Science Learning Progression

Key Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Scientific questioning	Know that a question is a phrase/sentence which asks for information.	Know that questions can be asked to gather information to support understanding.	Know that specifically there are scientific questions and that there is more than one way of finding the answer.	Know that questions can be asked and answered by carrying out a scientific enquiry.	Know that relevant scientific questions need to be asked and answered through different types of scientific enquiries.	Know that questions can be or might need to be refined through the scientific process.	Know that precision is achieved through refinement of both questioning and of control of the variables in a scientific enquiry.
Systematic scientific exploration (observing)	Know how to physically explore the wider world using their senses	Know and understand the effects of the changing world around them (seasons, states etc) using their senses.	Know the effects and what affects the changing world using physical and abstract exploration	Know and understand the systematic changes that occur in the world (plants, materials, animals etc) using physical and abstract exploration	Know and understand the systematic changes that occur in the world, both locally and globally using physical and abstract exploration	Know, understand and explain what systematic changes are, how they affect the world through physical and abstract exploration.	Know, understand and explain what changes occur in various communities/societies and how they are influenced by the wider world (variables and constants).
Identifying and Classifying things scientifically	Know that it is possible to recognise something by its features.	Know that by comparing common features, it is possible to group and sort objects, materials or living things.	Know that sorting and grouping by features and characteristics can be refined to give more accurate and detailed identification (for example, tree/oak tree/deciduous)	Know that information collected during a simple scientific enquiry can be used to inform identification and classification.	Know that accurate identification and classification can be used to answer questions in a simple scientific enquiry.	Know that identification and classification can involve the organisation of a substantial amount of information and there are agreed methods for doing this. (e.g. key, graphs)	Know that the success of more complex scientific enquiries requires appropriate selection of the most effective method of classifying information.
Scientific Testing	Know that the information needed to answer a question, sometimes needs to be checked to make sure it is correct. Know that a test is a way of used to check something.	Know that a test is a procedure which can be used to check the accuracy of the information used to answer questions.	Know that there are different ways to perform a test including the use of simple equipment.	Know that the process used to carry out a scientific enquiry must be fair.	Know that if the procedure used in the scientific enquiry is not fair then the information gathered is unreliable.	Know that the outcome of a fair test can inform and shape further scientific enquiries.	Know that the outcome of fair tests supports factual understanding of a scientific enquiry which may differ from opinion.
Hypothesising in Science	Know that ideas can be put forward for thinking and talking about.	Know that ideas can be used to predict possible outcomes to a scientific enquiry.	Know that a prediction can be informed by prior knowledge and experience.	Know that a hypothesis is a starting point for further scientific enquiry.	Know that a hypothesis can be refined as a result of scientific enquiry and used to inform the next stage of the process.	Know that knowledge gained from previous scientific enquiries can be used to inform a more accurate hypothesis at the outset of a new enquiry.	Know that an efficient and effective scientific enquiry should be based on an informed hypothesis.

Interpreting and Recording Data	Know that information can be collected and shared with others.	Know that there are many ways to collect and record information and that this can be used by others.	Know that recorded data can be used to find answers to questions.	Know that recorded data is an important part of a scientific enquiry as it can be used draw conclusions.	Know that inaccurately recorded data can mislead and lead to incorrect conclusions.	Know that filtering data is an important step when drawing conclusions so that only the most relevant information is used.	Know that accurate data can be a powerful tool when supporting or refuting scientific ideas/arguments.
Key Area	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Conceptual Knowledge Progression							
Life	Know that plants are living things that grow.	Know that plants grow around them.	Know that plants begin their life in different forms.	Know that plants go through different life stages and that they have different requirements to survive.	Know that plants are a part of a food chain	Know that plants go through stages of reproduction	Know that plants have adapted to suit the needs of their environment.
	Know that animals are living things that grow	Know that animals are separated into classes	Know that animals go through different life stages	Know what animals need to survive.	Know that animals are a part of a food chain.	Know the physical changes that animals go through during different life stages	Know how animals have adapted over time to suit the needs of their environment.
Earth	Know the difference between day and night	Know that weather is associated with seasons	Know that a light source is needed for life on earth	Know that shadows are created from a light source	Know that a life source plays an important role in the water cycle	Know the relation of the planets, moon and sun in the solar system to Earth.	Know how light travels from the source and how various shadows are formed
						Know that the Earth's rotation affects day and night	
Energy	Know that forces can be felt	Know that materials have physical properties	Know that materials can change physically when subjected to force	Know how magnetic forces work	Know the purpose of electrical circuits and how they function	Know that resistance and friction occur with moving objects	Know that a variation of components exists within an electrical circuit