

Leigh Academy Molehill - Science Curriculum Map

	Who we are	How we express ourselves	Where we are in place and time	Sharing the planet	How the world works	How we organise ourselves
Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Animals including humans</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds, mammals) Identify, name, draw and label the basic parts of the human body and say which part is associated with each sense</p> <p>Identify and name a variety of common animals, including fish, amphibians, reptiles, birds, mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p>	<p>Seasonal changes, weather, minibeasts, microhabitats</p> <p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies</p>	<p>Everyday materials</p> <p>Distinguish between an object and the material from which it is made</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock</p> <p>Describe the simple physical properties of a variety of everyday materials</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties</p>	<p>Animals including humans Seasonal changes, weather</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds, mammals) Identify, name, draw and label the basic parts of the human body and say which part is associated with each sense</p> <p>Identify and name a variety of common animals, including fish, amphibians, reptiles, birds, mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p>	<p>Plants</p> <p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>Independent focus Seasonal changes, weather</p> <p>Investigations Focus on developing SC1 skills:</p> <p>Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions.</p>
Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Animals including humans</p> <p>Notice that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (for water, food and air)</p> <p>Describe the importance of exercise, eating the right amounts of different food types and hygiene for humans</p>	<p>Living things and their habitats</p> <p>Explore and compare differences between things that are living, dead and things that have never been alive</p> <p>Identify that most living things live in habitats to which they are suited and how habitats provide for their basic needs</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats</p> <p>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>Materials</p> <p>Identify and compare the suitability of a variety of everyday materials for particular uses</p> <p>Find out how the shapes of solid objects made from some materials can be changed</p>	<p>Animals including humans</p> <p>Notice that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (for water, food and air)</p> <p>Describe the importance of exercise, eating the right amounts of different food types and hygiene for humans</p>	<p>Plants</p> <p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>Independent focus</p> <p>Focus on SC1 investigations. Focus on developing SC1 skills:</p> <p>Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions.</p>

KS1 Working Scientifically	Ongoing					
	Plan	Do	Record		Review	
	Ask simple questions and recognise that they can be answered in different ways	Observe closely, using simple equipment Perform simple tests Identify and classify	Gather and record data to help in answering questions		Use their observations and ideas to suggest answers to questions	
Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Animals including humans	Light	Rocks	Plants	Forces and Magnets	Independent Focus
	Identify that animals, including humans, need the right types and amounts of nutrition Identify that humans and some other animals have skeletons and muscles for support, protection and movement	Recognise that they need light in order to see things and that dark is the absence of light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect their eyes Recognise that shadows are formed when the light from a light source is blocked by an opaque object Find patterns in the way that the size of shadows change	Compare and group together different kinds of rocks on their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter	Identify and describe the functions of different parts of flowering plants Explore the requirements of plants for life and growth and how they vary from plant to plant Investigate the way in which water is transported within plants Explore the part that flowers play in the life cycle of flowering plants	Compare how things move on different surfaces Notice that some forces need contact between 2 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 magnets Describe magnets as having 2 poles Predict whether 2 magnets will attract or repel each other, depending on which poles are facing	Focus on SC1 investigations. Focus on developing SC1 skills as below
Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	States of Matter	Sound	Animals including humans	Electricity	Living things and their habitats	Independent Focus
	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 research the temperature this happens) Identify the part played by evaporation and condensation in the water cycle	Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the pitch of a sound and features of the object that produced it Find patterns between the volume of a sound and the strength of the vibrations that produced it Recognise that sounds get fainter as the distance from the sound source increases	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	Identify common appliances which run on electricity Construct a simple series circuit, identifying and naming its basic parts Identify whether or not a lamp will light in a simple series circuit, based on whether it is part of a complete loop Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights Recognise some common conductors and insulators, and associate metals with being good conductors	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 Recognise that environments can change and that this can sometimes pose dangers to living things	Focus on SC1 investigations. Focus on developing SC1 skills as below
LSK2 Working Scientifically	Ongoing					
	Plan	Do	Record		Review	
	Ask relevant questions and use 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, take accurate measurements using standard units, Use 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, 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.	

	How the world works	Sharing the planet	Who we are	Where we are in place and times	How we express ourselves	How we organise ourselves
Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Properties and changes of materials	Forces	Living things	Animals including humans	Earth and space	Independent Focus
	<p>Compare and group materials together, on the basis of their properties</p> <p>Know that some materials will dissolve in liquid to form a solution and how to recover a substance from a solution</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>Explain that some changes result in the formation of new materials and that this is not usually reversible</p>	<p>Explain that unsupported objects fall towards the Earth because of gravity acting the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals</p>	<p>Describe the changes as humans develop to old age. Look at the development of the fetus, baby, young child, adolescent, adult and old age.</p> <p>Think about how we can tailor our lifestyle to help us elongate our lives.</p>	<p>Describe the movement of the Earth and other planets relative to the Sun in the solar system</p> <p>Describe the Sun, Earth and moon as approximately spherical bodies</p> <p>Describe the movement of the moon relative to the Earth Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky</p>	<p>Focus on SC1 investigations. Focus on developing SC1 skills as below</p>
Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Living things and their habitats	Electricity	Evolution and inheritance	Light	Animals including humans	Animals including humans
	<p>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</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</p> <p>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</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>	<p>Recognise that light appears to travel in straight lines</p> <p>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</p> <p>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</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>	<p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p>
USK2 Working Scientifically	Ongoing					
	Plan	Do	Record		Review	
	<p>Plan different types of scientific enquiries to answer questions, including recognise and control variables where necessary</p>	<p>Take measurements, use a range of scientific equipment, with increasing accuracy and precision.</p> <p>Take repeat readings when appropriate</p>	<p>Record data and results of increasing complexity use scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p>		<p>Use test results to make predictions to set up more comparative and fair tests</p> <p>Report and present 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</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments</p>	