



Year 5- Animals Including Humans



Prior Learning	In Year 5	Later learning: Children do not need to be taught this year.	Key Vocabulary
<ul style="list-style-type: none">●Should be able to notice that animals, including humans, have offspring which grow into adults.●Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).●Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.●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.●Identify that humans and some other animals have skeletons and muscles for support, protection and movement.●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.	<ul style="list-style-type: none">●Describe the changes as humans develop to old age.	In Year 6 pupils will be taught to: Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans.	Puberty, life cycle, gestation, growth, reproduce, fetus, baby, fertilisation, toddler, child, adult, old age, life expectancy, adolescence, childhood, adulthood, womb, life, death.

Working Scientifically

Research the gestation periods of other animals and comparing them with humans. Find out the record the length and mass of a baby as it grows.



Year 5- Earth and Space



Prior Learning	In Year 5	Later learning: Children do not need to be taught this year.	Key Vocabulary
<ul style="list-style-type: none">•May have some knowledge about space.•Have some understanding about how the earth orbits the sun.	<ul style="list-style-type: none">•Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.•Describe the movement of the Moon relative to the Earth.•Describe the Sun, Earth and Moon as approximately spherical bodies.•Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	In Year 7 pupils will be taught: The composition of the Earth and the structure of the Earth. The rock cycle and the formation of igneous, sedimentary and metamorphic rocks. Earth as a source of limited resources and the efficacy of recycling. The carbon cycle and the composition of the atmosphere The production of carbon dioxide by human activity and the impact on climate. Gravity forces between the earth and the moon and the earth and the sun. Sun as a star, and stars in other galaxies. Seasons and the earths tilt, day length. Light years.	Earth, sun, moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, planets, solar system, day, night, rotate, orbit, axis, spherical, geocentric, heliocentric.

Working Scientifically

Compare the time of day at different places on the earth through internet links and direct communications. Create simple models of the solar system. Construct simple shadow clocks and sundials calibrated to show midday and the start and the end of the school day. Finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.



Year 5- Forces



Prior Learning	In Year 5	Later Learning (children do not need to be taught this year)	Key Vocabulary
<ul style="list-style-type: none">•May have an awareness of how to make things stop and start.•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.	<ul style="list-style-type: none">•Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.•Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.•Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.		Force, push, pull, opposing, gravity, air resistance, water resistance, friction, streamline, brake, gear, mechanism, lever, cog, pulley, machine.

Working Scientifically

Explore falling paper cones and cupcakes. Design and make a variety of parachutes carrying out a fair test to see which is the best design. Explore resistance in water by making and testing boats of different shapes. Design and make products that use levers, pulleys, gears or springs and explore their effects.



Year 5- Living Things and Their Habitats



Prior Learning	In Year 5	Later Learning: Children do not need to be taught this year.	Key Vocabulary
<ul style="list-style-type: none">•Comments and questions about the place they live or the natural world.•Shows care and concern for living things and the environment.•Can talk about things they have observed such as plants and animals.•Notices features of objects in their environment.•Comments and asks questions about their familiar world.•Explore and compare the differences between things that are living, dead, and things that have never been alive.•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 other. Identify and name a variety of plants and animals in their habitats, including microhabitats.•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.•Recognise that living things can be grouped in a variety of ways.•Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.•Recognise that environments can change and that this can sometimes pose dangers to living things.	<ul style="list-style-type: none">•To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.•Describe the life process of reproduction in some plants and animals.	<p>In year 6 pupils will be taught to:</p> <p>To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. give reasons for classifying plants and animals based on specific characteristics.</p>	Sexual, asexual, reproduction, cell, fertilisation, pollination, male, female, pregnancy, gestation, young, mammal, metamorphosis, amphibian, insect, egg, embryo, bird, plant.

Working Scientifically

Observing and comparing the life cycles of plants and animals in their own environment with other plants and animals from around the world. Asking pertinent questions and suggesting reasons for similarities and differences. Grow new plants from different parts of the parent plant. Observe changes in an animal over a period of time. Compare how different animals reproduce and grow.



Year 5- Properties and Changes of Materials



Prior Learning	In Year 5	Later learning: Children do not need to be taught this year.	Key Vocabulary
<ul style="list-style-type: none">• Distinguish between an object and the material from which it is made.• Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.• Describe 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.• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.• Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.• Compare and group materials together, according to whether they are solids, liquids or gases.• 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).	<ul style="list-style-type: none">• Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.• 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.• Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.• Demonstrate that dissolving, mixing and changes of state are reversible changes. 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.	In Year 7 pupils will be taught: The particulate nature of matter. Atoms, elements and compounds. Pure and impure substances. Chemical reactions. Periodic table. Materials such as carbon, ceramics, polymers and composites.	Material, conductor, dissolve, insoluble, suspension, chemical, physical, irreversible, solution, reversible, separate, mixture, insulator, transparent, flexible, permeable, soluble, property, magnetic, hard.



Year 5- Properties and Changes of Materials



●Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Working Scientifically

Carry out tests to answer questions, for example, which materials would be most effective for making a warm jacket, for stopping ice-cream from melting or for making black out curtains. Compare materials in order to make a switch in a circuit. Observe and compare the changes that take place, for example when burning different materials or when baking bread. Research how chemical changes have an impact on our lives, for example cooking. Discuss the creative use of new materials.