WORKING SCIENTIFICALLY Milestone 1				
Observing Closely	**Performing Tests**	**Identifying and Classifying**	**Recording Findings**	**Types of investigations**
Can they discuss what they can see, touch, smell, hear or taste? Can they use simple equipment to help them make observations? Can they use - see, touch, smell, hear or taste to help them answer questions? Can they use some scientific words to describe what they have seen and measured? Can they compare several things?	Can they perform a simple test? Can they describe/ explain what they have done? Can they carry out a simple fair test? Can they explain why it might not be fair to compare two things? Can they say whether things happened as they expected? Can they suggest how to find things out? Can they use prompts to find things out?	Can they identify and classify things they observe? Can they think of some questions to ask? Can they answer some scientific questions? Can they give a simple reason for their answer? Can they explain what they have found out? Can they organise things into groups? Can they find simple patterns (or associations)? Can they identify animals and plants by a specific criteria, e.g. lay eggs or not; have feathers or not?	Can they show their work using pictures, labels and captions? Can they record their findings using standard units? Can they record some information in a chart or table, or using ICT? Can they use text, diagrams, pictures, charts, tables to record their observations? Can they measure using simple equipment?	Children should have the opportunity to investigate: -Observing changes over time - Noticing similarities, differences and patterns - Grouping and classifying. - Carrying our comparative tests. - Finding things out using secondary sources of information.

WORKING SCIENTIFICALLY Milestone 2			
Planning	**Obtaining & Presenting Evidence**	**Considering Evidence & Evaluating**	**Types Of Investigations**
Can they use different ideas and suggest how to find something out? Can they set up a simple fair test to make comparisons? Can they explain why they need to collect information to answer a question? Can they plan and set up a fair test and isolate variables, explaining why it was fair and which variables have been isolated? Can they suggest improvements and predictions? Can they ask their own questions? Can they decide which information needs to be collected and decide what the best way to collect it is? Can they use their findings to draw a simple conclusion	Can they record their observations in different ways? - labelled diagrams, charts etc. Can they describe what they have found using scientific language? Can they take measurements using different equipment and units of measure and record what they have found in a range of ways? Can they use a range scientific equipment's to take accurate measurements or readings? Can they explain their findings in different ways (display, presentation, writing)? Can they record data using diagrams, labels, classification keys, tables, scatter graphs, bar graphs and line graphs?	Can they explain what they have found out and use their measurements to say whether it helps to answer their question? Can they find any patterns in their evidence or measurements? Can they evaluate and communicate their methods and findings? Can they make a prediction based on something they have found out? Can they ask further questions based on their data and observations? Can they evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables? Can they identify differences, similarities or changes related to simple scientific ideas or processes?	Children should have the opportunity to investigate: - Observing changes over different periods of time -Noticing patterns -Grouping and classifying -Carrying out comparative and fair tests - Finding things out using secondary resources

WORKING SCIENTIFICALLY Milestone 3			
Planning	**Obtaining & Presenting Evidence**	**Considering Evidence & Evaluating**	**Types of Investigations**
Can they plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary? Can they use test results to make predictions to set up comparative and fair tests? Can they explore different ways to test an idea, choose the best way, and give reasons? Can they vary one factor whilst keeping the others the same in an experiment? Can they explain why they do this? Can they use information to make a prediction and give reasons for it? Can they use test results to make further predictions and set up further comparative tests? Can they explain, in simple terms, a scientific idea and what evidence supports it?	Can they take measurements using a range of scientific equipment with increasing accuracy and precision? Can they present a report of their findings through writing, display and presentation? Can they take repeat readings when appropriate? Can they record more complex data and results using scientific diagrams, labels, classification keys, table, scatter graphs, bar and line graphs? Can they explain why they have chosen specific equipment? (including ICT based equipment) Can they decide which units of measurement they need to use? Can they explain why a measurement needs to be repeated? Can they record their measurements in different ways? (including bar charts, tables and line graphs)	Can they find a pattern from their data and explain what it shows? Can they use a graph to answer scientific questions? Can they link what they have found out to other science? Can they suggest how to improve their work and say why they think this? Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models? Can they draw conclusions from their work? Can they report findings from investigations through written explanations and conclusions using appropriate scientific language?	Children should have the opportunity to investigate through: -Recognising and controlling variables accurately and fairly, including changes over different periods of time -Noticing patterns, groupings and classifying -Carrying out comparative and fair tests -Finding things out using a wide range of secondary sources.