










Science Curriculum Map – YEAR A

	Autumn		Spring		Summer	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	<p><u>Human Body and Senses</u></p> <ul style="list-style-type: none"> Identifying/Naming body parts Identify which body part is associated with which sense Talk about how senses help us Experiment with different sense though sensory boxes, tasting, listening walks and games. <p><u>Seasonal Changes</u></p> <ul style="list-style-type: none"> Autumn and Weather <p><u>Materials</u></p> <ul style="list-style-type: none"> Test materials (STEM Challenges – Incy wincy / humpty dumpty) 	<p><u>Forest</u></p> <ul style="list-style-type: none"> Discuss animals that live in a woodland <ul style="list-style-type: none"> Nocturnal and diurnal animals inducing features and habitats (<i>Recall/compare to farm animals T1</i>) <p><u>Seasonal Changes</u></p> <ul style="list-style-type: none"> Autumn and Weather What's the same/different? <p><u>Shadows</u></p> <ul style="list-style-type: none"> Understand how shadows are formed Exploring shadow changes Understand different sources of light, how they can be used. <p>Use knowledge of senses to find out how these are affected by light and dark (<i>Recall senses T1</i>)</p>	<p><u>Materials</u></p> <ul style="list-style-type: none"> Begin to understand properties and name some materials through experiments (<i>Recall building houses with different materials T1</i>) Explore and predict how different items <i>sink and float</i> and why this may be Explore how things move on different surfaces <ul style="list-style-type: none"> Use language for force Look at how materials can change – ice melts, cake goes hard, paper burns <ul style="list-style-type: none"> Ice balloons Magnets <p>Recycling – talk about why we recycle, how we recycle in school</p>	<p><u>Animals and habitats</u></p> <ul style="list-style-type: none"> Identify and name a variety of animals (<i>Recall animals learned during T1 and 2</i>) Can talk about jungle animals (<i>STEM - science</i>) How are they made for the jungle/rainforest? Understand different animals live in different habitats and how their habitat helps them survive (<i>Recall animals learned in T1/ 2</i>) Compare habitats of animals in local area and jungles (<i>Recall habitats and local environment from T1, 2 and 3</i>) Compare Ilchester to Jungles: similarities/differences 	<p><u>Arctic</u></p> <ul style="list-style-type: none"> Describe animals that live in Arctic regions. How are they adapted? Revisit materials – what materials would we need if we were travelling to an Arctic environment? (<i>Recall materials from T3</i>) Make choices linked to their properties – which is the best material for teddy's outfit to the arctic? (<i>Recall predicting from T3</i>) Looking after our World, Plastic/litter etc. 	<p><u>Life Cycles</u></p> <ul style="list-style-type: none"> Understand how humans, plants and animals change as they grow (<i>Link to History; recall T1 – how have they changed since starting school?</i>) Sequence life cycles of either humans, animals and plants (<i>Recall history time language for past/present/future</i>) Observe caterpillars growing & discuss changes over time. Talk about the environment we need – why do we have flowers around school? Ladybird lifecycle / Stick insects / Butterflies / chicks? <p><u>Plants</u></p> <ul style="list-style-type: none"> Identify and describe the basic structure of flowers (<i>Recall plants from T2 (daffodil bulbs; T3 daffodils and tulips; other plants during forest school)</i>) Planting seeds and taking care Explain what plants need to grow (<i>Recall from planting bulbs during forest school</i>)

<p>Year 1</p>	<p style="text-align: center;">Energy and Forces</p>  <p style="text-align: center;">(Non Statutory) Electricity & Light</p> <ul style="list-style-type: none"> Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes. Identify common appliances that run on electricity. Construct a simple series electrical circuit. To be aware of electrical safety. (Age appropriate – eg not putting things in sockets, not touching plugs with wet hands, etc.) 	<p style="text-align: center;">Animals</p>  <p>Animals, including humans (Y1)</p> <ul style="list-style-type: none"> 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) 	<p style="text-align: center;">Materials and Matter</p>  <p>Properties of everyday materials (Y1)</p> <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 	<p style="text-align: center;">The Human Body</p>  <p>Animals, including humans (Y1)</p> <ul style="list-style-type: none"> identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<p style="text-align: center;">Plants</p>  <p>Plants (Y1)</p> <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. 	<p style="text-align: center;">Animals</p>  <p>Animals, including humans (Y1)</p> <ul style="list-style-type: none"> identify and name a variety of common animals that are carnivores, herbivores and omnivores
<p>Year 2</p>	<p>Animals, including humans (Y2)</p> <ul style="list-style-type: none"> find out about and describe the basic needs of animals, including humans, for survival (water, food and air) <p>Living things and their habitats (Y2)</p> <ul style="list-style-type: none"> 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 micro-habitats 	<p>Animals, including humans (Y2)</p> <ul style="list-style-type: none"> find out about and describe the basic needs of animals, including humans, for survival (water, food and air) <p>Living things and their habitats (Y2)</p> <ul style="list-style-type: none"> 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 micro-habitats 	<p>Uses of everyday materials (Y2)</p> <ul style="list-style-type: none"> 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>Animals, including humans (Y2)</p> <ul style="list-style-type: none"> describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene. <p>Living things and their habitats (Y2)</p> <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, and how they depend on each other 	<p>Plants (Y2)</p> <ul style="list-style-type: none"> 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>Animals, including humans (Y2)</p> <ul style="list-style-type: none"> notice that animals, including humans, have offspring which grow into adults Living things and their habitats (Y2) 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>Seasonal changes taught with both Y1 and Y2 1 session each half term to observe changes over time</p> <p>Seasonal changes (Y1)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies 				<p style="text-align: center;">Earth and Space</p> 		

Year 3 & Year 4

All LKS2 cover these objectives

Energy and Forces



Light

- 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 a solid object
- find patterns in the way that the size of shadows change.

Electricity

- 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 in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit

Animals



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

Animals, including humans

- construct and interpret a variety of food chains, identifying producers, predators and prey

Living things and their habitats

- recognise that living things can be grouped in a variety of ways

Materials and Matter



States of matter

- 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)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

Electricity

- recognise some common conductors and insulators, and associate metals with being good conductors

The Human Body



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

Animals, including humans

- 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.

Plants



Plants

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- 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
- 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.

Earth and Space



Rocks

- compare and group together different kinds of rocks on the basis of 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.
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Year 5 & Year 6

All UKS2 cover these objectives

Energy and Forces



Forces

- 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

Light

- 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.

Earth and Space



Earth and Space

- 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 that apparent movement of the sun across the sky.

Animals



Living things and their habitats

- 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

Living things and their habitats

- 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

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
- recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
- identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

Materials and Matter



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
- 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.

The Human Body



Animals, including humans

- describe the changes as humans develop to old age

Animals, including humans

- recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function

Plants



Living things and their habitats

- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
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Science Curriculum Map – YEAR A

WORKING SCIENTIFICALLY

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	PLAN	DO		REVIEW	
	Planning	Observing / obtaining evidence	Recording	Concluding	Evaluating
KS1 Year 1 and 2	<ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways 	<ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying 	<ul style="list-style-type: none"> gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> using their observations and ideas to suggest answers to questions 	
Lower KS2 Year 3 and 4	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests 	<ul style="list-style-type: none"> making systematic and careful observations and where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers 	<ul style="list-style-type: none"> gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 	<ul style="list-style-type: none"> reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions identifying differences, similarities or changes related to simple scientific ideas and processes Using straightforward scientific evidence to answer questions or to support their findings 	<ul style="list-style-type: none"> using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Upper KS2 Year 5 and 6	<ul style="list-style-type: none"> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary 	<ul style="list-style-type: none"> taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate 	<ul style="list-style-type: none"> recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs 	<ul style="list-style-type: none"> reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. 	<ul style="list-style-type: none"> using test results to make predictions to set up further comparative and fair tests. identifying scientific evidence that has been used to support or refute ideas or arguments