



Subject Leader Sticky Knowledge Grid

Subject: SCIENCE

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	BIOLOGY					
Plants To know the difference between a plant and a tree. To name basic features - roots, flowers and leaves. To know that plants need soil, water and light to grow. To know that plants change seasonally. Animals including humans To identify and name basic face and body parts. To know that we grow from a baby to a young child to a teenager then an adult. To know that all animals have babies and that some animals are born live and some hatch from eggs.	Plants There are a variety of wild and garden plants including deciduous and evergreen trees. Plants have roots, stem, leaves, and some have flowers. Trees have roots, trunk, branches and leaves. Animals including humans Identify and name a variety of common animals, including fish, amphibians, reptiles, birds and mammals. Identify and name basic parts of the human body and which parts are associated with the senses. Name at least one example of a carnivore, a herbivore and an omnivore.	Plants That seeds and bulbs grow into plants. That plants need water, light and a suitable temperature to grow and be healthy. Animals including humans That they have offspring which grow into adults. They need water, food and air to survive. They need exercise, healthy diet and good hygiene to be healthy. Living things and their habitats Identify things that are living, dead or never been alive. Different habitats provide basic needs for different animals and plants. Name at least three animals and their habitats. Describe how two animals are related through a food chain.	Plants Identify the functions of parts of a flowering plant including: roots, stem/trunk, leaves and flowers. That plants have a life cycle including pollination, seed formation and seed dispersal. That water moves throughout a plant. Animals including humans That they need the right types and amount of nutrition from what they eat. That humans and some other animals have skeletons and muscles for support, protection and movement.	Animals including humans 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. Living things and their habitats Name living things in own and wider environment. Classify and group living things. That environments can change and this can affect living things.	Animals including humans Describe the changes as humans develop to old age. Name the main parts of the human circulatory system including the heart, blood vessels and blood. That diet, exercise, drugs and lifestyle affect the function of the body. That blood transports nutrients and water within animals including humans. Living things and their habitats That mammals, amphibians, insects and birds have different life-cycles. The process of reproduction in some plants and animals.	Evolution and inheritance That living things have changed over time. That fossils provide information / evidence of those changes. That animals and plants adapt to their environment and this can lead to evolution. That characteristics are passed from parents to offspring but they are not identical. Living things and their habitats I can choose various criteria to classify living things. I can explain how foods chains and feeding relationships effect habitats.

	PHYSICS					
To know and name the 4 seasons. To be able to describe different weather.	To describe seasonal changes across the four seasons. There are associated weather changes across the four seasons.		Light We need light in order to see things and dark is the absence of light. Name sources of light including natural and not natural. That looking at the sun is dangerous and how they can protect their eyes. That light can be reflected from surfaces. That shadows are formed when light is blocked by an opaque object and the shadow changes dependant on the position of the light source. Forces and Magnets Magnetic forces can act at a distance. That magnets repel or attract each other, and attract some materials and not others. Magnets have 2 poles. As friction increases, an object will move over a surface slower. As friction decreases, an object will move over a surface faster.	Sound Name sources of sound. Identify how sounds are made by vibrations. That vibrations travel through a medium (air, water, solid). That volume can be changed by changing the strength and distance of vibrations. Correlation between pitch and the object producing the sound. Electricity Name appliances that use electricity. Make a simple circuit with buzzers and switches and name the components. Name some common insulators and conductors and know that metal is a good conductor.	Earth and space How the Earth and other planets move relative to the sun in the solar system. The movement of the moon relative to the Earth. That night and day occurs due to the Earth's rotation around the sun, and the sun does not move. That the Earth and the moon are approximately spherical. Forces That the force of gravity acts to pull unsupported objects to the Earth. The effects of water resistance, air resistance and friction between moving surfaces. That some mechanisms, including levers, pulleys and gears allow a smaller force to have a greater effect. Light That light appears to travel in straight lines. That we can see because light travels	Electricity Use recognised symbols to represent a simple circuit in a diagram. That components in a circuit, (e.g. brightness of bulbs) are affected by the number and voltage of cells used in the circuit. Light That as light appears to travel in straight lines, shadows will keep the shape of the opaque object from which they are formed.

					from light sources to our eyes or to objects and then reflects to our eyes.	
	CHEMISTRY					
Changes That heating a material may cause a change (cooking).	Materials Identify and name a variety of everyday materials. Materials can be grouped on the basis of their properties.	Materials Identify the suitability of different everyday materials for different uses. That the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Rocks That rocks have different physical properties. To know, in simple terms, how fossils are formed. That soils are made from rocks.	States of Matter Compare and group materials into solids, liquids or gases. That some materials change when heated or cooled. How evaporation and condensation play a part of the water cycle.	Properties and changes of materials Compare and group materials on the basis of their properties. That some materials dissolve to form a solution and some do not (soluble / insoluble). How mixtures can be separated by sieving, filtering and evaporating. Identify some changes are reversible and some that are irreversible.	