Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Notice differences between people. Explore and respond to different natural phenomena in their environment. Explore nature- talk about what they see using suitable vocabulary. Discuss the different stages of maturity Explain some similarities and differences between them and others. Makes observations about the world around them Explain how to keep teeth healthy Explain how to keep physically fit. Explain what makes a healthy diet.	**<u>To understand animals and humans</u>** To be able to name some carnivores, herbivores and omnivores To be able to name some common plants and trees To know the parts of a plant/tree To know the names of some fish, amphibians, reptiles, birds and mammals, including pets To know the structure of fish, amphibians, reptiles, birds and mammals, including pets To know the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth)	**<u>To understand animals and humans</u>** To know what animals need to stay alive To know: egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep To know exercise keeps us healthy To know how exercise affects our body To know germs cause disease To know washing hands removes germs To know the importance of a healthy diet	**<u>To understand animals, including humans</u>** To know the main food groups To be able to identify which foods are healthy To be able to make healthy eating choices To know skeletons and muscles support, protect and aid movement	**<u>To understand animals and humans</u>** To know the function of the mouth, tongue, teeth, oesophagus, stomach and small and large intestine To know how to look after your teeth To know what damages teeth To know what a food chain is To know what predator, producer, prey means	**<u>Animals, including humans</u>** To know changes experienced in puberty To be able to draw a timeline to indicate stages in the growth and development of humans	**<u>Animals, including humans</u>** To know the names of blood vessels: arteries veins and capillaries To know the components of blood (plasma, white and red blood cells and platelets) To know the blood carries oxygen, carbon dioxide, food and waste To know the function of the components of blood To know the heart pumps blood around the body Identify and name the parts of the human circulatory system

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Name some parts of the body external and internal. Understand the key features of the life cycle of an animal.	To name the 5 senses To link a sense to a body part					To know the structure of the respiratory system To know how oxygen enters the body and travels to our cells To know how nutrients travels into the blood and are transported to the cells that need it To know the components of a balanced diet To know what each component of the diet is used for To recognise the negative effects of drugs and alcohol To recognise the positive effects of exercise on the body

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Explore and respond to different natural phenomena in their environment. Explore nature- talk about what they see using suitable vocabulary. Makes observations about the world around them Plant seeds and care for growing plants, understanding the life cycle of a plant.	**To understand plants** To be able to name some common plants and trees To know the parts of a plant/tree	**To understand plants** To know plants grow from seeds and bulbs To know seeds and bulbs have a store of food inside them To know seeds and bulbs need water to grow but most do not need light To know plants need light, water and a suitable temperature to grow To know plants make seeds and seeds make plants	**To understand plants** To be able to identify parts of a flowering plant To know what plants need to live and grow To know how water is transported in a plant To understand how flowers aid pollination To understand how and where seeds are formed To know how seeds are dispersed in different ways			

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Explore and respond to different natural phenomena in their environment. Explore nature- talk about what they see using suitable vocabulary. Makes observations about the world around them Begin to understand the need to respect and care for the natural environment and all living things. Explain some ways to look after our planet- litter picking, wastage, recycling.		**<u>To investigate</u> <u>living things</u>** To be able to describe a simple food chain (e.g. grass, cow, human) To be able to give an example of something that is dead, alive or has never been alive To know what a microhabitat is To know what a habitat is To know some plants and animals in local habitats Compare to plants and animals in other habitats e.g. reservoir, ocean, polar regions To know how conditions, affect what plants and animals live there		**<u>To investigate living things</u>** To know plants and animals can be grouped according to their characteristics To know classification keys can be used to identify plants and animals To know humans can have a positive and a negative effect on an environment e.g. deforestation, melting ice-caps	**<u>All living things and their habitats</u>** To know how animals reproduce To understand sexual and asexual reproduction in plants To observe the life cycle of plants in a vegetable garden To be able to explain the life cycle of a chicken, a mammal, an insect and an amphibian.	**<u>All living things and their habitats</u>** To know that all living things belong in a 'group' according to their characteristics To know how micro-organisms and Tardigrades are grouped according to their characteristics To be able to explain why animals, plants and microorganisms are grouped into the 5 main animal groups, flowering plants, ferns mosses, cereals, grasses, coniferous and deciduous plants. To able to explain why insects, crustaceans, molluscs, arachnids, and worms are grouped. To able to explain why bacteria, viruses and fungi are grouped.

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Explore and respond to different natural phenomena in their environment. Explore materials with different properties. Makes observations about the world around them To explore the effect of heating upon ingredients/ materials. Describe different materials Explore and talk about different scientific concepts; magnetism. Explore and talk about different scientific concepts; floating/sinking.	**To investigate everyday materials** To know an object is made of a material e.g. pencil is made of wood. To know the names of materials To know the properties of materials such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent. To be able to sort and classify objects based on the material they are made of and its properties.	**To investigate everyday materials** To know materials can be used for more than one thing e.g. (metal can be used for coins, cans, cars and table legs To know how a property of a material makes it suitable for its purpose To know objects made of some materials can be changed in shape	**Rocks** To be able to name different kinds of rocks To know the simple property of a different rocks To be able to compare and group a rock based on its appearance and its simple properties To know what a fossil is To be able to describe how a fossil is formed To know that soils are different To be able to identify similarities and differences between soil types To know how soil is formed	**To investigate materials** (States of Matter) To be able to describe the states of matter e.g. solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container To know water can be a solid, a liquid or a gas To know some materials, change state when heated or cooled To be able to describe the water cycle	**Properties and changes of materials** To know that melting and dissolving are different processes. To know how to recover a material from a solution To be able to filter, sieve, melt or dissolve different substances To understand evaporating, filtering, sieving, melting and dissolving are reversible changes. To know that melting and dissolving are different processes and reversible To know that some changes are reversible and some are not e.g. burning To know an example of how a new	

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Begin to explain the 4 r's- reduce, reuse, repurpose, recycle. Explain some ways to look after our planet- litter picking, wastage, recycling.					material is formed from a non-reversible reaction To be able to name materials that are hard, soluble and transparent. To know which materials conduct electricity. To know which materials conduct temperature. To know which materials are magnetic.	

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Explore and respond to different natural phenomena in their environment. Makes observations about the world around them Recite the different seasons Explain the weathers usually associated with the different seasons Explain some ways to look after our planet-	**<u>To understand seasonal changes</u>** To know it is not safe to look at the sun To know the length of the day varies To know the 4 seasons To know the weather changes with the seasons			**<u>To investigate sound and hearing</u>** To know pitch and volume of sounds can be changed in a variety of ways To know sound is made through vibrations To know vibrations from sounds travel through a medium to the ear To know the force of a vibration affects the volume of a sound To know what affects the pitch of a sound To know sounds are quieter at a distance from the sound source	**<u>Earth and space</u>** To know how Earth, the moon, the other planets and the Sun move in relation to each other. To know that the sun is a star at the centre of our solar system and that it has eight planets. To name the planets in the solar system To be able to explain day and night To understand that the moon is a celestial body that orbits a planet	

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
			To investigate light To know light is needed to see things To know light reflects from surfaces To know that looking at the sun is dangerous To know how a shadow is formed To know the size of shadows can change			**Light** To know light travels in straight lines To know light reflects off an object into our eyes To know how our eyes help us to see To know objects block light to make a shadow

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
Makes observations about the world around them Explore and talk about different scientific concepts; magnetism.			**Forces and magnets** To know different types of magnets To know magnets can act without direct contact To know where magnets are used in everyday use To know magnets have two poles To know magnets attract and repel To know which poles attract To know what materials magnets attract		**Forces and Magnets** To know how air and water resistance affects movements To know what friction is To know what gravity is To know who Sir Isaac Newton and Galileo are To know how levers, pulleys and gears amplify a force	

Progression of Knowledge in primary science.

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6
				To understand electrical circuits To know what appliances run on electricity To know how to construct a simple series circuit including, bulbs,buzzers, motors and switches. To be able to create a simple device. To draw a circuit as a picture that would light a lamp. To know how to be safe around electricity To know common conductors and insulators To understand how a switch works.		**Electricity** To know the meaning of electrical symbols To draw simple circuit diagrams To know the brightness of a lamp (or volume of a buzzer) is linked to the number of cells in a circuit To be able to explain the reasons why bulbs vary in brightness To know the function of a switch in a simple circuit

By end of EYFS	By end of year 1	By end of year 2	By end of year 3	By end of year 4	By end of year 5	By end of year 6

Progression of Knowledge in primary science.