Biology						
Plants						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• Know the names of a variety of common wild and garden plants • Know the names of a variety of common trees • Know the difference between deciduous and evergreen trees • Know which plants grow in the local environment KV Names of locally found garden plants / wild plants / flowering plants / trees Vegetable Name of plants grown Root Bulb Seed Trunk Branch Stem Stalk	• Trees and shrubs take in water and carbon dioxide and give out oxygen. • Trees can live for a very long time. The oldest known tree is over 5000 years old. • A single tree has many roots. The roots carry food and water from the ground through the trunk and branches to the leaves of the tree. • The leaves can be of many different shapes. They take in sunlight and use water and food from the roots to make the tree grow. • As a tree grows, it usually	• Know the function of the different parts of the flowering plant. • Identify and know the names of: stem; roots; leaves and flowers. • Know what a plant needs to grow. • Know that light, air, water, nutrients from soil are all important for plant growth. • Find out how water is transported within a plant. • Know the part that flowers play in the life cycle of a flowering plant. • Know about pollination, seed formation and seed dispersal. KV Roots Stem Nutrients Pollination	No content	No content	No content

		produces growth rings as new wood is laid down around the old wood. KV Roots Crown Deciduous Evergreen Blossom Bulb Trunk Stem Woodland Habitat oxygen	Seed dispersal Ferrtiliser Seed formation Stigma Anther soil			
Animals inc. humans						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• Know examples of mammals, fish, reptiles, birds and amphibians. • Know that animals, including humans, have young animals that look like them. • Know that the babies will grow into adults. • Know what humans need to survive (including food and water).	• Know examples of mammals, fish, reptiles, birds and amphibians. • Know that animals, including humans, have young animals that look like them. • Know that the babies will grow into adults. • Know what humans need to survive (including food and water). • Know what animals need to survive. • Know why it is important to exercise.	• That humans cannot make their own food. They get their nutrition from what they eat. • That humans have skeletons and muscles for support, protection and movement. • Know that the body parts have special functions. • Know the names of the body parts associated with skeleton and muscles. • Compare the diets of different	• Know and name the parts of the digestive system. • Know the function of each organ of the digestive system. • Know and identify the different types of teeth in humans. • Know the function of different human teeth. • Use food chains to identify producers, predators and prey. • Construct food		• Identify and name the main parts of the human circulatory system. • Know the function of the heart, blood vessels and blood. • Know the impact of diet, exercise, drugs and lifestyle on health. • Know the ways in which nutrients and water are transported in animals,

	• Know what animals need to survive. • Know why it is important to exercise. • Know why it is important to eat the right amounts of food. • Know why it is important to keep clean and wash regularly. KV Fish Amphibians Reptiles Birds Mammals Carnivore Herbivore Tame Wild Nocturnal Healthy Diet Of-spring Exercise Proteins Carbohydrates Fats Nutrition Survival Hygiene	• Know why it is important to eat the right amounts of food. • Know why it is important to keep clean and wash regularly. KV Fish Amphibians Reptiles Birds Mammals Carnivore Herbivore Tame Wild Nocturnal Healthy Diet Of-spring Exercise Proteins Carbohydrates Fats Nutrition Survival Hygiene	groups of animals, including humans. Know what a healthy meal looks like. KV Nutrition Skeleton Muscles Diet Joint Pelvis Cartlidge Rib cage Tendon Spine	chains to identify producers, predators and prey. KV Digestive system Pancreas Oesophagus Intestine organ Stomach Canines Incisors Molars Food chain Predators Prey Salivary Gland		including humans. KV Circulatory system Blood vessels Capillaries Arteries Veins Red blood cells White blood cells Oxygen Carbon dioxide Ventricles Cardiologists William Harvey
Living things and their habitats						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• A habitat is a place that an	• A habitat is a place that an animal lives. It		• Vertebrates (mammals, fish,	• Know the life cycle of	• Be able to classify living

	animal lives. It provides the animal with food, water and shelter. • There are many different sorts of habitats around the world from forests to grasslands and from mountain slopes to deserts. • Animals like cockroaches are really important in a habitat -they eat the dead plants and recycle the nutrients back into the soil. • People are causing harm to many habitats. Forests are being burnt down, lakes and rivers polluted and the polar ice caps are melting. • Because resources like water and food may be limited, plant and animal species often compete with each other for food and water. Because the Earth is always changing, habitats are constantly changing. KV	provides the animal with food, water and shelter. • There are many different sorts of habitats around the world from forests to grasslands and from mountain slopes to deserts. • Animals like cockroaches are really important in a habitat - they eat the dead plants and recycle the nutrients back into the soil. • People are causing harm to many habitats. Forests are being burnt down, lakes and rivers polluted and the polar ice caps are melting. • Because resources like water and food may be limited, plant and animal species often compete with each other for food and water. Because the Earth is always changing, habitats are constantly changing. KV Dinosaur Indigenous Rivers Woodland Ponds Sea Rainforest Desert Species		reptiles, birds, amphibians) • Invertebrates (snails, slugs, worms, spiders, insects) Environment, habitats KV Environment Fish Reptiles Amphibians Mammals Birds Vertebrates Invertebrates Human impact Plant groups (trees, grasses, flowering and non-flowering plants)	different living things, e.g. mammal, amphibian, insect and bird. • Know the differences between different life cycles. • Know the process of reproduction in plants. • Know the process of reproduction in animals. KV Seed dispersal Seed formation Pollen Stamen Stigma Anther Filament Style Sepal Carpel Reproduction , Sexual , Asexual Germination, Pollination Gestation	things into broad groups according to observable characteristics and based on similarities and differences. • Know how living things have been classified. • Give reasons for classifying plants and animals based on specific characteristics. KV Microorganism Vertebrates Invertebrates Species Fungi Monera Bacteria Protista Algae Carl Linnaeus

	Dinosaur Indigenous Rivers Woodland Ponds Sea Rainforest Desert Species microhabitats	microhabitats				
Evolution and inheritance						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
No content	No content	No content	No content	No content	No content	• Evolution is a scientific theory used by biologists. It explains how living things changed over a long time, and how they have come to be the way they are. • We know that living things have changed over time, because we can see their remains in the rocks. • We know that the animals and plants of today are different from those of long ago. • Evolutionary questions are still being actively researched by biologists. Key vocabulary Off spring Adaptation Evolution Inheritance

						Palaeontologist Charles Darwin Genes Chromosomes Syndrome Genotype
Chemistry						
Materials						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• Know why some materials are more suitable than others for specific uses • Know why glass, wood, plastic, brick or paper would be used for certain jobs • Know that some materials can be squashed, twisted or bent according to need • Know why certain materials are suitable for many different uses • Know about the lives of important people who have developed useful new materials KV **uses** Metal Wood Plastic Squashing Bending Twisting stretching	• Know why some materials are more suitable than others for specific uses • Know why glass, wood, plastic, brick or paper would be used for certain jobs • Know that some materials can be squashed, twisted or bent according to need • Know why certain materials are suitable for many different uses • Know about the lives of important people who have developed useful new materials KV **uses** Metal Wood Plastic Squashing Bending Twisting stretching			• Know what a reversible change means. • Know what an irreversible change means. • Give examples of reversible and irreversible changes. • 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	No content

					KV Solubility Conductivity Transparency Thermal evaporation Dissolve Thermal Filtering Melting Separate	
Rocks						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
No content	No content	No content	• Know how fossils are formed. • Know what soil is. • Know the difference between igneous, sedimentary and metamorphic rocks. • Group together different rocks according to different attributes. KV Soil Fossil Crystals Name common rocks/soil types, marble, chalk, clay, sandy Sedimentary Igneous metamorphic	No content	No content	No content
States of matter						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				• Solid, liquid, gas • Particles • Evaporation		No content

				• Condensation • Freezing • Melting/heating Temperature KV Air Oxygen Powder Grain / granular Changes state Gaseous Particles Water vapour Water cycle Heating /cooling Degree Celsius Melt Freeze, Boil Evaporation Condensation Energy transfer		
Physics						
Seasonal changes						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• In the UK we have four seasons: spring, summer, autumn and winter. Summer is the hottest season and winter the coldest. • Spring starts when the day and night are the same length (usually 21st March. However, many	• In the UK we have four seasons: spring, summer, autumn and winter. Summer is the hottest season and winter the coldest. • Spring starts when the day and night are the same length (usually 21st March. However, many say that Spring starts on March 1st). • In summer the longest day of the year is around June	No content	No content	No content	No content

	say that Spring starts on March 1st). • In summer the longest day of the year is around June 21st and in winter the shortest day of the year is usually December 21st. • When we have our summer it is winter in the southern hemisphere. When we have our winter Australia has its summer. • In the USA and many other countries the season 'Autumn' is known as the 'Fall'. This is because so many leaves fall from the trees in Autumn. • Seasons change throughout the year because of the way the Earth travels around the Sun. KV Autumn, Winter, Spring Summer	21st and in winter the shortest day of the year is usually December 21st. • When we have our summer it is winter in the southern hemisphere. When we have our winter Australia has its summer. • In the USA and many other countries the season 'Autumn' is known as the 'Fall'. This is because so many leaves fall from the trees in Autumn. • Seasons change throughout the year because of the way the Earth travels around the Sun. KV Autumn, Winter, Spring Summer Fall Weather Temperature Thermometer Weather symbol Deciduous coniferous				

	Fall Weather Temperature Thermometer Weather symbol Deciduous coniferous					
Light						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• What dark is (in relation to absence of light). • Know that we need light so we can see things. • Know that light can be reflected. • Know how a shadow is formed. • Understand why shadows change shape. • Know the dangers of looking directly at the Sun. • Know how to protect oneself from direct sunlight. KV Reflective Shadow Light source Opaque Refraction Periscope Nocturnal Orbits Convex Concave			• Know that light travels in straight lines. • Understand that because light travels in straight lines objects are seen because they give out or reflect light into the eye. • Know that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. • Know that light travels in straight lines and therefore shadows have the same shape as the objects that cast them. KV Light wave Light source Concave Convex Filters Lens Retina Cornea Iris pupil

Forces						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• compare how things move on different surfaces • notice that some forces need contact between two 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 two poles predict whether two magnets will attract or repel each other, depending on which poles are facing. KV magnet, pole, north, south, attract, repel, compass, direction gravity		• Know what gravity is and its impact on our lives. • Identify and know the effect of air resistance. • Identify and know the effect of water resistance. • Identify and know the effect of friction. • Explain how levers, pulleys and gears allow a smaller force to have a greater effect. • Know who Isaac Newton and Galileo were. KV Friction Gravity Air resistance Water resistance Levers Pulleys Gears Parachute Galileo Newton	No content
Electricity						

FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				• Know about common appliances that run on electricity. • Know how to construct a simple series electrical circuit. • Identify and name the basic parts of the circuit, including cells, wires, bulbs, switches and buzzers. • Know that a switch opens and closes a circuit. • Know about some common conductors and insulators. • Know that metals are good conductors. KV Circuit Conductor Insulator Cell Battery Socket Appliance Series circuit Switch Buzzer		• Know that the brightness of a bulb is associated with the voltage. • Compare and give reasons for variations in how components function. • Use recognised symbols when representing a simple circuit in a diagram. • Construct simple series circuits. • Be able to answer questions about what happens when they try different components, for example; switches, bulbs, buzzers and motors. KV Conductor Insulator Socket Series Cells Volts Generator Turbine fuses Thomas Edison
Sound						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

No content	No content	No content	No content	• Know how sound is made. • Know how sound travels from the source to the ears. • Know to associate sound with vibration. • Know the correlation between pitch and the object producing a sound. • Know the correlation between the volume of a sound and the strength of the vibrations that produced it. • Know what happens to a sound as it travels away from its source. KV Vibrating Pitch Volume Insulation Outer/ Middle/ Inner ear Cochlea Auditory Frequency hammer	No content	No content
Earth and space						
FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
No content	No content	No content	No content	No content	• Know about and explain the movement of the Earth and other planets relative to the Sun. • Know about and	No content

					explain the movement of the Moon relative to the Earth. • Know and demonstrate how night and day are created. • Describe the Sun, Earth and Moon (using the term spherical). • Know information about the planets. • Neil Armstrong was the first man to step on the moon. KV Earth Planets Sun Solar system Moon Celestial body Sphere / spherical Rotation Spin Phases of moon Orbit Elliptical orbit Revolve, Shadow clocks ,Sundials Asteroids, Comets, Galaxy Meteors Light years	