

**Ickford School Science Map
Resources – Curriculum Maestro**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KS1	Working Scientifically Ask simple questions and recognising that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.					
Classes 1 & 2	<p>Habitats Identify and name a variety of common animals that are carnivores, herbivores and omnivores. 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.</p>	<p>Everyday Materials 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.</p>	<p>Ourselves and Other Animals Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Notice that animals, including humans, have offspring which grow into adults</p>	<p>Seasonal Changes Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p>	<p>Keeping Fit and Healthy 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.</p>	<p>Plants Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees. Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>
LKS2	Working Scientifically					

	<p>Ask relevant questions and using different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Identify differences, similarities or changes related to simple scientific ideas and processes. Use straightforward scientific evidence to answer questions or to support their findings.</p>					
<p>Class 3</p>	<p>Materials Changing Observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius, building on teaching in mathematics.</p>	<p>Keeping Fit and Healthy Identify the different types of teeth in humans and their simple functions. Comparison of animal teeth: carnivores/herbivores.</p>	<p>Scientific Enquiry Conducting investigations which include: Making predictions and drawing conclusions. Emphasis on correct use of scientific equipment to make observations and ensure fair testing. Experiments include: Dancing raisins, egg float, magnets and forces.</p>	<p>Forces and Movement Notice that some forces need contact between two objects and some act at a distance. Compare how things move on different surfaces. Observe how magnets attract/repel each other and attract some materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing. Compare and group a variety of materials on the basis of whether they are attracted to a magnet. Identify some magnetic materials.</p>	<p>Plants Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Identify how plants resemble their parents in many features. Explore the requirements for plants for life and growth (air, light, water, nutrients, and room to grow) and how these vary between plants.</p>	<p>Electricity Identify common appliances that run on electricity. Electrical safety at home/school. Construct a simple series electrical circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Identify and name the basic parts of an electrical circuit, including wires, cells, bulbs and buzzers. Use recognised symbols when representing a circuit in a diagram.</p>
<p>UKS2</p>	<p style="text-align: center;">Working Scientifically</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in</p>					

results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments

Class 4

Keeping Fit and Healthy

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.

Describe ways in which nutrients and water are transported within animals, including humans.

Describe the simple functions of the basic parts of the digestive system in humans.

Materials Changing

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

Compare and group materials together, according to whether they are solids, liquids or gases.

Electricity

Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a circuit. Identify whether or not a lamp will light in a circuit based on whether or not the lamp is part of a complete loop with a battery. Identify and name the basic parts of an electrical circuit, including wires, cells, bulbs, switches and buzzers. Associate the brightness of a lamp or the loudness of a buzzer with the number of voltage cells used in a circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and

Forces and Movement

Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. Describe, in terms of drag forces, why moving objects that are not driven tend to slow down

Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs.

Explain that unsupported objects fall towards Earth because of the gravity acting between the Earth and the object.

Plants

Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Describe the life process of reproduction in some plants.

Investigate the way in which water is transported within plants.

Properties of Materials

Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (thermal and electrical) and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

			the on/off position of switches.			
Class 5	<p>Microorganisms Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms.</p> <p>Healthy Body and Mind Recognise the impact of diet, exercise, drugs and lifestyle on the way our bodies function.</p>	<p>Sound Sound proofing enquiry. <i>Enquiry linked to design technology with children designing sound proofing for a house or ear protectors.</i></p> <p>Properties 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, oxidisation, and the action of acid on bicarbonate of soda.</p>	<p>Evolution and Inheritance Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Describe the life process of reproduction in some animals. Describe the changes as humans develop from birth to old age. Describe how adaptation leads to evolution.</p> <p>Classification Genetics and inheritance, including DNA. Describe the life cycles common to a variety of animals, including humans (birth, growth, development, reproduction, death).</p>	<p>Earth, Moon and Space Describe the movement of the Earth relative to the Sun in the solar system. Describe the movement of the moon relative to the Earth. Describe the sun, moon and earth as approximately spherical bodies. Use the idea of the earth's rotation to explain day and night.</p> <p>Circulatory System Identify and name the main parts of the human circulatory system and explain the functions of the heart, blood vessels, and blood (including pulse and clotting).</p>	<p>Plants Describe the life cycles common to a variety of plants (birth, reproduction and death). Photosynthesis.</p>	<p>Electrical Circuits Investigation of electrical circuits and components – hot wire project.</p>



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