Bearwood Primary and Nursery School

Science: Working Scientifically Progression of Knowledge

'Learning, Enjoying and Succeeding Together'

LEARNING, ENJOYING, & SUCCEEDING TOGETHER!

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Ask and Answer Questions	Raise questions about the world around them and begin to recognise that they can be answered in different ways	Ask people questions that include scientific language and recognise that they can be answered in different ways. Begin to use secondary sources to answer questions	Ask questions related to their scientific experiences and use different types of enquiry to answer them.	Ask relevant scientific questions and use different types of scientific enquiry to answer them. Recognise how and when secondary sources might help answer questions that cannot be answered through practical investigation	Use scientific experiences to explore ideas and raise different types of questions	Recognise which secondary sources will be most useful to research their ideas and begin to separate fact from opinion.
Plan and set up enquires	Perform simple tests	Perform simple tests	Set up simple practical enquiries, comparative and fair tests	Set up simple practical enquiries, comparative and fair tests	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	Plan different types of scientific enquiries to answer their own or others questions, including recognising and controlling variables where necessary
Observe	Use simple equipment to observe closely	Use simple equipment to observe closely including changes over time	Make systematic and careful observations	Make systematic and careful observations		
Measure			Where appropriate, take accurate	Where appropriate, take accurate	Take measurements using scientific	Take measurements, using scientific

			measurement using standard units, using a range of equipment, including thermometers and data loggers	measurements using standard units, using a range of equipment, including thermometers and data loggers	equipment, with increasing accuracy and precision, taking repeat findings when appropriate	equipment, with increasing accuracy and precision, taking repeat findings when appropriate
Gather and Record Results	Gather and record data to help in answering questions Identify and classify	Gather and record data to help in answering questions including from secondary sources of information Identify, group and classify data	Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
Interpret results	Use his/her observations and ideas to suggest answers to questions	Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns Compare simple comparative tests	Use straightforward scientific evidence to answer questions or to support his/her findings Identify differences, similarities or changes related to simple scientific ideas and processes	Use straightforward scientific evidence to answer questions or to support his/her findings Identify differences, similarities or changes related to simple scientific ideas and processes	Identify scientific evidence that has been used to support or refute ideas or arguments	Identify scientific evidence that has been used to support or refute ideas or arguments
Draw Conclusions	Tell others what you did and what you found out	Explain what happened, what you found out and why this is the case	Use evidence to explain what happened and why it happened (simple conclusions)	Use evidence to draw conclusions, explaining what you have found out why you believe it to be true	Draw conclusions, explaining what you have learned from the enquiry referring to evidence and data from your enquiry	Share what you have found out and why you believe this is the case clearly and succinctly

Present Results		Communicate ideas what he/she does and what he/she finds out in a variety of ways	Report on findings from, including oral and written explanations, displays or presentations of results and conclusions	Report on findings from, including oral and written explanations, displays or presentations of results and conclusions	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	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
Make Predictions	Children consider in advance, what might happen or what they might find	Children consider in advance, what might happen or what they might find and know this as a prediction	Use results to make predictions and suggest new values	Use results to make predictions and suggest new values	Use test result to make predictions to set up further comparative and fair tests	Use test result to make predictions to set up further comparative and fair tests
Evaluate	Recall what went wrong and why	Recall what went wrong, why and how you could avoid this in future	Reflect on the enquiry, suggest improvements and raise further questions	Reflect on the enquiry, suggest improvements and raise further questions	Reflect on the accuracy and effectiveness of the enquiry and suggest alternatives for future enquiry where appropriate	Reflect on the accuracy and effectiveness of the enquiry and suggest alternatives for future enquiry where appropriate