**Science Overview**

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|  | Aut 1st | Aut 2nd | Spring 1st | Spring 2nd | Summer 1st | Summer 2nd |
| **Year 1** | **Plants**To know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen treesKnow and identify and describe the basic structure of a variety of common flowering plants, including trees.**Animals including humans**Know and identify and name a variety of common animals that are carnivores, herbivores and omnivores. Know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). Know and name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. | **Everyday Materials**Know how to distinguish between an object and the material from which it is madeKnow how to identify and name a variety of everyday materials, including wood, plastic, glass,metal, water, and rockTo know 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. | **Seasonal Changes**Know the changes across the four seasonsKnow and describe weather associated with the seasons and how day length varies |
| **Year 2** | **Living Things and their habitats**Know and compare the differences between things that are living, dead, and things that have never been alive.Know 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 Know and name a variety of plants and animals in their habitats, including microhabitats Know 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. | **Plants**Know and describe how seeds and bulbs grow into mature plantsKnow and describe how plants need water, light and a suitable temperature to growand stay healthy. | **Animals, including humans**Know that animals, including humans, have offspring which grow into adultsKnow about and describe the basic needs of animals, including humans, forsurvival (water, food and air)Know the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. | **Uses of everyday materials**Know and compare the suitability of a variety of everyday materials, includingwood, metal, plastic, glass, brick, rock, paper and cardboard for particular know how the shapes of solid objects made from some materials can be changedby squashing, bending, twisting and stretching. |
|  | **Aut 1st** | **Aut 2nd** | **Spr 1st** | **Spr 2nd** | **Sum 1st + 2nd** |
| **Year 3** | **Plants**Know the functions of different parts of flowering plants: roots,stem/trunk, leaves and flowersKnow and explore the requirements of plants for life and growth (air, light, water, nutrients fromsoil, and room to grow) and how they vary from plant to plantKnow the way in which water is transported within plantsKnow the part that flowers play in the life cycle of flowering plants, includingpollination, seed formation and seed dispersal. | **Animals, including humans**Know 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 eatKnow that humans and some other animals have skeletons and muscles forsupport, protection and movement. | **Rocks**Know and group together different kinds of rocks on the basis of their appearanceand simple physical propertiesKnow in simple terms how fossils are formed when things that have lived aretrapped within rockRecognise that soils are made from rocks and organic matter. | **Light**Know that they need light in order to see things and that dark is the absence oflightKnow that light is reflected from surfacesKnow that light from the sun can be dangerous and that there are ways to protecttheir eyesKnow that shadows are formed when the light from a light source is blocked byan opaque objectKnow patterns in the way that the size of shadows change. | **Forces and Magnets/Revision**Know how things move on different surfacesKnow that some forces need contact between two objects, but magnetic forces canact at a distanceKnow how magnets attract or repel each other and attract some materials and notothersKnow and group together a variety of everyday materials on the basis of whetherthey are attracted to a magnet, and know some magnetic materials.Know magnets have two polesKnow whether two magnets will attract or repel each other, depending on whichpoles are facing. |
| **Year 4****Year 5****Year 6** | **Aut 1st****Living Things and their habitats**Know that living things can be grouped in a variety of waysKnow and use classification keys to help group, identify and name a variety of livingthings in their local and wider environmentKnow that environments can change and that this can sometimes pose dangersto living things.**Aut 1st****Living Things and their Habitats**Know the differences in the life cycles of a mammal, an amphibian, an insect anda birdKnow the life process of reproduction in some plants and animals.**Aut 1st****Living Things and their habitats**Know how living things are classified into broad groups according to commonobservable characteristics and based on similarities and differences, including microorganisms,plants and animalsKnow and give reasons for classifying plants and animals based on specific characteristics. | **Aut 2nd****Animals, including humans**Know the simple functions of the basic parts of the digestive system in humansKnow the different types of teeth in humans and their simple functionsKnow how to construct and interpret a variety of food chains, identifying producers, predators andprey.**Aut 2nd****Animals, including humans**Know the changes as humans develop to old age.**Aut 2nd****Animals, including humans**Know and name the main parts of the human circulatory system, and describe thefunctions of the heart, blood vessels and bloodKnow the impact of diet, exercise, drugs and lifestyle on the way their bodiesfunctionKnow the ways in which nutrients and water are transported within animals,including humans. | **Spr 1st****States of Matter**Know how to group materials together, according to whether they are solids, liquidsor gasesKnow that some materials change state when they are heated or cooled, andmeasure or research the temperature at which this happens in degrees Celsius (°C)Know the part played by evaporation and condensation in the water cycle andassociate the rate of evaporation with temperature.**Spr 1st****Forces**Know that unsupported objects fall towards the Earth because of the force ofgravity acting between the Earth and the falling objectKnow the effects of air resistance, water resistance and friction, that act betweenmoving surfacesKnow that some mechanisms, including levers, pulleys and gears, allow asmaller force to have a greater effect.**Spr 1st****Evolution including inheritance**Know that living things have changed over time and that fossils provideinformation about living things that inhabited the Earth millions of years agoKnow that living things produce offspring of the same kind, but normally offspringvary and are not identical to their parentsKnow how animals and plants are adapted to suit their environment in differentways and that adaptation may lead to evolution. | **Spr 2nd****Sound**Know how sounds are made, associating some of them with something vibratingRecognise that vibrations from sounds travel through a medium to the earKnow patterns between the pitch of a sound and features of the object that produced itKnow patterns between the volume of a sound and the strength of the vibrations thatproduced itKnow that sounds get fainter as the distance from the sound source increases.**Spr 2nd****Earth and Space**Know the movement of the Earth, and other planets, relative to the Sun in thesolar systemKnow the movement of the Moon relative to the EarthDescribe the Sun, Earth and Moon as approximately spherical bodiesKnow and use the idea of the Earth’s rotation to explain day and night and the apparentmovement of the sun across the sky.**Sum 1st****Light**Know that light appears to travel in straight linesUse the idea that light travels in straight lines to explain that objects are seenbecause they give out or reflect light into the eyeKnow that we see things because light travels from light sources to our eyes orfrom light sources to objects and then to our eyes Know and use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. | **Sum 1st + 2nd****Electricity/Revision**Know common appliances that run on electricityKnow how to construct a simple series electrical circuit, Know and naming its basic parts,including cells, wires, bulbs, switches and buzzersKnow whether or not a lamp will light in a simple series circuit, based on whether ornot the lamp is part of a complete loop with a batteryKnow that a switch opens and closes a circuit and associate this with whether ornot a lamp lights in a simple series circuitKnow some common conductors and insulators, and associate metals with beinggood conductors.**Sum 1st + 2nd** **Properties and changes of materials/Revision**Know how to group together everyday materials on the basis of their properties,including their hardness, solubility, transparency, conductivity (electrical andthermal), and response to magnetsKnow that some materials will dissolve in liquid to form a solution, and describe howto recover a substance from a solutionUse knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporatingGive reasons, based on evidence from comparative and fair tests, for the particularuses of everyday materials, including metals, wood and plasticKnow that dissolving, mixing and changes of state are reversible changesKnow that some changes result in the formation of new materials, and that this kindof change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate soda **Sum 1st + 2nd****Electricity/Revision**Know and associate the brightness of a lamp or the volume of a buzzer with the number andvoltage of cells used in the circuit Know and give reasons for variations in how components function, including thebrightness of bulbs, the loudness of buzzers and the on/off position of switchesKnow and use recognised symbols when representing a simple circuit in a diagram. 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