Science: Progression of Skills

EYFS	Questioning and Planning	Experimenting	Recording	Concluding
Reception	• Understand and answer yes no questions. • Understand and ask why questions • Self select equipment to investigate • Talk about what they intend to do	• Talk about the similarities and differences between objects • Begin to use comparative language (bigger, smaller, longer) • Talk to an adult or peers to describe what is happening • Adjust their approach if they can find a better way • Identify cause and effect relationships (If I do this….this	• Draw pictures and begin to use simple phonics skills to label to show what is happening/being observed • Begin to use number knowledge to count objects in small groups—up to ten by the end of yr R • With the support of an adult, create simple pictograms to show results.	

Science: Progression of Skills

	Questioning and Planning	Experimenting	Recording	Concluding
KS1	• Ask a yes/no questions to aid sorting. • Ask one/two simple research questions linked to a topic. • Identify a question to investigate from a scenario or choose a question from a range provided • Ask a question about what might happen over time or a question that is looking for a pattern based on observations. • Use books/given websites/apps to find answers to simple questions.	• Identify the heading for 2 groups (it has…./it does not have….) • Be able to observe objects based on obvious, observable features e.g. size, shape, colour, texture etc. • Choose equipment to use and decide what to do and what to observe or measure in order to answer the question. • Use simple equipment to make observations linked to answering the question e.g hand lens, egg timers • When appropriate, measure using standard units where all numbers are marked on the scale.	• Sort objects or living things into 2 groups using a basic Venn diagram or a simple table. • Talk about the number of objects in each group (which has more or less) • Record data in simple, prepared tables, pictorially or taking photographs and adding simple annotation. • Present what they have learnt verbally, pictorially or using simple block diagrams or pictograms • Answer their questions with simple sentences with some scientific vocabulary, by using their observations or measurements.	- Children in KS1 are not expected to draw conclusions. They are expected to make observations which will help them to answer questions. They do not have the subject knowledge to give reasons for what they observe so they cannot draw scientific Conclusions. - Children in KS1 are not expected to make scientific predictions as they do not have the subject knowledge to do this. That does not mean that you should not ask children what they think may happen, but this will be based on experience or may simply be a guess. - Children in KS1 are not expected to evaluate. However, children should be encouraged to consider their method and adapt this where necessary.

Science: Progression of Skills

	Questioning and Planning	Experimenting	Recording	Concluding
LKS2	• Be able to ask yes/no questions to aid sorting • Ask a range of questions linked to a topic. • Be able to create appropriate headings onto intersecting Venn diagrams and Carroll diagrams. • Choose a source from a range provided • Decide what to change and what to measure and observe • Decide how often to observe/ take measurements	• Be able to create appropriate headings onto intersecting Venn diagrams and carroll diagrams. • Compare objects based on more sophisticated observable features. • Make relevant observations linked to answering a question. • Measure using standard units where not all the numbers are marked on the scales and take repeat readings where necessary. • Use data loggers to measure over time. • Choose appropriate equipment to aid in investigations.	• Present observations in labelled diagrams • Sort objects and living things into groups using intersecting Venn diagrams and Carroll diagrams • Present what they have learnt verbally, using labelled diagrams or taking photographs and adding relevant annotations • Present data in bar charts • Use ICT packages to present data. • Prepare their own tables to record data.	• Draw simple conclusions, when appropriate, for pattern seeking. • Spot patterns in the data particularly two criteria with no examples e.g. there are no living things with wings and no legs • Be able to answer their question using scientific language, referring directly to evidence they have gathered. • Where appropriate, provide oral or written explanations for their findings. • Use results from an investigation to make predictions about further investigations. • Suggest a new question arising from an investigation. • Evaluate an investigation by suggesting limitations that could have impacted the results

Science: Progression of Skills

	Questioning and Planning	Experimenting	Recording	Concluding
UKS2	• Ask a range of yes/no questions to aid sorting and decide which ways of sorting will give useful information. • Ask specific clear questions that will help to sort without ambiguity. • Ask a rage of questions linked to the topic, recognising that some can be answered with research and others may not. • Ask a range of questions and identify the type of enquiry that will help to answer the questions. • Ask follow up questions based on results of previously answered questions. • Choose a suitable source to use. • Recognise and control variables where necessary.	• Compare not only on physical properties but also on knowledge gained through previous enquiry • Make relevant observations linked to answering a question. • Use data loggers to measure over time. • Measure in standard units with scales that involve decimals. • Choose appropriate equipment to investigate effectively.	• Create branching diagrams and keys that enable others to name living things and objects. • Talk about the features that living things share based on information in their branching diagram/keys • Present what they have learnt in arrange of ways e.g different graphic organisers • Choose an appropriate form of presentation including line and scatter graphs • Answer their question using scientific evidence gained from a range of sources. • Be able to answer questions, describing detailed change over time. • Answer questions by identifying patterns based on scientific evidence. • Create their own table to record data, including columns to take repeated measurements for accuracy.	• Explain using evidence that branching diagrams or classification keys will only work for the living things/objects it was created for. • Create oral and written explanations of their findings • Use their results and knowledge gained from previous enquiries to make predictions about further investigation. • Talk about the degree of trust they have in the sources they have used. • Talk about the degree of trust they have in the data they have gathered, identifying limitations or improvements for further investigation.