 4	• Ask **relevant questions** and use different types of scientific enquiries to answer them.	• **Make systematic and careful observations** and, where appropriate, take accurate measurements using standards units, using a range of equipment, including thermometers and data loggers. • **Record findings** simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	• Set up simple practical enquiries, **comparative and fair tests.**	• **Gather, record, classify and present data** in a variety of ways to help in answering questions.	• **Report findings** from enquiries, including oral and written explanations, displays or presentations of results and conclusions. • Use results to draw **simple conclusions**, make predictions for new values, suggest improvements and raise further questions ("what if…")	• **Use straightforward scientific evidence** to answer questions or to support their findings. • **Identify differences, similarities** or changes related to simple scientific ideas and processes.
5 & 6	• Plan different types of scientific enquiries to **answer questions**, including recognising and controlling variables when necessary.	• **Take measurements**, using a range of scientific equipment, with increasing accuracy and precision, taking repeat recording when appropriate. • **Record data** and results of increasing complexity	• Perform and use test results to **make predictions to set up further comparative and fair tests.**	• **Use scientific diagrams and labels, classification, keys, tables, scatter graphs, bar and line graphs.**	• **Report and present 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**.	• **Identify scientific evidence** that has been used to support or refute ideas or arguments.