Ready to Progress Criteria
Subject: Science

	Knowledge	Skills
EYFS	• I show care and concern for living things and the environment. • I understand processes and changes in the natural world - seasons and changes in states and matter.	**Hypothesis:** comment and ask questions about aspects of my familiar world, such as the place where I live or the natural world. E**xperiments:** to test and observe using simple equipment. **Conclusions:** use simple conclusions to suggest answers.
Year 1	• **Seasonal Changes:** I can observe and describe weather associated with the seasons and how day length varies. • **Everyday Materials:** I can compare and group together a variety of everyday materials on the basis of their simple physical properties. • **Animals, Including Humans:** I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • **Plants:** I can identify and describe the basic structure of a variety of common flowering plants, including trees.	**Ask simple questions** and recognise that they can be answered in different ways. **Experiments:** I can observe closely, using simple equipment. - **Recording Data:** I can orally explain observations made during experiments. **Identify and classify:** recognise and group things based upon their characteristics. **Conclusions:** Use simple conclusions to suggest answers.
Year 2	• **Animals, including Humans:** I can find out about, and describe, the basic needs of animals, including humans, for survival (water, food and air). • **Living things and their habitats:** I can identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. • **Uses of Everyday Materials:** I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. • **Plants:** I can find out, and describe, how plants need water, light and a suitable temperature to grow and stay healthy.	**Ask simple questions and make predictions** **Experiments/Recording Data:** can use different types of scientific enquiry to gather and record data, using simple equipment where appropriate, to answer questions. **Observe and classify:** recognise, sort and group objects and information based on shared characteristics. **Conclusions:** I can use observations and ideas to suggest answers to questions.
Year 3	• **Animals, including Humans:** I can identify that humans and some other animals have skeletons and muscles for support, protection and movement. • **Forces and Magnets:** I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. • **Light:** I recognise that shadows are formed when the light from a light source is blocked by an opaque object. • **Plants:** I can identify and describe the functions of different parts of plants; roots, stem, leaves and flowers. • **Rocks:** I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	**Asking questions** I can formulate questions that can be investigated through science. **Making predictions:** based on prior knowledge and observations, they should be able to predict what might happen in an investigation. **Planning and conducting investigations:** this includes setting up simple practical investigations, identifying variables and conducting fair tests. **Recording data:** students learn to record their findings using a variety of methods, including simple scientific language, drawings, labelled diagrams and charts. **Conclusions:** I can analyse data and use straightforward scientific evidence to answer questions or to support my findings, then raise further questions.

Year 4	• **Animals Including Humans:** I can describe the simple functions of the basic parts of the digestive system in humans. • **Electricity:** I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. • **Living things and their habitats:** I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. • **Sound:** I recognise that vibrations from sounds travel through a medium to the ear. • **States of Matter:** I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	**Asking questions** I can formulate questions that can be investigated through science. **Making predictions:** based on prior knowledge and observations, they should be able to predict what might happen in an investigation. **Planning and conducting investigations:** this includes setting up simple practical investigations, identifying variables and conducting fair tests. **Recording data:** students learn to record their findings using a variety of methods, including simple scientific language, drawings, labelled diagrams and charts. **Conclusions:** I can analyse data and use straightforward scientific evidence to answer questions or to support my findings, then raise further questions.
Year 5	• **Living things and their habitats:** I can describe the life process of reproduction in some plants and animals. • **Animals, including humans:** I can describe the changes as humans develop to old age. • **Properties and changes of materials:** I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. • **Earth and Space:** I use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. • **Forces:** I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces.	**Planning and conducting investigations:** I can plan different types of enquiries, using a range of different equipment and recording data in increasingly complex ways; including scientific diagrams, classification keys, tables and graphs. **Analysing and interpreting results:** I can use results to make predictions, I can present their findings in oral and written forms including conclusions, casual relationships and explanations. I can identify evidence that supports or refutes ideas or arguments. **Evaluating:** I can evaluate my findings, identifying the strength and limitations of the results.
Year 6	• **Animals, including Humans:** I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • **Electricity:** I can compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. • **Evolution and Inheritance:** I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. • **Light:** I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. • **Living things and their habitats:** I can give reasons for classifying plants and animals based on specific characteristics.	**Planning and conducting investigations:** I can plan different types of enquiries, using a range of different equipment and recording data in increasingly complex ways; including scientific diagrams, classification keys, tables and graphs. **Analysing and interpreting results:** I can use results to make predictions, I can present their findings in oral and written forms including conclusions, casual relationships and explanations. I can identify evidence that supports or refutes ideas or arguments. **Evaluating:** I can evaluate my findings, identifying the strength and limitations of the results.