SCIENCE YEAR A			
THEMES	Physics	Chemistry	Biology
KS1	Seasonal changes	Everyday materials	Plants (Y1 and Y2 objectives) Animals, including Humans (Y1)
LKS2	Rocks Forces and Magnets Electricity	Rocks	Animals, including Humans
UKS2	Electricity	Properties and materials	Living things and their habitat (Y5) Animals including Humans (Y5) Evolution and Inheritance
SCIENCE YEAR B			
KS1	Seasonal changes	Uses of everyday materials	Animals, including Humans (Y2) Living things and their habitat (Y2)
LKS2	Light Sound	States of matter	Plants Living things and their habitats
UKS2	Earth and Space Forces Light		Living things and their habitats (Y6) Animals including Humans (Y6)

SCIENCE TIER 3 VOCABULARY

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically record, results, test, explore, observe, compare, similarities, differences, secondary sources, identify, classify, data **Animals Including Humans** senses, amphibians, carnivores,habitat, herbivore, mammals, omnivore, reptiles offspring, life cycles, hygiene **Plants** deciduous, evergreen **Seasonal Change** Season - Spring, Summer, Autumn, Winter **Everyday Materials** waterproof, absorbent, flexible, transparent, translucent, opaque **Living things and their habitats** habitats, micro-habitats, food chain		**Working Scientifically**: fair tests, observations, conclusions, predictions, classify, data loggers **Rocks** fossils **Forces and Magnets** magnetic force, north/south pole, attract, repel **Electricity** circuit, components, cell, connection, short circuit, conductor, insulator, **Animals inc Humans** Nutrition, balanced diet, vertebrate, invertebrate, canine, incisor, molar, oesophagus (gullet), intestine, carnivore, herbivore, omnivore, producer, consumer, **Light/ Sound** reflect, transparent, opaque, translucent **States of Matter** States of matter, change state, degrees celcius,evaporation, condensation, precipitation, transpiration **Plants** fertiliser, pollination, **Living Things and habitats** amphibians, reptiles, mammals, vertebrates, invertebrates,		**Working Scientifically**: independent variable, dependent variable, controlled variable, precision, degree of trust, classification keys, causal relationships, support/refute, data loggers **Animals inc. Humans** Circulatory system, digestive system, evolution, adaptation, variation,respiration **Light** glare, source, reflect, absorb, transparent, opaque, translucent **Living things and their habitats** sexual, asexual, germination, pollination, Organism, micro-organism, classification environment, vertebrates, invertebrates **Properties and changes of materials** electrical/thermal conductivity, particle, filtering, residue, reversible/non reversible changes **Forces and Magnets** air resistance, water resistance, friction, mechanisms, transfers **Electricity** complete circuit, terminal, connection, short circuit, resistance **Earth and Space** solar system, celestial body, geocentric model, heliocentric model, shadow clocks, astronomical clocks **Evolution and Inheritance** adaption, breed, inherited traits, adaptive traits, evolution, imutation survival of the fittest, variation	

SCIENCE PROGRESSION MAP + TIER 2 VOCABULARY		
Category of Knowledge	**Key Stage**	**Content**
Plants	KS1	• **identify** and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and **describe** the basic structure of a variety of common flowering plants, including trees • **observe** and describe how seeds and bulbs grow into mature plants • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
	LKS2	• **Identify** and describe the functions of different parts of flowering plants (roots, stem/trunk, leaves and flowers) • **Explore** and **describe** the requirement of plants for life and growth (air, light, water, nutrients from soil, and room to grow)and how they vary from plant to plant • **Investigate** the way in which water is transported within plants • Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal
Animals including Humans	KS1	• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals •identify and name a variety of common animals that are carnivores, herbivores and omnivores •describe and **compare** the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) •identify, name, draw and **label** the basic parts of the human body and say which part of the body is associated with each sense Identify some of the differences between different animals' observable features. • **notice** that animals, including humans, have offspring which grow into adults •find out about and describe the basic needs of animals, including humans, for survival (water, food and air) •describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
	LKS2	•**identify** that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat •**identify** that humans and some other animals have skeletons and muscles for support, protection and movement •**describe** the simple functions of the basic parts of the digestive system in humans •**identify** the different types of teeth in humans and their simple functions •construct and interpret a variety of food chains, identifying producers, predators and prey
	UKS2	• Describe the changes as humans develop to old age • **identify** and name the main parts of the human circulatory system, and describe the **functions** of the heart, blood vessels and blood •recognise the **impact** of diet, exercise, drugs and lifestyle on the way their bodies **function** •describe the ways in which nutrients and water are transported within animals, including humans

Category of Knowledge	Key Stage	
Rocks	LKS2	•compare and group together different kinds of rocks on the basis of their appearance and simple physical properties •describe in simple terms how fossils are formed when things that have lived are trapped within rock •recognise that soils are made from rocks and organic matter
Living Things and their Habitats	KS1	•**explore** and **compare** the differences between things that are living, dead, and things that have never been alive •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 •identify and name a variety of plants and animals in their habitats, including microhabitats •**describe** how animals obtain their food from plants and other animals, using the idea of a simple food chain, and **identify** and name different sources of food
	LKS2	•**recognise** that living things can be grouped in a variety of ways •**explore** and use classification keys to help group, identify and name a variety of living things in their local and wider environment •recognise that environments can change and that this can sometimes pose dangers to living things
	UKS2	•describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird •describe the life process of **reproduction** in some plants and animals
Sound	LKS2	•**identify** how sounds are made, associating some of them with something vibrating •**recognise** that vibrations from sounds travel through a medium to the ear •**find patterns** between the pitch of a sound and features of the object that produced it •find patterns between the volume of a sound and the strength of the vibrations that produced it •recognise that sounds get fainter as the distance from the sound source increases
Everyday Materials and Uses of Everyday Materials	KS1	•**distinguish** between an object and the material from which it is made •identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock •describe the simple physical **properties** of a variety of everyday materials •compare and group together a **variety** of everyday materials on the basis of their simple physical properties •identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses •find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
Seasonal Changes	KS1	•observe changes across the 4 seasons •observe and describe weather **associated** with the seasons and how day length varies
Electricity	LKS2	•**identify** common appliances that run on electricity •**construct** a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers •identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery •**recognise** that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit •recognise some common conductors and insulators, and associate metals with being good conductors
	UKS2	•**associate** the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit •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 •use recognised symbols when representing a simple circuit in a diagram
Forces (and Magnets)	LKS2	•**compare** how things move on different surfaces

		•notice that some forces need contact between 2 objects, but magnetic forces can act at a distance •observe how magnets attract or repel each other and attract some materials and not others •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 •**describe** magnets as having 2 poles •**predict** whether 2 magnets will attract or repel each other, depending on which poles are facing
	UKS2	•explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object •**identify** the effects of air resistance, water resistance and friction, that act between moving surfaces •recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect
Light	LKS2	•**recognise** that they need light in order to see things and that dark is the absence of light •notice that light is reflected from surfaces •recognise that light from the sun can be dangerous and that there are ways to protect their eyes •recognise that shadows are formed when the light from a light source is blocked by an opaque object •**find patterns** in the way that the size of shadows change
	UKS2	•recognise that light appears to travel in straight lines •use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye •explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes •use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them
States of Matter	LKS2	•**compare** and group materials together, according to whether they are solids, liquids or gases •observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) •**identify** the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
Properties and Changes of Material	UKS2	•**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 •know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution •use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, **sieving** and evaporating •give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic •demonstrate that dissolving, mixing and changes of state are reversible changes •explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.
Earth and Space	UKS2	•describe the movement of the Earth and other planets **relative** to the sun in the solar system •describe the movement of the moon **relative** to the Earth •describe the sun, Earth and moon as approximately **spherical** bodies •use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky
Evolution and Inheritance	UKS2	•recognise that living things have changed over time and that fossils provide information about living things that **inhabited** the Earth millions of years ago •recognise that living things produce offspring of the same kind, but normally offspring vary and are not **identical** to their parents •identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
Working Scientifically	KS1	• To ask simple questions and **recognise** that they can be answered in different ways • To observe closely, using simple **equipment**

		• To **perform** simple tests • To identify and classify • To use **observations** and ideas to suggest answers to questions • To **gather** and **record** data to help in answering questions (Plus non-statutory guidance of NC where appropriate)
	LKS2	•To ask relevant questions and use different types of scientific enquiries to answer them • To set up simple practical enquiries, comparative and fair tests •To make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use a range of equipment, including thermometers and data loggers •To gather, record**, classify** and present data in a variety of ways to help in answering questions • To record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and **conclusions** • To use results to draw simple **conclusions**, make **predictions** for new values, suggest improvements and raise further questions •To **identify** differences, similarities or changes related to simple scientific ideas and processes • To use straightforward scientific **evidence** to answer questions or to support their findings. (Plus non-statutory guidance of NC where appropriate)
	UKS2	• To plan different types of scientific **enquiries** to answer questions, including recognising and controlling **variables** where necessary • To take measurements, using a range of scientific equipment, with increasing **accuracy** and precision, taking repeat readings when appropriate • To record **data** and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • To use test results to make **predictions** to set up further comparative and fair tests • To report and present findings from **enquiries**, including **conclusions**, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • To identify scientific evidence that has been used to support or **refute** ideas or arguments (Plus non-statutory guidance of NC where appropriate)