



## Science Progression of Working Scientifically skills

### ASK QUESTIONS

Reception	Year 1	Year 2	Year 3	Year 4
Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Offer explanations for why things might happen, making use of recently introduced vocabulary. Express their ideas about their experiences using full sentences, including use of past, present and future tenses. Make comments about what they have heard and ask questions to clarify their understanding.	Ask simple questions about the world around them.	Ask simple questions about the world around them with links to science concepts.	Begin to ask questions that show relevance to the world around them and show some understanding of science concepts.	Independently ask questions that show relevance to the world around them and show understanding of science concepts.

### MAKE PREDICTIONS

Reception	Year 1	Year 2	Year 3	Year 4
Making predictions is not part of working scientifically (Y1 – Y4). Children will be encouraged to make or record simple predictions to show understanding of science concepts.				
Through play with skilled adult questioning to allow children to talk about what they think might happen.	Make a simple prediction by choosing from given outcomes.	Make a simple prediction using own ideas.	Begin to make and explain a prediction.	Make a prediction and link to known science concepts.

PLAN				
Reception	Year 1	Year 2	Year 3	Year 4
Adults introduce the language of science enquiry.	With support using given variables.  Begin to identify the type of science enquiry being used.	With help, decide on a variable to change or measure/record.  Identify which type of science enquiry is being used.	Begin to explain why variables are chosen to be changed or measured/recorded.  Planning for a given type of science enquiry.	Begin to make independent choices about variable to change or measure/record.  Beginning to select the type of science enquiry to use for testing.
SET UP AND HANDLE EQUIPMENT				
Reception	Year 1	Year 2	Year 3	Year 4
To explore different tools and materials in their creations.  Uses equipment/resources safely and follows advice given by adult.	Begin to use simple tools with support to perform practical tasks.  To name the appropriate tools.  Uses equipment/resources safely and follows advice given by adult.	Experiment with using simple tools to perform practical tasks.  To select an appropriate tool from a given selection.  Uses equipment/resources safely and follows advice given by adult.	To select and use an appropriate tool to perform practical tasks.  Begins to make own risk assessment.	To select and use and appropriate tool from a wider range of tools to perform practical tasks.  Completed simple risk assessment.
OBSERVE AND MEASURE				
Reception	Year 1	Year 2	Year 3	Year 4
Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Explore methods to record: * lengths and heights * mass/weight * capacity and volume * time	Use simple features to compare.  measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time	Use simple observable and behavioural features to compare, sort and group  Begin to record <ul style="list-style-type: none"> <li>length/height(m/cm) mass (kg/g)</li> <li>temperature (°C)</li> <li>capacity (litres/ml)</li> <li>Time (minute)</li> </ul> to the nearest appropriate unit, using scales with help.	With help, carry out simple tests to sort and classify according to properties or behaviours.  Begin to measure and record <ul style="list-style-type: none"> <li>lengths (m/cm/mm);</li> <li>mass (kg/g);</li> <li>volume/capacity (l/ml)</li> <li>temperature (°C)</li> <li>Time (minute and seconds)</li> </ul>	Independently carry out tests to sort and classify according to properties and behaviours.  Measure and record with increasing accuracy <ul style="list-style-type: none"> <li>lengths (m/cm/mm);</li> <li>mass (kg/g);</li> <li>volume/capacity (l/ml)</li> <li>Time (minute and seconds)</li> </ul>

RECORD				
Reception	Year 1	Year 2	Year 3	Year 4
Record using <ul style="list-style-type: none"> <li>• Marks/writing on paper that they can explain</li> <li>• Verbally/adult scribe</li> <li>• Illustrations</li> </ul>	Record using <ul style="list-style-type: none"> <li>• Prepared tables</li> <li>• Pictograms</li> </ul>	Record using Simple tables <ul style="list-style-type: none"> <li>• Tally charts</li> <li>• Block diagrams</li> </ul>	Begin to make decisions about recording methods <ul style="list-style-type: none"> <li>• Tables (self labelled)</li> <li>• Venn and Carroll diagrams</li> <li>• Bar charts</li> </ul>	Make decisions about recording methods <ul style="list-style-type: none"> <li>• Tables (self-made)</li> <li>• Branching database</li> <li>• Line graphs (with support)</li> </ul>
EVALUATE				
Reception	Year 1	Year 2	Year 3	Year 4
Through play with skilled adult questioning to allow children to talk about what they think might happen, explain what has happened and then talk about what could be different if it was repeated.	Talk about observations/results.  With help, talk about what other investigations could now be carried out.	talk about observations/results and with help, evaluate the prediction.  With help, identify changes that could be made to this investigation.	Begin to explain the results and with help, draw a simple conclusion.  With help, explain how this investigation could be changed or improved	Begin to give a conclusion referring to the results.  With help, suggest how this investigation could be improved or extended.
RESEARCH				
Reception	Year 1	Year 2	Year 3	Year 4
Use technology, books, video clips and simple information sheets/fact files to find out information with an adult to support this if needed.	Use given extracts from simple books, charts and secondary sources to find answers to questions with help.	Use simple books, charts and secondary sources to find answers to questions with help.	Recognise when secondary sources are required. Begin to choose appropriate secondary resources.	Recognise when secondary sources are required. Compare resources and choose the most appropriate.