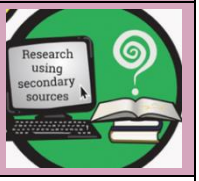
Learning Objectives

Composite Learning Skills

National Curriculum Requirements

Working Scientifically LKS2

General/Asking questions	Observing changes over time	Comparative and fair tests	Identifying and classifying	Looking for naturally occurring patterns and relationships	Recording and reporting findings	Researching and using secondary sources
						
Be able to raise their own questions about the world around them.	Make observations about everyday phenomena.	Suggest a practical way to find something out.	Use simple observable features to compare objects or living things.	Recognise links between observations and answers to questions.	Use notes, simple tables and standard units.	Use information from secondary sources to help answer a question.
Be able to suggest one way of finding an answer to a question.	Decide what is important or relevant to observe.	Make decisions about which practical method is best to find something out.	Be able to group objects and living things in different ways.	Notice patterns and relationships.	Help to make decisions about how to record and analyse data.	Recognise when and how secondary sources might help answer questions that cannot be answered through practical investigations.
Understand that some questions may not be relevant to enquiries.	Make increasingly careful observations.	Be able to identify two variables in an investigation, e.g. water and light when investigating plant growth.	Talk about criteria for grouping, sorting and classifying.	Look for naturally occurring patterns and relationships and decide what data to collect to identify them.	Make independent choices about appropriate ways to record data.	
Be able to suggest more than one way of finding an answer to a question, e.g. by research, by testing.	Make systematic observations.	Be able to set up a comparative test.	Use observable features of objects to identify them.	Be able to collect data from their own observations and measurements.	**Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.**	
Suggest 'testable questions' that can be answered in classroom investigations.	Decide for how long to make observations.	Recognise when a simple fair test is necessary to answer a scientific question.	Use simple keys.	With help, look for changes, patterns, similarities and differences in their data.	Use relevant scientific language to discuss their ideas.	
Recognise alternative methods of scientific enquiry used to find answers to questions.	Use a range of equipment correctly to observe and measure.	Be able to identify variables to measure and variables to observe.	Begin to classify and identify by linking observable features to already known objects or things.	Use patterns in their data to draw simple conclusions and answer questions.	Communicate findings in ways that are appropriate to different audiences.	
Make own decisions about which method of enquiry is best to answer a question.	Be able to select appropriate equipment to observe and measure.	With others, help to set up a fair test.	Begin to classify by behavioural features, e.g. conducts electricity, is magnetic.	Use evidence to answer questions and make predictions.	Identify relevant evidence used to draw conclusions.	
Asking relevant questions and using different types of scientific enquiries to answer them.	Use new equipment such as dataloggers appropriately.	Start to recognise when a test is not fair and suggest improvements.	Explain which observable or behavioural features have led them to classify in a particular way.	Say whether what happened was what they expected.	**Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.**	
Be able to refine a question.	Accurately use standard measures.	**Setting up simple practical enquiries, comparative and fair tests.**	**Identifying differences, similarities or changes related to simple scientific ideas or processes.**	With support, identify new questions arising from the data.	**Using straightforward scientific evidence to answer questions or to support their findings.**	

Draw simple conclusions and talk about what they have found out using some scientific language.	**Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.**	Be able to develop features of a test to give a better outcome.	Be able, independently, to use simple databases or keys to identify or classify living things, objects or events.	Make predictions for new values within or beyond the data they have collected.	Use scientific language and facts to describe processes and what they have observed.	
Draw simple conclusions and write about what they have found out using some scientific language.	Use an increasing range of standard measures accurately.			Find ways of improving what they have already done.	Explain findings reported and recorded using more complex scientific language.	
Use relevant scientific language to discuss their ideas.	Explain why particular equipment chosen is appropriate to the task.			Link results to their own experiences.		
Use relevant scientific language to communicate their findings.				**Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.**		
Communicate their ideas in ways that are appropriate for different audiences.				Recognise when a result seems unusual when compared with other values.		
Use a variety of written communication methods, e.g. guides, keys, drawings and other pictorial representations which are suggested to them.				Identify when repeated results are necessary.		
Choose their own way of communicating ideas to different audiences.						
Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.						