

## Appendix 1

### Progression in Scientific Enquiry (learning objectives taken from NC)

Year 1 and 2 children should:

- Ask simple questions and recognise that they can be answered in different ways
- Observe closely, using simple equipment
- Perform simple tests
- Identify and classify
- Use observations and ideas to suggest answers to questions
- Gather and record data to help answer questions

Year 3 and 4 children should:

- Ask relevant questions and use different types of scientific enquiry to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations, taking appropriate measurements using standard units, use a range of equipment, including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help answer questions
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables
- Report on 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
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support their findings

Year 5 and 6 children should:

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Report and present findings from enquiries, including conclusions, casual relationships and explanations of and 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