Year A			
EYFS	**Year 1/2**	**Year 3/4**	**Year 5/6**
	Working scientifically		
	• **prediction:** guess what might happen based on observations or other information. • **variable:** something that can change and affect the result of the experiment	• **accurate:** describing something – like a set of results – that is close to the true value. **classification** – how we can sort all living things into groups. • **repeatable**: describing data that is the same every time a single group of people conduct the experiment. **reproducible:** describing data that is the same every time any group of people conduct the experiment	

		• **anomaly:** a result that is unexpected. It stands out because it is different to the other results.	
	PLANTS		
	• **nutrition:** food or something needed for growth • **reproduce:** have offspring (young, new living things) • **grow:** to get bigger • **living:** something that is alive • **roots:** take in water and anchor the plant to the ground • **stem:** transports water and nutrients around the plant	.	

	• **leaves:** make food for the plants • **flowers:** bright petals at the top of a flower • **trunk:** The main stem of a tree • **branch:** A part of a tree that grows from the trunk • **coniferous:** a tree that doesn't lose its leaves • **deciduous:** trees that lose leaves at certain times of the year • **needles:** a type of leaf from a coniferous tree		

	• **offspring:** the product of a reproductive process • **petal:** the segments of a flower • **plant:** a living thing that usually produces seeds, has a stem, leaves, roots and sometimes flowers • **reproduce:** the process used to produce offspring • **seedling:** a young plant that has grown from a seed • **weed:** a wild plant that is growing where it is not wanted • **seed:** is the small, hard part of a plant		

	that a new plant grown from. • **dormant:** a seed that Is resting and not yet growing. • **seed coat:** A tough coating that protects the seed from the outside world. • **embryo** is a very tiny plant that has a shoot, a root, and one or more leaf. This will grow into the adult plant. • **endosperm:** this is a food store and contains all the food the seeds need. • **germination:** is the development of a plant from a seed. .		

	• **shoots:** parts of a plant that grow above ground • **growth-** the process of increasing in size • **temperature:** how hot or cold something is. • **bulb:** a resting stage for certain plants. It provides a large underground food store, with short stems and fleshy leaves. • **fruit:** the sweet and fleshy product of a tree or plant that contains a seed and is eaten as food.		

	• **vegetable**: a plant, or part of a plant, that can be eaten.		
	Living things and their habitats **Animals, including humans**		
	• **carnivore:** an animal that eats meat. • **herbivore** an animal that eats plants. • **omnivore:** an animal that eats plants and meat. • **amphibians:** class of animals eg frog, newt. • **birds:** an animal with feathers and wings. Some can fly. • **fish:** an animal that lives in water and is covered in scales. • **mammals:** an animal of which females	• **carbohydrate:** a component of food that is high in energy, starch and fibre are carbohydrates. • **fibre:** a type of carbohydrate that we cannot digest; it prevents constipation. • **protein:** a component of food that helps your body grow and repair itself. • **vitamin:** an important part of our diet, needed in small amounts to keep us healthy. • **fats:** a component of food that is high in energy. It	• **genome**– the information that controls how an individual organism will develop • **fertilisation** – the process of causing an egg or seed to develop into new young or plant by joining with a male cell. • **oviparous:** when an embryo develops inside an animal's body. • **viviparous:** when females lay eggs, and the embryo completes their development outside the body. • **metamorphosis**– the process by which the young form of insects and some animals, such as frogs, develop into adults. • **germinate** – to cause a seed to start growing. • **asexual reproduction:** when the offspring (the young) gets its genome

	feed their young with milk. • **reptiles:** an animal that produces eggs and has waterproof scales. • **temperature:** how hot or cold something is. • **muscle** – a part of our body that helps us move by pulling our bones. • **repair:** to fox something that is broken/ injured eg in your body. • **nutrition:** food needed to live. • **breathing:** taking air into your lungs and releasing it.	keeps us warm, If we eat more fat than we need, we store it in our bodies. • **heart:** the organ responsible for pumping blood around the body. • **muscle:** a part of the body that causes movement when it contracts. • **organ:** a part of the body that has a particular job to do. • **skeleton:** the bones that make up the body of a human or animal. • **balanced diet:** a diet that contains the right amount of each nutrient to keep an animal healthy. • **deficient:** something that does not have enough of something	from only one parent; the young will have the same genome as that parent (they are genetically identical) • **cell:** the smallest building block of all living things • **embryo:** the first stage of development after fertilisation • **external fertilisation:** where the male sex cell and female sex cell join outside of the body • **gestation:** the period of time between fertilisation and birth • **hibernate**: when animals slow down their bodily functions (like breathing and heart rate) in order to save energy; this happens in the winter months when the temperature is very cold and the food supply is low • **offspring:** the animal's or plant's young • **pollination:** this is the process where pollen from the stamen is transferred to the stigma either by the wind or insects

	• **oxygen:** A gas that all living things need to survive. We cannot see it or smell it, but it is in the air. • **offspring** – an animal's young. • **reproduction -** The process of producing offspring. • **hygiene** – keeping clean to stay healthy. • **exercise-** an activity that needs physical effort. • **aerobic** –a type of exercise that causes us to breathe more heavily than normal. • **biodiversity:** all the different living things in an area.	• eg a vitamin. • **vertebrates** – animals that have an internal skeleton (endoskeleton). • **invertebrates -** Animals that don't have an internal skeleton. They an exoskeleton or hydrostatic skeleton. • **exoskeletons-** are hard rigid outer coverings of the body eg. crabs. • **endoskeletons** – A skeleton inside the body. • **hydrostatic skeletons** – type of skeleton that are fluid-filled compartments, eg. a jellyfish. • **flowering plant** – a plant with flowers	• **sexual reproduction:** when the offspring (the young) gets its genome from both parents • **adaptations -** the process in which a living thing changes slightly over time to be able to continue to exist in a particular environment, or a change like this. • **physical** – These are **physical** characteristics outside the organism's body that make it adapted to its environment. • **behavioural-** These are adaptations in an animal's **behaviour** that give it an advantage. • **physiological -**These are functions and processes **inside the body** that allow organisms to survive different environments.

	• **excretion:** the process of removing waste form the body. • **fauna:** animal life. • **flora:** plant life. • **food chain:** a food chain shows the feeding relationship between organisms in a habitat. The arrows show the transfer of energy. • **habitat:** where an animal, plant, or organism lives. It includes all living and non-living parts of the environment. • **microhabitat:** a smaller part of a habitat, which has different conditions	• **non-flowering plant** – a plant that does not produce flowers. • **biodiversity** – all the living things in an area. • **interdependence** – Living things rely on each other for resources. • **cold-blooded**: animals that need help from the environment to warm up or cool their body down • **warm-blooded**: describing animals that can maintain a constant body temperature without relying on their environment.	• **variation**– the process by which the young form of insects and some animals, such as frogs, develop into adults. • **inherit** – passing on genetic traits from parents to their offspring. • **natural selection -** the process that results in the continued existence of only the types of animals and plants that are best able to produce young **or** new plants in the conditions in which they live • **evolution**– the way in which populations of living things change and develop over time. • **extinct**: when an entire species dies out, we say that the species is extinct. Dinosaurs, for example, are extinct.

	to the habitat around it. • **organism:** a living thing - a plant or an animal. • **producer:** something that can make its own food - usually a plant. • **species:** a group of living things that are the same type. • **adaptation**: features that help an organism survive in its environment. • **alive:** describing something that is living. • **dead:** describing something that was once alive, but no longer is.		• **fossil**: fossils are the preserved remains of living things that lived over 10,000 years ago. For fossils to be formed in rock, special conditions need to be met; not every living thing that dies will become a fossil. • **palaeontology**: the study of fossils and the evolution of life on Earth. • **species:** a group of organisms that can interbreed to produce fertile offspring (offspring that can go on to successfully reproduce). • **structural adaptation**: physical characteristics that adapt the animal to its environment. • **adolescence:** the time between approximately 10 – 20 years old. • **embryo:** an unborn baby that is under eight weeks old.

	• **environment**: the surroundings. It includes the living and non-living parts. • **sensitivity:** the process of detecting changes in the environment. • **shelter:** a place that provides protection.		• **fertilisation (conception)** when the egg and sperm fuse (join). • **foetus** – an unborn baby that is over eight weeks old. • **gestation period** –the time the offspring grows inside the womb (the length of the pregnancy). • **IVF:** a type of assisted reproduction where a female egg is fertilised outside the body and the embryo formed is transferred back into the female. • **life cycle** – the changes an organism goes through from birth to old age. • **pregnancy** – the period a baby grows inside the uterus/womb. Pregnancy lasts about nine months. • **puberty** –the process where a child's body changes to an adult body and reaches sexual maturity.

			• **sperm** – a male sex cell. • **uterus** – the organ in which offspring are conceived and grow before they are born. • **artery**: a type of blood vessel that transports blood away from the heart to the organs and other tissues in the body. • **blood vessel**: allows blood to be transported to all the parts of the body. Arteries, veins and capillaries are blood vessels. • **capillary**: a very small blood vessel with thin walls. They exchange materials between the blood and cells of the tissues and organs. • **carbon monoxide**: a gas found in tobacco smoke that reduces the amount of oxygen that can be carried by red blood cells.

			• **circulatory system:** the system that moves blood around the body, consists of the heart and the blood vessels. • **deoxygenated blood**: blood that is high in carbon dioxide and low in oxygen. • **excretion**: the process of removing waste products. • **lungs**: organs that are used for breathing. The lungs exchange gases, oxygen is moved from the lungs into the blood and carbon dioxide is moved out of the blood and into the lungs. • **nicotine**: a substance found in tobacco smoke that causes heart disease. • **oxygenated blood**: blood that is high in oxygen and low in carbon dioxide. • **plasma**: plasma is the yellow fluid that the blood cells are in. It transports

			protein, nutrients, and hormones around the body. Plasma is about 90% water. • **platelet:** platelets help blood clot where there is a wound; this stops the wound from bleeding. • **red blood cell**: cells that carry oxygen to the organs and tissues. • **respiration**: a process that provides the energy needed by our organs to function. • **tar**: a substance found in tobacco smoke that causes throat, mouth and lung cancer. • **white blood cell:** white blood cells defend our body against diseases. • **vein**: a type of blood vessel that transports blood from the capillaries back to the heart.
	Forces, Earth and Space		

		• **contact force:** a force that act between objects that are touching each other. eg push and pull forces. • **force:** a push or pull on a particular direction. • **friction:** a force that acts between two surfaces that are moving, or are trying to move, across each other. Friction slows a moving object down, or tries to stop an object from moving in the first place. • **magnet** an object that attracts certain other materials. Those other materials must contain iron, cobalt or nickel.	• **gravity:** non-contact force that pulls objects towards each other. • **newtons (N):** the unit of measure for force • **mass:** the amount of matter an object has - Kg • **weight:** a force measured in newtons • **force:** a push or pull that acts on an object to move it or change shape • **gravitational pull:** • **upthrust:** upward force that a liquid or gas puts on a floating object. • **load:** weight that if being moved • **pivot:** point at which something turns • **friction:** a force that acts to slow or stop a moving object • **air resistance:** force of air on a moving object • **water resistance:** force of water on a moving object • **surface area:** the size of an object area moving in a certain direction

		• **magnetic field:** the region around a magnet where another magnet will experience the force of attraction or repulsion. • **magnetic force:** the pulling forces or pushing forces which happen when magnets are close to each other. • **magnetic poles:** magnets have 2 poles: a *north pole* and a *south pole*. • **non-contact force:** a force that can act at a distance, eg magnetic force and gravity. • **north pole:** this is one of a magnet's poles. A north pole will repel (push away) another north pole, but	• **asteroid:** pieces of rock (smaller than a planet, larger than a meteoroid) that orbit the Sun • **celestial body:** a word to describe anything that exists in space, including stars, planets, moons and asteroids. • **comet:** icy chunks of rock that travel through the solar system, often with a tail • **galaxy:** a group of millions of stars and their respective solar systems • **gas planet**: a planet further away from the Sun without a solid surface (Jupiter, Saturn, Uranus, Neptune) • **heliocentric model:** the accepted scientific theory that the Sun (not Earth) is the centre of the solar system • **meridian:** the vertical lines that split the Earth into 24 time zones • **meteoroid:** ~1m pieces of rock that have broken off from asteroids and orbit the Sun

		will be attracted to a south pole. • **south pole**: this is one of a magnet's poles. A south pole will repel (push away) another south pole, but will be attracted to a north pole. • **attract:** when magnets attract, they pull towards each other (this happens when you place the north pole of a magnet near the south pole of another magnet). **repel:** when magnets repel, they push away from each other (this happens when you try and put the same poles of the magnet near each other	• **meteor:** meteoroids that enter the Earth's atmosphere, that burn up and become what we know as 'shooting stars' • **meteorite:** the small pieces of meteors that do not burn up in Earth's atmosphere and land on Earth • **Milky Way:** the name of the galaxy that we live in • **rocky planet:** a planet closer to the Sun that has a solid surface (Mercury, Venus, Earth, Mars) • **Prime Meridian:** a line of longitude that splits the Earth in half into the Eastern and Western hemispheres. • **solar system:** the collection of celestial bodies that exist together around a star • **universe:** everything that exists in space, including galaxies and the solar systems within them • **vacuum:** a place that has no particles in it at all, including air

		• **balanced:** describing something that has a fair or even amount of things. • **opposing:** describing something that acts against (is the opposite of) something else. • **push:** a force that moves an object away from another object. • **pull:** a force that moves an object towards another object. • **speed:** how fast something is moving. • **balanced forces:** when opposing (opposite) forces are the same size. • **opposing forces:** forces that act in opposite directions.	

		• **unbalanced forces**: when opposing (opposite) forces are different sizes.	
	Energy		
		• **appliance:** an object designed to carry out a specific task. • **buzzer:** the buzzer changes the electrical energy to sound energy (the buzzer will make a sound). • **cell/ battery:** cell/ battery provides energy to push the electricity around the circuit. • **component:** things we use to build our circuit, e.g. bulbs, wires, cells, batteries, switches, motors.	

		• **insulator:** is a material that does not allow electricity to flow through it. Examples of insulators include wood and plastic. • **lamp:** a circuit component that lights when in a complete circuit • **mains electricity:** the electricity that most of our electrical appliances are connected to by plugging appliances into sockets. • **motor:** a component used in a circuit. • **switch:** completes or breaks the circuit. When the switch is closed, the circuit is complete, and the electrical energy can flow around the circuit.	

		• **wires:** a component used to connect other components in a circuit. • **complete circuit:** a complete loop which allows electricity to flow, making the components in the circuit work. • **conductor**: is a material that allows electricity to flow through it. Metals such as copper and steel are good electrical conductors. • **electrical appliance/device:** something that needs electricity to work eg a kettle. • **electrical circuit:** a path that electricity can flow through. The path must be	

		a complete circuit for the components to work. • **incomplete circuit:** a loop that is *not* complete. Electricity cannot flow through, so the components in the circuit will not work.	
	Materials		
		• **rock**– a naturally occurring material made of different materials. • **crust** – the hard outer covering of the Earth. • **anthropic rocks** – man made- eg bricks and concrete. They are not rock. • **igneous** – rocks formed from cooled magma.	

		• **sedimentary** – rocks made by layers of sediment being compressed over a long time. • **metamorphic** – formed when igneous of sedimentary rock is put under a lot of pressure. • **permeable** –it allows water or gases to pass through it. • **impermeable** – Doesn't allow water or gas to pass through it. • **geologist:** scientists who study what the Earth is made from, and specifically its rocks • **megafauna:** very large animals • **organic matter:** matter that is either living, once	

		was living (and now dead) or came from a living thing (like poo**)** • **palaeontologist:** someone that studies fossils that were formed tens of thousands to millions of years ago, to learn about how life has changed. • **soil** – the material on the surface of the ground in which plants grow. • **granite** – a hard grey, pink and black rock used in building and often found in Cornwall.	