

EYFS Framework				
Personal, Social and Emotional Development				
ELG: Speaking Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.				
ELG: Managing Self Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.				
Understanding the World				
ELG: People, Culture and Communities Describe the immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps				
ELG: The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter				

KS1 National Curriculum Strands					
KS1 Working Scientifically <ul style="list-style-type: none"> 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. 	Year 1		Year 1		
	Biology		Chemistry	Physics	
	Animals, including Humans	Plants	Everyday materials	Seasonal Change	
	Year 2		Year 2		
	Biology		Chemistry		
	Animals, including Humans	All living things and their habitats	Plants	Everyday materials	

Lower KS2 National Curriculum Strands					
Lower KS2 Working Scientifically <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 Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers 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 Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identifying differences, similarities or changes related to simple scientific ideas and processes Using straightforward scientific evidence to answer questions or to support their findings. 	Year 3		Year 3		
	Biology		Chemistry	Physics	
	Animals, including Humans	Plants	Rocks	Forces	Light
	Year 4		Year 4		
	Biology		Chemistry	Physics	
Animals, including Humans	All Living things and their habitats		States of Matter	Electricity	Sound

Upper KS2 National Curriculum Strands						
Upper KS2 Working Scientifically <ul style="list-style-type: none"> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests 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 identifying scientific evidence that has been used to support or refute ideas or arguments. 	Year 5		Year 5			
	Biology		Chemistry	Physics		
	Animals, including Humans	All Living things and their habitats		Properties and Changes in Materials	Forces	Earth in Space
	Year 6		Year 6			
	Biology		Physics			
Animals, including Humans: Circulatory System	All Living things and their habitats	Evolution and Inheritance	Electricity (Circuits)	Light		

Year 1 2020-21

KS1 End Points (NC)	Term	Autumn		Spring		Summer 1
	½ Term Coverage	Autumn 1 (Week 4 and 5)	Autumn 2 (Week 6 and 7)	Spring 1 (Week 3 & 4)	Autumn 1 (Week 4 and 5)	Autumn 2 (Week 6 and 7)
	Topic	Seasons (Part one)	Materials	Animals, including humans	Plants	Seasons (continued)
<ul style="list-style-type: none"> Has experienced and observed phenomena, having looked more closely at the natural and humanly-constructed world around them. Shows curiosity, asking questions about what they have noticed. Has developed understanding of scientific ideas through the use of different types of scientific enquiry to answer own questions, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information. Is beginning to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. 	Key Knowledge	<ul style="list-style-type: none"> Knows when each of the four seasons occurs Knows what the features of autumn are and what happens to trees in this season Knows that days are longer in summer (sunshine hours) than in winter Observe changes across the four seasons 	<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made Can 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 Knows why and how the properties of materials make them particularly useful for specific purposes (for example, stone is a hard, heavy and durable material so is useful for construction of buildings). Know how the properties of a material can make it useful for a range of different purposes (for example, plastic is waterproof so it can be used to coat fabric for clothing but can also be used for outdoor play equipment) knows that different materials can share the same properties (for example glass and plastic can both be transparent). 	<ul style="list-style-type: none"> Knows and can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals e.g. cat, robin, adder, frog, salmon. Knows and can identify and name a variety of common animals that are carnivores, herbivores and omnivores. Can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<ul style="list-style-type: none"> Knows and can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Knows and can identify and describe the basic structure of a variety of common flowering plants, including trees. 	<ul style="list-style-type: none"> Knows about and can describe weather in different seasons over a year. Knows and can describe the features of different seasons and how they change through the year
	Cross Curricular Links	Maths: Creation of a pictogram Art: Create seasonal artwork	<ul style="list-style-type: none"> D&T: Children attempt to create a waterproof roof for a lego model 	<ul style="list-style-type: none"> P.E. investigate the effects of exercise on the human body. Art – Animal sculptures Maths – non-standard measurements of parts of the body. 	<ul style="list-style-type: none"> Literacy: Writing instructions for how to plant a seed. Art: Create a plant collage and label with key vocabulary. 	<ul style="list-style-type: none"> Maths: Handling (weather) Data Art: Seasonal Artwork
	Key Skills	<ul style="list-style-type: none"> Gather and record data about weather conditions in autumn, drawing on observation and using simple equipment (such as a container to measure rainfall) *.* Use data to create a pictogram and use this to describe changes in day length over the seasons. Use their evidence to describe some other features of the weather, surroundings, themselves, animals, and plants found in autumn. Demonstrate their knowledge in different ways e.g. creating seasonal artwork, creating a pictogram (and use this to ask and answer related questions) 	<ul style="list-style-type: none"> Compare and group together a variety of everyday materials on the basis of their simple physical properties. Classify objects made of one material in different ways e.g. a group of objects made of metal. Classify one type of object made from a range of materials e.g. a collection of spoons made of different materials. Chosen an appropriate method for testing an object for a particular property. Use their test evidence to answer the questions about properties e.g. Which cloth is the most absorbent? Test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters. 	<p>Compromised content:</p> <ul style="list-style-type: none"> Make first hand close observations of animals from each of the groups (city farm) Take measurements of parts of the body and present results in a table to interpret. Compare the structure of two animals from the same or different group e.g. wings, feathers, vertebrates/ invertebrates. Classify animals using a range of features e.g. lay eggs/give birth to live young. Herbivore, omnivore (these terms do not have to be explicitly taught). Identify animals by matching statements to named images. Conduct simple sense experiments. Which part of my body is good for feeling, which is not? Which food/flavours can I identify by taste? Which smells can I match? 	<ul style="list-style-type: none"> Can sort and group parts of plants using similarities and differences e.g. the shape of leaves, the colour of the flower/blossom. Can use simple charts and Venn diagrams etc. to identify and classify plants. <p>Compromised content:</p> <ul style="list-style-type: none"> Use photographs and their own observations to talk about how plants change over time (e.g. seed to sapling to tree) and over the year (deciduous and fruit bearing trees).* Plant seeds and observe how they grow and change by making simple observations.* Make close observations of plants, including trees – leaves, seeds, flowers etc. Point to and name the parts of a plant, recognising that they are not always the same e.g. leaves and stems may not be green, the leaves are different shapes. 	<ul style="list-style-type: none"> Collect information about the weather regularly throughout the year** Present this information in tables and charts to compare the weather across the seasons Collect information, regularly throughout the year, of features that change with the seasons e.g. plants, animals, humans Present this information in different ways to compare the seasons** Gather data about day length regularly throughout the year and present this to compare the seasons Use gathered evidence to describe the general types of weather and changes in day length over the seasons.** Use evidence to describe some other features of their surroundings, themselves, animals, plants that change over the seasons** Demonstrate knowledge in different ways e.g. creating seasonal artwork
School Context						
	<ul style="list-style-type: none"> Children will learn about seasonal change in the school grounds (including roof garden and edible playground) and local area. 	<ul style="list-style-type: none"> Identify the materials key local buildings are made from and discuss why those materials have been used. 	<ul style="list-style-type: none"> Senses discussed and explored within school. What do we see, hear, touch, smell and taste every day? Local area – animals at Spitalfields city farm. 	<ul style="list-style-type: none"> Planting seeds using the outdoor classroom resources. Tour and discussion of the edible garden at school. 	<ul style="list-style-type: none"> Children visit the same areas in the school grounds and locality from Autumn term to draw comparison. 	

KS1 End Points	Term	Autumn		Spring	Summer	
	Half Term Coverage	Autumn 1 (Week 2 & 3)	Autumn 1 (Week 4)	Spring 1 (Week 2 & 3)	Summer 1 (Week 1, 2 and 3)	Summer 2 (Week 1 & 2)
<ul style="list-style-type: none"> Has experienced and observed phenomena, having looked more closely at the natural and humanly-constructed world around them. Shows curiosity, asking questions about what they have noticed. Has developed understanding of scientific ideas through the use of different types of scientific enquiry to answer own questions, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information. Is beginning to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. 	Topic	Animals (including humans); adults and offspring	Animals (including humans), basic needs for survival	Use of everyday materials	Living Things and their habitats	Plants
	Key Knowledge	<ul style="list-style-type: none"> Can describe how animals including humans have offspring which grow into adults, using the appropriate names for the stages Knows that to survive animals need sunlight, water, air, food and a suitable habitat (including shelter for protection from predators and the environment). 	<ul style="list-style-type: none"> Knows that exercise is important to humans and can explain why. Knows the different food groups and the benefits of each as part of a healthy, balanced diet Knows which food groups common foods belong to. Knows about general hygiene and its importance and can state examples of hygienic practice. 	<ul style="list-style-type: none"> Knows and can explain why some materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard are particularly suited to specific purposes Knows how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching Knows the difference between materials that are transparent, translucent and opaque. 	<ul style="list-style-type: none"> Knows and can explain the differences between things that are living, dead, and things that have never been alive Knows that most living things live in habitats to which they are suited Knows and can describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Knows and can name a variety of plants and animals in their habitats, including micro-habitats Knows and can describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and make the different sources of food. 	<ul style="list-style-type: none"> Knows that plants may grow from either seeds or bulbs. knows that seeds and bulbs can germinate and then grow into seedlings and then continue to grow into mature plants. Knows that mature plants may have flowers which then develop into seeds, berries and fruits etc. knows that seeds and bulbs need to be planted at particular times of the year and will germinate and grow at different rates. knows that some plants are better suited to growing in full sun and some grow better in partial and full shade. Knows that plants need water, light and a suitable temperature to grow and stay healthy
	Cross Curricular Links	<ul style="list-style-type: none"> Literacy: Refer back to Y1 text; The Hungry Caterpillar 	<ul style="list-style-type: none"> PE: investigation into the effects of physical exercise Literacy: Creation of pet owner's guide. 			
KS1 Skills End Points (Working scientifically): <ul style="list-style-type: none"> Asks simple questions and recognises that they can be answered in different ways. Observes closely, using simple equipment. Performs simple tests. Can identify and classify. Uses their observations and ideas to suggest answers to questions. Gathers and records data to help in answering questions. 	Key Skills	<ul style="list-style-type: none"> Ask questions and use secondary sources to find out about the life cycles of some animals Observe animals growing over a period of time e.g. chicks, caterpillars, a baby Ask questions of a parent about how they look after their baby Ask pet owners questions about how they look after their pet 	<p>Recovery content: Children will not have taken body measurements prior to this unit, and may need support to measure and observe growth, as well as to present results in a table.</p> <ul style="list-style-type: none"> Investigate the effect of exercise on their bodies Classify food in a range of ways, including using the Eatwell guide Investigate washing hands, using glitter gel Describe, using diagrams, the life cycle of some animals, including humans, and their growth to adults e.g. by creating a life cycle book for a younger child Measure/observe how animals, including humans, grow. Collate what they know about looking after a baby/animal by creating a parenting/pet owners' guide Explain how development and health might be affected by differing conditions and needs being met/not met 	<ul style="list-style-type: none"> Classify and sort materials by their properties e.g. manmade, natural Investigate and observe what happens to different materials during testing and use this to inform explanation of their properties Investigate which materials are fit for a purpose e.g. What is the best material for an umbrella? Explain from their observations how materials change when a force is exerted on them by squashing, bending, twisting and stretching. Investigate the transparency of objects, recording class data in a table and drawing simple conclusions from the findings. Ask and answer questions about everyday materials 	<ul style="list-style-type: none"> Explore the outside environment regularly to find objects that are living, dead and have never lived Classify objects found in the local environment Observe animals and plants carefully, drawing and labelling diagrams Create simple food chains for a familiar local habitat from first hand observation and research Create simple food chains from information given e.g. in picture books (Gruffalo etc.) Can sort into living, dead and never lived Can give key features that mean the animal or plant is suited to its micro-habitat Using a food chain can explain what animals eat Can explain in simple terms why an animal or plant is suited to a habitat 	<p>Recovery content:</p> <ul style="list-style-type: none"> Children will need to observe how the plants change over time, including considering how they may change over a year. There will need to be an element of recording findings in an appropriate chart or table. Make close observations of seeds and bulbs Classify seeds and bulbs Research and plan when and how to plant a range of seeds and bulbs Look after the plants as they grow – weeding, thinning, watering etc. Make close observations and measurements of their plants growing from seeds and bulbs Make comparisons between plants as they grow Can spot similarities and difference between bulbs and seeds
		School Context				
	<ul style="list-style-type: none"> Use animals in school; chicks in EYFS if available, if not, children to metamorphosis of caterpillar to butterfly in own classroom. Interview community members (parents, family members) about looking after a baby and/or a pet 	<ul style="list-style-type: none"> Refer to school dinner menu; each day provides from each food group 	<ul style="list-style-type: none"> Children to compare the uses of everyday materials in and around the school with materials found in other places 	<ul style="list-style-type: none"> Exotic animal visit to school Woodberry Wetlands Walk/Link to Environment Day 	<ul style="list-style-type: none"> Children observe plants and the conditions they are growing in around the school grounds, including in the edible playground and rooftop garden. Children plant tulip bulbs in raised bed on roof. 	