Skills Progression

Science							
Skills	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
 Observations	Talk about what they see, using a wide vocabulary. Explore how things work Explore the natural world around them	Pupil can examine objects to note key features, e.g. observe growth of plants they have planted.	Pupil can examine carefully, e.g. using a hand lens.	Pupil can use various equipment, as instructed, e.g. using a hand lens to examine rocks. Pupil can use standard measurements when taking measurements, e.g. measuring distances between a light source and an object.	Pupil can use various equipment, as instructed, repeatedly and with care, e.g. thermometers. Pupil can recognise the importance of using standard units and measures accurately, e.g. measuring temperature when investigating its effect on washing drying.	Pupil can, following discussion of alternatives, selects appropriate equipment, e.g. using a shadow stick and measuring length and angle of shadow. Pupil can take measurements that are precise as well as accurate, e.g. measuring the force needed to pull different shapes of boat through the water	Pupil can use appropriate equipment, such as meter rule, to take measurements, such as distance travelled by light. Pupil can consider how by modifying instrument or technique, measurements can be improved, e.g. when recording route of light rays
 Classifying And pattern seeking	Use talk to work out problems and organise thinking and activities.	Pupil can identify key findings from an enquiry, e.g. noting how plants have changed over time.	Pupil can identify and group key outcomes from enquiry, e.g. describing conditions in different habitats and how these affect the numbers and types of organisms.	Pupil can, with prompting, recognise patterns that relate to scientific ideas, e.g. investigating the behaviour of magnets.	Pupil can use various ways to record, group and display evidence, e.g. grouping and classifying various materials. Pupil can recognise patterns that relate to scientific ideas, e.g. finding out which materials make better earmuffs.	Pupil can, with support, display and present key findings from enquiries orally and in writing, e.g. suggesting reasons for similarities and differences between various animals.	Pupil can display and present key findings from enquiries orally and in writing, e.g. deciding how well classifications fit unfamiliar animals and plants

 Comparative and Fair testing		Pupil can, with support, conduct simple tests, e.g. comparing the properties of different materials.	Pupil can conduct simple tests, e.g. setting up comparative tests to show that plants need water and light.	Pupil can plan enquiry, such as comparative or fair test, e.g. comparing the effect of different factors on plant growth. Pupil can set up a comparative test, e.g. how far things move on different surfaces. Pupil can suggest how an investigation could be extended, e.g. suggesting creative uses for different magnets.	Pupil can plan investigations using different types of scientific enquiry, e.g. exploring various materials by observing change over time, running comparative tests and conducting surveys. Pupil can set up comparative and fair tests, e.g. finding patterns in the sounds made by elastic bands of different thicknesses. Pupil can use evidence to suggest further relevant investigations, e.g. making own instruments, using ideas about pitch and volume.	Pupil can, with prompting, identifies and manages variables, e.g. when exploring falling paper cones. Pupil can know how to process repeat readings, e.g. when timing falling objects. Pupil can suggest further relevant comparative or fair tests, e.g. when testing materials for various properties to determine their suitability for an application.	Pupil can identify and manage variables, e.g. distances and sizes in shadow formation. Pupil can identify situations in which taking repeat readings will improve the quality of evidence, e.g. investigating the behaviour of components in a circuit. Pupil can use evidence to suggest further comparative or fair tests that would develop the investigation, e.g. in the design of rear view mirrors for cars.

 Questioning	Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" Ask questions to find out more and to check what has been said to them. Make comments about what they have heard and ask questions to clarify their understanding.	Pupil can, with prompting, ask simple questions that can be tested, e.g. about plants growing in their habitat. Pupil can offer ways of gathering evidence to answer a question, e.g. by deciding on the best material to use for a particular application.	Pupil can ask simple questions that can be tested, e.g. about the local environment and how organisms depend on each other. Pupil can suggest different ways of answering a question, e.g. testing the suitability of materials for different purposes.	Pupil can, with support, develop relevant, testable questions, e.g. what happens to shadows when the light source moves.	Pupil can develop relevant, testable questions, e.g. based on observations of animals.	Pupil can, with support, can answer questions using evidence gathered from different types of scientific enquiry, e.g. comparing life cycles of different plants using change over time, surveys and secondary research.	Pupil can answer questions using evidence gathered from different types of scientific enquiry, e.g. operation of circulatory system from experiment, survey and secondary research.
 Recording Data	Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail.	Pupil can, with prompting, identify what might usefully be recorded, e.g. drawing structures of plants or recording changing day length. Pupil can collect data, e.g. comparing and contrasting familiar plants.	Pupil can, with assistance, draw and label diagrams, e.g. recording plants changing over time, starting from seed or bulb. Pupil can collect data relevant to the answering of questions, e.g. seeing how the shapes of some materials can be changed.	Pupil can, with prompting, draw and label diagrams, e.g. to show how water travels in a plant. Pupil can, with prompting, use tables to record evidence, e.g. recording what happens when various rocks are rubbed together. Pupil can, with prompting, gather and display evidence in various ways, e.g. about the ways that magnets behave in relation to each other.	Pupil can use words and diagrams to record findings, e.g. how habitats change during the year. Pupil can use various ways to record evidence, e.g. comparing the teeth of herbivores and carnivores.	Pupil can start to use labelled diagrams to show more complex outcomes, e.g. comparing the time of day at different places on the earth. Pupil can, with prompting, use various ways to record complex evidence, e.g. when investigating how gears and levers enable a small force to have a larger effect. Pupil can use a line graph to record basic data, e.g. length and mass of a baby as it grows.	Pupil can use labelled diagrams to show complex outcomes, e.g. relating specific adaptations of organisms to environmental factors Pupil can use various ways, as appropriate, to record complex evidence, e.g. in the construction of a key to aid plant identification. Pupil can use line graphs to display complex data, e.g. size of object in relation to the size of the shadow it casts.

 Analysing Data	Make comments about what they have heard and ask questions to clarify their understanding.	Pupil can suggest answers to enquiry questions using data, e.g. describe how to group plants.	Pupil can answer enquiry questions using data and ideas, e.g. to help decide how the properties of certain materials make them suitable for certain applications.	Pupil can, with prompting, write a conclusion based on evidence, e.g. exploring the strengths of different magnets. Pupil can indicate findings from an enquiry that could be reported, e.g. answering questions about how rocks are formed. Pupil can, with support, use evidence to produce a simple conclusion, e.g. the changes that occur when rocks are in water	Pupil can write a conclusion based on evidence, e.g. effect on brightness of bulbs if more cells are added. Pupil can present findings either in writing or orally, e.g. relating to investigating which materials are conductors. Pupil can use evidence to produce a simple conclusion, e.g. the effect of temperature on various substances.	Pupil can, with prompting, write a conclusion using evidence and identifying causal links, e.g. investigating what makes a parachute fall quicker. Pupil can, with support, indicate why some results may not be entirely trustworthy, e.g. when timing falling objects. Pupil can show how evidence supports a conclusion, e.g. researching gestation periods of various mammals and relating them to adult mass.	Pupil can write a conclusion using evidence and identifying causal links, e.g. in the design of a periscope. Pupil can, in conclusions, indicate how trustworthy they are, e.g. in relating brightness of bulb to voltage supplied. Pupil can identify how an idea is supported or refuted by evidence, e.g. selective breeding to produce animals or plants with desirable characteristics