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| **Knowledge Progression** | **EYFS** | **Year 1 & Year 2**  | **Year 3 & Year 4**  | **Year 5 & Year 6**  |
| **Animals including humans** | I know that different animals have different body parts (some have no legs, some have lots)I know that different animals like different foods and live in difference placesI know that some animals are big and some animals are smallI know that butterflies do not start out looking like butterflies (undergo metamorphosis) I know how to talk about different places an animals might liveI know that some animals hibernateI know that some animals are adapted to live under the sea and that humans are adapted to live on land I know that if I wash my hands then that will kill off germs I know about the importance of a healthy dietI know I cannot eat unhealthy foods like chips and pizza everyday and I need a variety of foodI know about the importance of a healthy exercise regimeI know that exercise is good for my body. | I know how to describe and compare observable features of animals from a range of groups I know how to group animals according to what they eat I know how to identify and name a variety of common animals including fish, amphibians, reptiles, mammals and birdsI know how to identify and name a variety of common animals that are carnivores, herbivores and omnivoresI know how to name and locate parts of the human body, including those related to the sensesI know how to describe and compare observable features of animals from a range of groupsI know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)I know how to identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each senseI know how to take care of animals taken from their habitat and understand the need to return them safely to their homesI know how to use the vocabulary and identify: head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth and teeth | I know how to name and locate parts of the human body, including those related to the senses and describe themI know how to describe the basic needs of animals for survival and the main changes as offspring from young animals, including humans, grow into adultsI know how to group animals according to what they eat, describe how animals get their food from other animals and/or plants, and use simple food chains to describe these relationshipsI know how to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygieneI know how to describe the basic needs of animals, including humans, for survival (water, food and air)I know how to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygieneI know how to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene | I know how to 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 I know how to identify that humans and some other animals have skeletons and muscles for support, protection and movement | I know how to describe the simple functions of the basic parts of the digestive system in humans I know how to identify the different types of teeth in humans and their simple functionsI know how to construct and interpret a variety of food chains, identifying producers, predators and prey | I know how to describe the changes as humans develop to old age | I know how to identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and bloodI know how to recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies functionI know how to describe the ways in which nutrients and water are transported within animals, including humans |
| **Everyday Materials** | I know that objects are made from different materialsI know about similarities and differences in relation to places, objects, materials and living thingsI know how to about the features of my immediate environment and how environments might vary from one anotherI know how to make observations of animals and plants and explain why some things occur, and talk about changes | I know how to distinguish objects from materials, describe their properties, identify and group everyday materialsI know how to distinguish between an object and the material from which it is madeI know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rockI know how to describe the simple physical properties of a variety of everyday materialsI know how to compare and group together a variety of everyday materials on the basis of their simple physical properties | I know how to distinguish objects from materials, describe their properties, identify and group everyday materials and compare their suitability for different usesI know how to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular usesI know how to describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching |  |  | I know how to compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnetsI know how to recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solutionI know how to use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporatingI know how to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plasticI know how to demonstrate that dissolving, mixing and changes of state are reversible changesI know how to 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 |  |
| **Light** |  |  |  | I know how to recognise that he/she needs light in order to see things and that dark is the absence of lightI know how to notice that light is reflected from surfacesI know how to recognise that light from the sun can be dangerous and that there are ways to protect eyesI know how to find patterns in the way that the size of shadows changeI know that it is not safe to look directly at the sun, even when wearing dark glasses |  |  | I know how to recognise that light appears to travel in straight linesI know how to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eyeI know how to explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyesI know how to use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them |
| **Magnets** | I know that magnets are ‘sticky’ without being sticky.I know magnets stick to certain materials (metals)I know how to find an object which a magnet will stick to |  |  | I know how to compare how things move on different surfacesI know how to notice that some forces need contact between two objects, but magnetic forces can act at a distanceI know how to compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materialsI know how to describe magnets as having two poles |  |  |  |
| **Electricity** |  |  |  |  | I know how to identify common appliances that run on electricityI know how to 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 batteryI know how to recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuitI know how to recognise some common conductors and insulators, and associate metals with being good conductors |  | I know how to associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuitI know how to 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 switchesI know how to use recognised symbols when representing a simple circuit in a diagram |
| **Seasonal changes** | I know how to identify that it is Autumn, Winter, Summer and SpringI know how to identify seasonal coloursI know that lots of new life begins in the Spring timeI know how to choose appropriate clothing for the seasons  | I know how to observe and describe changes across the four seasonsI know how to observe and describe weather associated with the seasons and how day length variesI know that it is not safe to look directly at the sun, even when wearing dark glasses |  |  |  |  |  |
| **Plants** | I know that plants need sun to growI know that plants need water to grow I know that most plants need soil and nutrients to growI know some plants grow from seeds | I know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen treesI know how to identify and describe the basic structure of a variety of common flowering plants, including treesI know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees | I know how to describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plantsI know how to observe and describe how seeds and bulbs grow into mature plantsI know how to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy  | I know how to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowersI know how to explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plantI know how to investigate the way in which water is transported within plantsI know how to explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal |  |  |  |
| **Living things and their habitats** | I know about similarities and differences in relation to living things and their habitatsI know how to talk about the features of my own immediate environment and how environments might vary from one anotherI know how to make observations of animals and plants and explain why some things occur, and talk about changes. |  | I know how to identify whether things are alive, dead or have never livedI know how to explore and compare the differences between things that are living, dead, and things that have never been aliveI know how to name different plants and animals and describe how they are suited to different habitatsI know how to 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 otherI know how to identify and name a variety of plants and animals in their habitats, including micro-habitatsI know how to 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 |  | I know how to recognise that living things can be grouped in a variety of ways I know how to explore and use classification keys to help group, identify and name a variety of living things in their local and wider environmentI know how to recognise that environments can change and that this can sometimes pose dangers and have an impact on living things | I know how to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird I know how to describe the life process of reproduction in some plants and animals | I know how to describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animalsI know how to give reasons for classifying plants and animals based on specific characteristics |
| **Rocks** |  |  |  | I know how to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties I know how to describe in simple terms how fossils are formed when things that have lived are trapped within rockI know how to recognise that soils are made from rocks and organic matter. |  |  |  |
| **Forces** |  |  |  | I know how to compare how things move on different surfacesI know how to notice that some forces need contact between two objects, but magnetic forces can act at a distanceI know how to compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materialsI know how to describe magnets as having two polesI know how to predict whether two magnets will attract or repel each other, depending on which poles are facing |  | I know how to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling objectI know how to identify the effects of air resistance, water resistance and friction, that act between moving surfacesI know how to recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effectI know how to describe the differences in the life cycles of a mammal, an amphibian, an insect and a birdI know how to describe the life process of reproduction in some plants and animals |  |
| **Sound** |  |  |  |  | I know how to identify how sounds are made, associating some of them with something vibrating I know how to recognise that vibrations from sounds travel through a medium to the earI know how to find patterns between the pitch of a sound and features of the object that produced itI know how to find patterns between the volume of a sound and the strength of the vibrations that produced itI know how to recognise that sounds get fainter as the distance from the sound source increases |  |  |
| **States of matter** |  |  |  |  | I know how to compare and group materials together, according to whether they are solids, liquids or gasesI know how to 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)I know how to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature |  |  |
| **Earth and Space** |  |  |  |  |  | I know how to describe the movement of the Earth, and other planets, relative to the Sun in the solar systemI know how to describe the movement of the Moon relative to the EarthI know how to describe the Sun, Earth and Moon as approximately spherical bodiesI know how to use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the skyI know that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a ‘dwarf planet’ in 2006). I know that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). |  |
| **Evolution and inheritance** |  |  |  |  |  |  | I know how to recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years agoI know how to recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parentsI know how to identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution |
| **Possible Famous Scientists** |  | *William Addis (Toothbrush Inventor)**Charles Mackintosh (Waterproof coat)**John MacAdam- (Roads)**Chester Greenwood (Earmuffs)**Dr Steve Lyons (Extreme Weather)**Holly Green (Meteorologist)**Beatrix Potter**(Author & Botanist)**Chris Packham (Animal Conservationist)**Elizabeth Garett Anderson (Physician and Surgeon)* | *Rachel Carson (Marine Pollution)**Liz Bonnin (Conservationist)**Jane Goodall (Primatologist)**Florence Nightingale (Pioneer of modern nursing in GB)**Elizabeth Garrett Anderson (First British female physician and surgeon**Steve Irwin (Wildlife expert)**Robert Winston (Human Scientist)**Captain Cook (Botanists)**Agnes Arber (Botanist)**Alan Titchmarsh (Botanist & Gardener)**Charles Macintosh (Waterproof material)**John MacAdam (Tarmac)* | *Marie Curie (Radiation)**Wilhelm Rontgen (X rays)**Adelle Davis (Nutritionist)**Justus Von Liebig (Mirrors)**James Clerk Maxwel (Visible and Invisible Waves of Light)**Andre Marie Ampere (Electro-magnetism)**The Wright Brothers (Airplanes)**Henry Ford (Cars)**Mary Anning (Fossils)**Dr Anjana Khatwa (Geologist)**William Smith (Fossils)**Inge Lehrmasn (Earth’s Mantle)**Katia Krafft (Geologist and Volcanologist)**Joseph Banks (Botanist)*[*Ahmed Mumin Warfa*](https://en.wikipedia.org/wiki/Ahmed_Mumin_Warfa) *(Botanist)* | *Jacques Cousteau (Marine Biology)**Cindy Looy (Environmental Change and Extinction)**Joean Beauchamp Procter (Zoologist)**Joseph Lister (Antiseptic)**Ivan Pavlov (Digestive System Mechanisms)**Washington & Lucius Sheffield (Toothpaste)**Alexander Graham Bell (Invented telephone)**Aristotle (Sound Waves)**Gailileo Galilei (Frequency and Pitch of Sound Waves)**Joseph Priestly (Discovered oxygen)**Lord Kelvin (Temperature)**Anders Celsius (Temperature Scale)**Daniel Fahrenheit (Temperature Scale / Invention of the Thermometer)**George Washington Carver (Chemist)**Michael Faraday (Magnets and Electricity)**Thomas Edison (Lightbulb)**Joseph Swan (Incandescent Light Bulb)* | *Jane Goodall (Naturalist)**Sylvia Earle (Marine Biologist)**Dr. Paula Kahumbu (Wildlife Conservationist)**Mangala Mani (Antarctic scientist)**Sir David Attenborough- (Animal Behaviourist)**Alexander Fleming (Penicillin)**Louis Pasteur (Vaccination)**Eva Crane (Reproduction in Bees)**Virginia Apgar (*[*Obstetrical*](https://en.wikipedia.org/wiki/Obstetrics)[*Anaesthesiologist*](https://en.wikipedia.org/wiki/Anesthesiologist)*)**Sir Humphrey Davy (Separating gases)**Jamie Garcia (Invention of a new plastic)**Becky Schroeder (Fluorescence material)**Spencer Silver, Arthur Fry and Alan Amron (Post-It Notes)**Ruth Benerito (Wrinkle-Free Cotton)**Margaret Hamilton (Computer scientist Moon Landings)**Stephen Hawking (Black Holes)**Mae Jemison (Astronaut)**Claudius Ptolemy and Nicolaus Copernicus (Heliocentric vs Geocentric Universe)**Neil Armstrong (First man on the Moon)*Helen Sharman (GB *Astronaut)*CarolineHerschel (First to find a comet)*Valentina Tereshkova (Cosmonaut)**Isaac Newton (Gravity)**Albert Einstein (The Theory of Relativity)**Galileo Galilei (Gravity and Acceleration)**Archimedes of Syracuse (Levers)* | *Hippocrates (Medicine)**Charles Darwin (Evolution)**Alfred Russell Wallace (Naturalist)**Rosalind Franklin (DNA)**Nettie Stevens (Geneticist, Evolutionary)**Carl Linneus(Classification)**Libby Hyman (Classification Invertebrates)**Leonardo Da Vinci (Anatomy)**Santorio Santorio (Anatomist)**Dr. Katherine Dibb – (Cardiovascular Sciences)**Justus von Liebig (Theories of Nutrition and Metabolism)**Sir Richard Doll (Smoking)**Thomas Edison (Light Bulb)**Patricia Bath (Sight)**Thomas Young (Wave Theory of Light)**Ibn al-Haytham (Light and our Eyes)**Percy Shaw (The Cats Eye)**Nikola Telsa (AC electric system)**Alessandro Volta (Electrical Battery)**Nicola Tesla (Alternating Currents)**Edith Clarke (Electrical Engineer)* |