

Little Houghton CEVA Primary School

Progression Map

Subject area: Science

	EYFS	KS1	LKS2	UKS2
To work Scientifically	<ul style="list-style-type: none"> • Observing changes over time. • Making simple observations and identify what are important, including asking simple questions. • Identify and discuss what has been observed. 	<ul style="list-style-type: none"> • Ask simple questions • Know how to use simple equipment • Know how to observe closely • Understand how to perform simple tests • Know how to identify and classify • Use observations and ideas to suggest answers to questions • Know how to gather and record data to help answer questions 	<ul style="list-style-type: none"> • Ask relevant questions • To know how to set up simple practical enquiries and comparative and fair tests • To know how to make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. • To know how to 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, bar charts and tables. • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. • Know how to use results • To draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. • Knows how to identify differences, similarities or 	<ul style="list-style-type: none"> • Plan enquiries, including recognising and controlling variables where necessary. • Knows how to use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. • Knows how to take measurements, using a range of scientific equipment, with increasing accuracy and precision. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models. • Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. • Present findings in written form, displays and other presentations. • Use test results to make predictions to set up further comparative and fair tests. • Know how to use simple models to describe scientific ideas, identifying scientific evidence that has been

			<p>changes related to simple, scientific ideas and processes.</p> <ul style="list-style-type: none"> • Understands how to use straightforward, scientific evidence to answer questions or to support their findings 	<p>used to support or refute ideas or arguments.</p>
<p>Animals Including humans (Incl. Y6 Evolution and Inheritance)</p>	<p>EYFS</p> <ul style="list-style-type: none"> • To know that some animals are nocturnal. • To know that some animals hibernate. • Identify and sort the different types of animals (Farm, Woodland, Wild, Sea, Pets). 	<p>KS1</p> <ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • Identify and name a variety of common animals that are 	<p>LKS2</p> <ul style="list-style-type: none"> • Construct and interpret a variety of food chains, identifying producers, predators and prey • Identify that humans and some other animals have skeletons and muscles for support, protection and movement 	<p>UKS2</p> <ul style="list-style-type: none"> • Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • Describe the ways in which nutrients and water are transported within animals, including humans

	<ul style="list-style-type: none"> • To identify and name basic human body parts. • To understand the different senses of a human. 	<p>carnivores, herbivores and omnivores</p> <ul style="list-style-type: none"> • 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) • 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 • Notice that animals, including humans, have offspring which grow into adults • To 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 	<ul style="list-style-type: none"> • 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 • 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 • 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 in simple terms how fossils are formed when things that have lived are trapped within rock 	<ul style="list-style-type: none"> • Describe the changes as humans develop to old age • Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • 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 • Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
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		different types of food, and hygiene		
Plants	<ul style="list-style-type: none"> To learn about the life cycle of plants. To observe the growth of seeds and observe changes. To know what a seed needs to grow (Water, Soil, Sunlight). 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Investigate the way in which water is transported within plants Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal 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 	<ul style="list-style-type: none"> Describe the life process of reproduction in some plants and animals
Living things and their habitats	<ul style="list-style-type: none"> Name the parts of a plant (Roots, Leaves, Stem, Petal, Flower). To know how to care for growing plants. 	<ul style="list-style-type: none"> 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, 	<ul style="list-style-type: none"> Recognise that environments can change and that this can sometimes pose dangers to living things Construct and interpret a variety of food chains, identifying producers, predators and prey 	<ul style="list-style-type: none"> 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

	<ul style="list-style-type: none"> To understand that animals have different types of habitats. 	<p>and how they depend on each other</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 animals Give reasons for classifying plants and animals based on specific characteristics
<p>Materials: - Everyday materials (Y1), - Uses of everyday materials (Y2), - Rocks (y3), - States of matter (y4), - Properties & changes of materials (Y5)</p>	<ul style="list-style-type: none"> To identify and sort everyday materials. (Recycling Plastic, Cardboard, Metal). To know that some things are man-made and some things are natural. To explore and talk about everyday materials (Squashy, Hard, Soft, Bendy). 	<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 Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses 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 	<ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Compare and group materials together, according to whether they are solids, liquids or gases Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 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"> Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic 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 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 Demonstrate that dissolving, mixing and changes of state are reversible changes Know that some materials will dissolve in liquid to form a

		<ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 		<p>solution, and describe how to recover a substance from a solution</p> <ul style="list-style-type: none"> Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
Forces and magnets (YR, Y3) Forces (Y5)			<ul style="list-style-type: none"> 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 attracts 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 having 2 poles Predict whether 2 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 resistances and friction, that act between moving surfaces Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a great effect

<p>Electricity (Y4 and Y6)</p>			<ul style="list-style-type: none"> • Identify common appliances that run on electricity. • 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 a series circuit based on whether or not the lamp is part of a complete loop with a battery • Recognise some common conductors and insulators, and associate metals with being good conductors 	<ul style="list-style-type: none"> • Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit • Compare and give reasons for the variations in how components function, including the brightness of buzzers and the on/off position of switches • Use recognised symbols when representing a simple circuit in a diagram
<p>Light (Y3 and Y6)</p>			<ul style="list-style-type: none"> • 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 • Recognised 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 	<ul style="list-style-type: none"> • Recognise that light appears to travel in straight lines • 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 • 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 • Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

Sound (Y4)			<ul style="list-style-type: none"> • Identify how sounds are made, associating them with something vibrating • Recognise that vibrations from sound travels through a medium to the ear • Find patterns between the pitch of a sound and features of the object that produced it • Recognise that sounds get fainter as the distance from the sound source increases 	
Seasonal changes (Y1) Earth and Space (Y5)	<ul style="list-style-type: none"> • To understand the effect of changing seasons on the natural world. • To identify signs of the changing seasons. 	<ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how the day length varies 		<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 spherical bodies • Use the idea of the Earths rotation to explain day and night and the apparent movement of the sun across the sky