Science Curriculum

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| Year 1 | Animals including humans | Identify sort and name a variety of common animals including: fish, amphibians, reptiles, birds and mammals |
| Year 1 | Animals including humans | Identify sort and name a variety of common animals that are carnivores herbivores and omnivores |
| Year 1 | Animals including humans | Identify similarities and differences between fish. Amphibians, reptiles, birds and mammals. |
| Year 1 | Animals including humans | Identify name draw and label the basic parts of the human body and say which part of the body is associated with each sense |
| Year 1 | Everyday materials | Distinguish between an object and the material from which it is made |
| Year 1 | Everyday materials | Identify and name a variety of everyday materials including wood plastic glass metal water and rock |
| Year 1 | Everyday materials | Describe the simple physical properties of a variety of everyday materials |
| Year 1 | Everyday materials | Compare and group together a variety of everyday materials on the basis of their simple physical properties |
| Year 1 | Plants | Identify and name a variety of common wild and garden plants including deciduous and evergreen trees |
| Year 1 | Plants | Identify and describe the basic structure of a variety of common flowering plants including trees |
| Year 1 | Plants | Identify similarities and differences between plants and the changes in them as they grow |
| Year 1 | Seasonal changes | Observe changes in plants and animal behaviour across the 4 seasons |
| Year 1 | Seasonal changes | Observe and describe weather associated with the seasons and how day length varies |
| Year 1 | Working scientifically | Asking simple questions and recognising that they can be answered in different ways |
| Year 1 | Working scientifically | Observing closely using simple equipment |
| Year 1 | Working scientifically | Performing simple tests |
| Year 1 | Working scientifically | Identifying and classifying |
| Year 1 | Working scientifically | Using their observations and ideas to suggest answers to questions |
| Year 1 | Working scientifically | Gathering and recording data to help in answering questions |
| Year 2 | Animals including humans | Describe the main stages in the life cycle of at least 3 animals including humans |
| Year 2 | Animals including humans | Find out about and describe the key needs of animals including humans for survival (water food and air) |
| Year 2 | Animals including humans | Describe the importance for humans of exercise eating the right amounts of different types of food and hygiene |
| Year 2 | Everyday materials | I can identify uses of everyday materials give some reasons why a particular material might be chosen to make an object. |
| Year 2 | Everyday materials | I can identify how a variety of common materials can be changed (stretched bent snapped etc) |
| Year 2 | Living things and their habitats | Explore and compare the differences between things that are living dead and things that have never been alive |
| Year 2 | Living things and their habitats | 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 |
| Year 2 | Living things and their habitats | Identify and name a variety of plants and animals in their habitats including microhabitats |
| Year 2 | Living things and their habitats | 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 |
| Year 2 | Plants | Observe and describe how seeds and bulbs grow into mature plants |
| Year 2 | Plants | Investigate and describe how plants need water light and a suitable temperature to grow and stay healthy |
| Year 2 | Plants | Describe the life-cycle of a flowering plant |
| Year 2 | Working scientifically | Asking simple questions and recognising that they can be answered in different ways |
| Year 2 | Working scientifically | Observing closely using simple equipment |
| Year 2 | Working scientifically | Performing simple tests |
| Year 2 | Working scientifically | Identifying and classifying |
| Year 2 | Working scientifically | Using their observations and ideas to suggest answers to questions |
| Year 2 | Working scientifically | Gathering and recording data to help in answering questions |
| Year 3 | Animals including humans | 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 |
| Year 3 | Animals including humans | Identify that humans and some other animals have skeletons and muscles for support protection and movement. To make comparisons between animals that do and don't have skeletons |
| Year 3 | Animals including humans | Describe the main food groups - (Vitamins / Minerals Carbohydrates Fats Proteins Sugars) |
| Year 3 | Forces | Describe changes in the motion of objects (getting faster slowing down changing direction) |
| Year 3 | Forces | Sort materials into magnetic and non-magnetic by testing them with a magnet |
| Year 3 | Forces | Understand that magnetic poles may attract or repel |
| Year 3 | Forces | Know that some pushes and pulls require contact while others act at a distance |
| Year 3 | Light | Recognise that they need light in order to see things and that dark is the absence of light and that there are a range of possible light sources |
| Year 3 | Light | Notice that light is reflected from surfaces |
| Year 3 | Light | Recognise that light from the sun can be dangerous and that there are ways to protect their eyes |
| Year 3 | Light | Recognise that shadows are formed when the light from a light source is blocked by a solid object |
| Year 3 | Light | Find patterns in the way that the size of shadows change |
| Year 3 | Plants | Identify and describe the functions of different parts of flowering plants: roots stem/trunk leaves and flowers |
| Year 3 | Plants | 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 plant |
| Year 3 | Plants | Investigate the way in which water is transported within plants |
| Year 3 | Plants | Explore the part that flowers play in the life cycle of flowering plants including pollination seed formation and seed dispersal |
| Year 3 | Rocks | Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties |
| Year 3 | Rocks | Describe in simple terms how fossils are formed when things that have lived are trapped within rock |
| Year 3 | Rocks | Recognise that soils are made from rocks and organic matter |
| Year 3 | Rocks | Give examples of living things that can be found in rocks |
| Year 3 | Working scientifically | Asking relevant questions and using different types of scientific enquiries to answer them |
| Year 3 | Working scientifically | Setting up simple practical enquiries comparative and fair tests |
| Year 3 | Working scientifically | Making systematic and careful observations and where appropriate taking accurate measurements using standard units using a range of equipment including thermometers and data loggers |
| Year 3 | Working scientifically | Gathering recording classifying and presenting data in a variety of ways to help in answering questions |
| Year 3 | Working scientifically | Recording findings using simple scientific language drawings labelled diagrams keys bar charts and tables |
| Year 3 | Working scientifically | Reporting on findings from enquiries including oral and written explanations displays or presentations of results and conclusions |
| Year 3 | Working scientifically | Using results to draw simple conclusions make predictions for new values suggest improvements and raise further questions |
| Year 3 | Working scientifically | Identifying differences similarities or changes related to simple scientific ideas and processes |
| Year 3 | Working scientifically | Using straightforward scientific evidence to answer questions or to support their findings. |
| Year 4 | Animals including humans | Describe the simple functions of the basic parts of the digestive system in humans |
| Year 4 | Animals including humans | Identify the different types of teeth in humans and their simple functions |
| Year 4 | Animals including humans | Construct and interpret a variety of food chains identifying producers predators and prey |
| Year 4 | Animals including humans | Compare the teeth of herbivores and carnivores |
| Year 4 | Animals including humans | Group animals into vertebrates and invertebrates |
| Year 4 | Animals including humans | Identify the key features of fish amphibians reptiles birds and mammals |
| Year 4 | Animals including humans | Sort invertebrates into snails / slugs worms spiders insects and others |
| Year 4 | Electricity | Identify common appliances that run on electricity (mains or battery) |
| Year 4 | Electricity | Construct a simple series electrical circuit identifying and naming its basic parts including cells wires bulbs switches and buzzers |
| Year 4 | Electricity | 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 battery |
| Year 4 | Electricity | Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit |
| Year 4 | Electricity | Recognise some common conductors and insulators and associate metals with being good conductors |
| Year 4 | Electricity | Recognise potential hazards caused by electricity in and around the home. Know how to use electricity safety |
| Year 4 | Living things and their habitats | Recognise that environments can change and that this can sometimes pose dangers to living things and identify that sometimes these changes are caused by humans |
| Year 4 | Living things and their habitats | Use Keys to identify plants and animals in my local environment |
| Year 4 | Living things and their habitats | Describe the impact that humans have had on my local environment and make suggestions for improvement |
| Year 4 | Living things and their habitats | Develop my own keys for identifying living things in my local environment |
| Year 4 | Plants | Sort plants into flowering and non-flowering |
| Year 4 | Sound | Identify how sounds are made associating some of them with something vibrating |
| Year 4 | Sound | Recognise that vibrations from sounds travel through a medium to the ear |
| Year 4 | Sound | Find patterns between the pitch of a sound and features of the object that produced it |
| Year 4 | Sound | Find patterns between the volume of a sound and the strength of the vibrations that produced it |
| Year 4 | Sound | Recognise that sounds get fainter as the distance from the sound source increases |
| Year 4 | States of matter | Compare and group materials together according to whether they are solids liquids or gases |
| Year 4 | States of matter | 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) |
| Year 4 | States of matter | Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature |
| Year 4 | Working scientifically | Asking relevant questions and using different types of scientific enquiries to answer them |
| Year 4 | Working scientifically | Setting up simple practical enquiries comparative and fair tests |
| Year 4 | Working scientifically | Making systematic and careful observations and where appropriate taking accurate measurements using standard units using a range of equipment including thermometers and data loggers |
| Year 4 | Working scientifically | Gathering recording classifying and presenting data in a variety of ways to help in answering questions |
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| Year 4 | Working scientifically | Using results to draw simple conclusions make predictions for new values suggest improvements and raise further questions |
| Year 4 | Working scientifically | Identifying differences similarities or changes related to simple scientific ideas and processes |
| Year 4 | Working scientifically | Using straightforward scientific evidence to answer questions or to support their findings. |
| Year 5 | Animals including humans | Describe the changes as humans develop through puberty and at other stages in life |
| Year 5 | Animals including humans | Recognise that different mammals have different gestation periods and that these relate broadly to size |
| Year 5 | Animals including humans | Describe differences in the life-cycles of a mammal an amphibian an insect and a bird. |
| Year 5 | Earth and space | Describe the movement of the earth and other planets relative to the sun in the solar system and key features of some of these planets. |
| Year 5 | Earth and space | Describe the movement of the moon relative to the earth |
| Year 5 | Earth and space | Describe the sun earth and moon as approximately spherical bodies |
| Year 5 | Earth and space | Use the idea of the earth’s rotation and inclination to explain day and night seasons and eclipses and the apparent movement of the sun across the sky |
| Year 5 | Forces | Explain that unsupported objects fall towards the earth because of the force of gravity acting between the earth and the falling object |
| Year 5 | Forces | Identify the effects of air resistance water resistance and friction that act between moving surfaces and understand that these can be reduced or increased by design |
| Year 5 | Forces | Recognise that some mechanisms including levers pulleys and gears allow a smaller force to have a greater effect |
| Year 5 | Living things and their habitats | Describe how differences between plants enable them to survive in different conditions |
| Year 5 | Plants | Describe sexual reproduction in plants |
| Year 5 | Plants | Describe how some plants reproduce asexually |
| Year 5 | Plants | Identify similarities and differences between the life cycles of different plants |
| Year 5 | Plants | Explain how differences in plants enable them to to survive in different conditions |
| Year 5 | Properties and changes of materials | 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 |
| Year 5 | Properties and changes of materials | Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution |
| Year 5 | Properties and changes of materials | Use knowledge of solids liquids and gases to decide how mixtures might be separated including through filtering sieving and evaporating |
| Year 5 | Properties and changes of materials | Give reasons based on evidence from comparative and fair tests for the particular uses of everyday materials including metals wood and plastic |
| Year 5 | Properties and changes of materials | Demonstrate that dissolving mixing and changes of state are reversible changes |
| Year 5 | Properties and changes of materials | 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 |
| Year 5 | States of matter | Record observations to describe what happens when a solid is added to a liquid |
| Year 5 | States of matter | Separate solids of different sizes and separate solids from liquids (including those in solution) |
| Year 5 | States of matter | Use therms melting and dissolving accurately |
| Year 5 | States of matter | Describe a chemical change ass being one where a new material is made |
| Year 5 | Working scientifically | Planning different types of scientific enquiries to answer questions including recognising and controlling variables where necessary |
| Year 5 | Working scientifically | Taking measurements using a range of scientific equipment with increasing accuracy and precision taking repeat readings when appropriate |
| Year 5 | Working scientifically | Recording data and results of increasing complexity using scientific diagrams and labels classification keys tables scatter graphs bar and line graphs |
| Year 5 | Working scientifically | Using test results to make predictions to set up further comparative and fair tests |
| Year 5 | Working scientifically | Reporting and presenting findings from enquiries including conclusions causal relationships and explanations of and a degree of trust in results in oral and written forms such as displays and other presentations |
| Year 5 | Working scientifically | Identifying scientific evidence that has been used to support or refute ideas or arguments |
| Year 6 | Animals including humans | Identify and name the main parts of the human circulatory system and describe the functions of the heart blood vessels and blood |
| Year 6 | Animals including humans | Recognise the impact of diet exercise drugs and lifestyle on the way their bodies function |
| Year 6 | Animals including humans | Describe the ways in which nutrients and water are transported within animals including humans |
| Year 6 | Animals including humans | Describe the main features of each vertebrate group: fish amphibians reptiles birds and mammals |
| Year 6 | Animals including humans | Describe the main features of each invertebrate group: worms. snails/slugs spiders insects and others |
| Year 6 | Electricity | Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit |
| Year 6 | Electricity | 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 switches |
| Year 6 | Electricity | Use recognised symbols when representing a simple circuit in a diagram and build the circuit shown |
| Year 6 | Evolution and inheritance | Recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago |
| Year 6 | Evolution and inheritance | describe how variations between individuals of the same species occur and understand that these changes can be passed down |
| Year 6 | Evolution and inheritance | Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution |
| Year 6 | Evolution and inheritance | Explain how fossils provide evidence for evolution |
| Year 6 | Light | Recognise that light appears to travel in straight lines |
| Year 6 | Light | Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye |
| Year 6 | Light | Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes |
| Year 6 | Light | Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them |
| Year 6 | Light | I can investigate the phenomenon of light using rainbows refraction and coloured filters |
| Year 6 | Working scientifically | Planning different types of scientific enquiries to answer questions including recognising and controlling variables where necessary |
| Year 6 | Working scientifically | Taking measurements using a range of scientific equipment with increasing accuracy and precision taking repeat readings when appropriate |
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