Science Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
A Scientist will be able to …	An EYFS scientist explores and investigates the world. They learn about the Scientific world through play. EYFS scientists combine these two key elements, to establish a lifelong love of learning.	A Year 1 scientist will know about the world around them. They will understand how the seasons change and why they need to do this. They will be able to talk about the similarities and differences of a variety of materials.	A Year 2 scientist the world around them. They will understand how the seasons change and why they need to do this. They will be able to discuss clearly their ideas on this topic. They will be able to talk about the similarities and differences of a variety of materials. They will also be able to discuss their uses.	A Year 3 scientist will know about similarities and differences of materials; be able to identify their properties and discuss states of matter. They will be able to talk about the Scientific cycles which we use to explain how things happen.	A Year 4 scientist will know about similarities and differences of materials; be able to identify their properties and discuss states of matter. They will be able to talk about the Scientific cycles which we use to explain how things happen. They will also be able to categorise living things based on their features.	A Year 5 scientist will know about the world around them and develop a knowledge of Space. They will be able to use Scientific questions to investigate and understand the world further. They will also be able to predict the outcomes of future experiments/investigations using knowledge from previous experiments.	A Year 6 scientist will know about the world around them and develop a knowledge of Space. They will be able to use Scientific questions to investigate and understand the world further. They will understand the concept of Evolution which has ensured certain living things survive. They will also be able to predict the outcomes of future experiments/investigations using knowledge from previous experiments.

Science Progression

Classifying	Guided to ask simple Yes/No questions to aid sorting activities. When given a heading, can sort into groups. E.g. It is …., it is not... Be able to compare objects based on obvious, observable features. E.g. size and colour. With support, sort objects and living things into two groups using a basic Venn diagram or simple table. Talk about the number of objects in each group. E.g. Which has more or less.	Guided to ask simple Yes/No questions to aid sorting activities. Identify the headings for the two groups. (It is …., it is not...) Be able to compare objects based on obvious, observable features. E.g. size, shape, colour, texture etc. Sort objects and living things into two groups using a basic Venn diagram or simple table. Talk about the number of objects in each group. E.g. Which has more or less.	To ask simple Yes/No questions to aid sorting activities. To identify and create the headings for the two groups. (It is …., it is not...) Be able to compare objects based on obvious, observable features. E.g. size, shape, colour, texture etc. Sort objects and living things into two groups using a basic Venn diagram or table. Talk about the number of objects in each group. E.g. Which has more or less; greater or fewer and the difference between.	Be able to ask a range of Yes/ No questions to aid sorting. Be able to put appropriate headings onto intersecting Venn and Carroll diagrams. Be able to compare objects based on more sophisticated, observable features. Present observations in labelled diagrams. Sort objects and living things into groups using intersecting Venn and Carroll diagrams. Spot patterns in the data particularly two criteria with no example. E.g. there are living things with wings and no legs. Draw simple conclusions, when appropriate, for patterns. E.g. a flying insect with no legs might always crash land. Suggest improvement. E.g. a wider range of objects – only looked at British trees. Suggest new questions arising from the investigation.	Be able to ask a range of Yes/ No questions to aid sorting. Be able to put appropriate headings onto intersecting Venn and Carroll diagrams. Ask and respond to questions and offer their own ideas. Be able to compare objects based on more sophisticated, observable features. Present observations in labelled diagrams with key definitions. Sort objects and living things into groups using intersecting Venn and Carroll diagrams. Spot patterns in the data particularly two/three criteria with no example. E.g. there are living things with wings and no legs. Draw conclusions for patterns. E.g. a flying insect with no legs might always crash land. Suggest improvements and use evidence for suggestion. E.g. a wider range of objects – only looked at British trees. Suggest new questions arising from the investigation.	Be able to ask a range of Yes/No questions to aid sorting and decide which ways of sorting will give useful information. Identify specific, clear questions that will help to sort without ambiguity. Be able to compare not only based on physical properties but also on knowledge gained through previous enquiry. Create branching databases (tree diagrams) and keys to enable others to name living things and objects. Be able to talk about the features that objects and living things share and do not share based on the information in the key etc. Be able to use data to show that living things and materials that are grouped together have more things in common than with things in other groups. Be able to explain using evidence that the branching database or classification key will only work for the living things or materials it was created for.	Be able to ask a range of Yes/No questions to aid sorting and decide which ways of sorting will give useful information. Thinking of the evidence style they will need to collect. Identify specific, clear questions that will help to sort without ambiguity. Explaining reasoning. Be able to compare not only based on physical properties but also on knowledge gained through previous enquiry. Create branching databases (tree diagrams) and keys to enable others to name living things and objects. Using scientific definitions. Be able to talk about the features that objects and living things share and do not share based on the information in the key etc. Be able to use data to show that living things and materials that are grouped together have more things in common than with things in other groups. Be able to explain using evidence that the branching database or classification key will only work for the living things or materials it was created for.
Researching	Ask a simple question linked to a topic. Present what they have learnt verbally or by ordering pictures. Be able to answer their questions using simple sentences.	Ask one or two simple questions linked to a topic. Present what they have learnt verbally or using pictures. Be able to answer their questions using simple sentences.	Ask a couple of simple questions linked to a topic. Present what they have learnt verbally or using pictures with key vocabulary. Be able to answer their questions using scientific vocabulary.	Ask a range of questions linked to the topic. Choose a source from a range provided. Present what they have learnt verbally or using labelled diagrams with key words. Be able to answer their questions using simple scientific language. Suggest limitations e.g. only had one book. Suggest new questions arising from the investigation.	Ask a range of questions linked to the topic. Choose a source from a range provided. Present what they have learnt verbally or using labelled diagrams with key words and scientific statements. Be able to answer their questions using simple scientific language and statements. Suggest limitations e.g. only had one book. Suggest new questions arising from the investigation.	Ask a range of questions recognising that some can be answered through research and others may not. Choose suitable sources to use. Present what they learnt in a range of ways. E.g. different graphic organisers. Be able to answer their questions using scientific evidence gained from a range of sources. Be able to talk about their degree of trust in the sources they have used.	Ask a range of questions recognising that some can be answered through research and others may not. Choose suitable sources to use. Present what they learnt in a range of ways. E.g. different graphic organisers. Be able to answer their questions using scientific evidence gained from a range of sources and explaining their research. Be able to talk in detail about their degree of trust in the sources they have used.

Science Progression

Comparative/fair testing	With support, choose equipment to use and decide what observe or measure in order to answer the question. Make observations linked to answering the question. With support, measure using standard units where all the numbers are marked on the scale. Record data pictorially or by taking photographs. Answer their question (verbally) in simple sentences using their observations or measurements.	Identify the question to investigate from a scenario or choose a question from a range provided. Choose equipment to use and decide what observe or measure in order to answer the question. Make observations linked to answering the question. When appropriate, measure using standard units where all the numbers are marked on the scale. Record data in simple prepared tables, pictorially or by taking photographs. Present what they learnt verbally using pictures or block diagrams. Answer their question in simple sentences using their observations or measurements.	Identify the question to investigate from a scenario or choose a question from a range provided. Choose equipment to use and decide what observe or measure in order to answer the question. Make observations linked to answering the question. And articulate this. When appropriate, measure using standard units where all the numbers are marked on the scale. Record data in simple prepared tables, pictorially or by taking photographs. Present what they learnt verbally using pictures or block diagrams. Answer their question in simple sentences using their observations or measurements.	Decide what to change and what to measure or observe. Choose equipment to use and decide what observe or measure in order to answer the question. Measure using standard units where not all the numbers are marked on the scale and take repeat readings where necessary. Prepare own tables to record data. Present data in bar charts. Refer directly to their evidence when answering their question. Where appropriate, provide oral or written explanations for their findings. Use results from an investigation to make a prediction about a further result. Suggest improvements. E.g. To method of taking measurements. Suggest new questions arising from the investigation.	Decide what to change and what to measure or observe- using prior knowledge to help. Choose equipment to use and decide what observe or measure in order to answer the question. Measure using standard units where not all the numbers are marked on the scale and take repeat readings where necessary. Prepare own tables to record data. Present data in bar charts and line graphs. Refer directly to their evidence when answering their question. Where appropriate, provide oral or written explanations for their findings. Use results from an investigation to make a prediction about a further result. Suggest improvements. E.g. To method of taking measurements. Suggest new questions arising from the investigation.	Decide what to change and what to measure or observe – using prior knowledge and research to help. Choose equipment to use and decide what observe or measure in order to answer the question. Measure using standard units where not all the numbers are marked on the scale or where they are varied and take repeat readings where necessary. Prepare own tables to record data. Present data in bar charts, line graphs, time graphs and scatter graphs. Refer directly to their evidence and own research when answering their question. Provide detailed oral or written explanations for their findings. Use results from an investigation to make a prediction about a further result. To explain outcomes and choice for future investigations. Suggest improvements. E.g. To method of taking measurements. Suggest new questions arising from the investigation.	Decide what to change and what to measure or observe – using prior knowledge and research to help. Choose equipment to use and decide what observe or measure in order to answer the question. Measure using standard units where not all the numbers are marked on the scale or where they are varied and take repeat readings where necessary. To be able to explain why they must do more testing. Prepare own tables to record data – including extra elements. Present data in bar charts, line graphs, time graphs and scatter graphs. Refer directly to their evidence and own research when answering their question. Thinking about future investigations they could do. Provide detailed oral or written explanations for their findings. Use results from an investigation to make a prediction about a further result. To explain outcomes and choice for future investigations. Suggest improvements. E.g. To method of taking measurements. Suggest new questions arising from the investigation.

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Observing over time	Ask a question about what might happen next in a cycle. Record data pictorially or by taking photographs. Present what they have learnt verbally.	Ask a question about what might happen in the future based on an observation. Record data in simple prepared tables, pictorially or by taking photographs. Present what they have learnt verbally.	Ask a question about what might happen in the future based on an observation with explanation. Record data in simple prepared tables, pictorially or by taking photographs. Present what they have learnt verbally and in written scientific phrases.	Decide what to measure or observe. Decide how often to take a measurement. Make a range of relevant observations. Measure using standard units of where not all numbers are marked on the scale. Use dataloggers to measure over time. Present data in time graphs.	Decide what to measure or observe. Decide how often to take a measurement. Make a range of relevant observations and be able to orally explain. Measure using standard units of where not all numbers are marked on the scale. Use dataloggers to measure over time. Present data in time graphs.	Decide what to measure or observe. Decide how often to take a measurement. Make a range of relevant observations and be able to explain orally. Measure using standard units of where not all numbers are marked on the scale. Use dataloggers to measure over time. Present data in time graphs and other graphs. Use evidence to explain findings.	Decide what to measure or observe. Decide how often to take a measurement. Make a range of relevant observations and be able to explain. Measure using standard units of where not all numbers are marked on the scale. Use dataloggers to measure over time. Present data in time graphs and other graphs. Explain their degree of trust in their results.
Pattern Seeking	Ask a question that is looking for a pattern based on observations. Record data in simple, prepared tables and tally charts. Present what they have learnt verbally.	Ask a question that is looking for a pattern based on observations. Record data in simple, prepared tables and tally charts. Present what they have learnt verbally. Answer their question in simple sentences using their observations or measurement.	Ask a question that is looking for a pattern based on observations and being able to explain why they have chosen this. Record data in simple, prepared tables and tally charts. Present what they have learnt verbally. Answer their question in scientific sentences using their observations or measurement.	Decide what to measure or observe. Record data in simple, tables and tally charts. Measure using standard units where not all the numbers are marked on the scale. Use ICT package to present data as a scattergram.	Decide what to measure or observe and explain their choice. Record data in tables and tally charts. Measure using standard units where not all the numbers are marked on the scale. Use ICT package to present data as a scattergram.	Decide what to measure or observe and explain their choice. Record data in detailed tables and tally charts. To discuss results scientifically. Measure using standard units where not all the numbers are marked on the scale. To be able to discuss impact from outside variants. Use ICT package to present data as a scattergram.	Decide what to measure or observe and explain their choice with scientific reasoning. . Record data in detailed tables and tally charts. To discuss findings scientifically in detail. Measure using standard units where not all the numbers are marked on the scale. To be able to discuss impact from outside variants. Use ICT package to present data as a scattergram.