Science
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	0 – 3 Preschool	3 – 4 EYFS 1	Reception EYFS 2	Links to KS1 Curriculum
EYFS area of Learning	Understanding the World: The Natural World			
Fundamental Knowledge	Repeat actions that have an effect whilst exploring materials inside and outside with different properties. Explore and respond to different natural phenomena in their setting or on trips.	Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Explore how things work. Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel. Talk about the differences between materials and changes they notice.	Explore the natural world around them and describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them.	Ask simple questions and recognising that they can be answered in different ways. Use their observations and ideas to suggest answers to questions. Observing closely, using simple equipment. Performing simple tests. Identifying and classifying. Gathering and recording data to help in answering questions.
Early Learning Goal	Explore the 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 know 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.			

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	Autumn 1 (1.1)	Autumn 2 (1.2)	Spring 1 (1.3)	Spring 2 (1.4)	Summer 1 (1.5)	Summer 2 (1.6)
Year 1	**What can my amazing body do?**	**Animals Inc Humans**	**Materials and their Properties**	**Plants**	**Plants**	**Seasonal Changes**
Fundamental Knowledge	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 carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).		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 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.	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 changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies.
Interleaved Links	In EYFS, children begin by exploring the world around them. They describe what they see, hear and feel outside. In 2.1, children will notice that animals, including humans, have offspring. They will also look deeper into the basic needs of animals.		In EYFS, children start by exploring their world and observing closely. In 2.3 and 2.4, children will begin looking at the sustainability of everyday materials.	In EYFS, children begin by exploring the world around them. In 2.5, children will delve deeper into what a plant needs to grow healthily.	Building on 1.4, the children will experience growing plants from seeds. They will use their previously taught knowledge to support	In EYFS, children will gain an understand the effects of the changing seasons on the natural world around them. In 2.6, children will learn about how climate

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				them in caring for their plants.	change effects the weather around the world.
Learning Tasks	Labelled picture Investigation	Categorising, sorting and grouping investigation	Labelled picture	Growing plants	Weather diary
Cultural Capital	Art – Tiger in a Tropical Storm - Henri Rousseau	Art - Mona Lisa – Jane Perkins	Design – Honeysuckle – William Morris	Poetry – Daffodils (William Wordsworth)	Poem – Six weather Haiku – George Hunter
Entitlement Vocabulary	Mammal, herbivore, carnivore, season, deciduous, evergreen, material, sort.				

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	Autumn 1 (2.1)	Autumn 2 (2.2)	Spring 1 (2.3)	Spring 2 (2.4)	Summer 1 (2.5)	Summer 2 (2.6)
Year 2	**Animals, including Humans**	**Living Things and their Habitats**	**Materials and their Properties**		**Plants**	
Fundamental Knowledge	Notice that animals, including humans, have offspring which grow into adults. 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.	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	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.		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.	

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		animals, using the idea of a simple food chain, and identify and name different sources of food.		
Interleaved Links	In 1.1 & 1.2, the children explore the different groups that animals can be categorised into. They also learn about different body parts and identify and label them in humans and animals.	In 1.1, the children learn about the diets of animals and classify them as herbivores, carnivores and omnivores.	In 1.3, the children name, describe and compare different everyday materials.	In 1.4 & 1.5, the children learn about the structure of a plant and identify common wild plants.
Learning Tasks	Health Guide Information Text	Making a wormery and a ladybird house Investigation – comparing microhabitats Food Chain diagram	Categorising, sorting and grouping Investigation – stretch test	Growing plants from seeds Investigation – effective conditions for plant growth
Cultural Capital	Poetry – The Owl and the Pussycat (Edward Lear)	Art – Tiger in a Tropical Storm (Henri Rousseau)	Art – Mona Lisa (Jane Perkins) Poetry – Woolly Saucepan (Michael Rosen)	Poetry – Daffodils (William Wordsworth)
Entitlement Vocabulary	Habitat, seed, seed, bulb, life cycle, off-spring, food chain, property (of a material), observe.			

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	Autumn 1 (3.1)	Autumn 2 (3.2)	Spring 1 (3.3)	Spring 2 (3.4)	Summer 1 (3.5)	Summer 2 (3.6)
Year 3	**Rocks and Fossils**	**Light**	**Forces and Magnets**		**Plants**	**Animals including humans**
Fundamental Knowledge	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.	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.	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 a magnet and identify some magnetic materials. Describe magnets as having 2 poles. Predict whether 2 magnets will attract or repel each other, depending on which poles are facing.		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.	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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
Interleaved Links	In 3.1, we explore that fossils are made from plant and animal sediment		Materials can be changed by bending, stretching and squashing.		Seeds and bulbs Requirement for growth	Food chains habitats

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	which links with 3.5 and 3.6.				
Learning Tasks	Modelling formations of different rocks with starbursts. Conducting tests on rocks including density, permeability, and durability tests. Children will be identifying, and sorting rocks based on their physical properties.	Investigation	Investigation	Investigation Life cycle of a plant	Information Text
Cultural Capital	Art- L.S Lowry (going to work)				
Entitlement Vocabulary	Rocks, Stone, Pebble, Boulder, Grain, Crystals, Layers, Texture, Absorb, Marble, Chalk, Sate, Granite, Sandstone, Chemical fossil, Body fossil, Trace fossil, Cast fossil, Mould fossil, Replacement fossil, Extinct, Organic, Fossils, Soil, Igneous, Sedimentary, Metamorphic, Erosion, Mineral, Organic matter, Physical properties, Natural, Man-made, Permeability, Characteristics, Micro-organisms, Nutrients, Lava, Pedologist.				

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	Autumn 1 (4.1)	Autumn 2 (4.2)	Spring 1 (4.3)	Spring 2 (4.4)	Summer 1 (4.5)	Summer 2 (4.6)
Year 4	**Electricity**	**Living Things and their Habitats**	**States of Matter**		**Sound**	**Animals Including Humans**
Fundamental Knowledge	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. Recognise some common 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 in their local and wider environment. Recognise that environments can change and that this can sometimes pose dangers to living things.	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.		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

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	and insulators, and associate metals with being good conductors.				
Interleaved Links	Forces	Requirements of life	Rocks and Soils	Light	
Learning Tasks	Labelled circuit diagrams	Classification task	Explanation text	Investigation	Labelled diagram
Cultural Capital					
Entitlement Vocabulary	Rocks, Stone, Pebble, Boulder, Grain, Crystals, Layers, Texture, Absorb, Marble, Chalk, Sate, Granite, Sandstone, Chemical fossil, Body fossil, Trace fossil, Cast fossil, Mould fossil, Replacement fossil, Extinct, Organic, Fossils, Soil, Igneous, Sedimentary, Metamorphic, Erosion, Mineral, Organic matter, Physical properties, Natural, Man-made, Permeability, Characteristics, Micro-organisms, Nutrients, Lava, Pedologist.				

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	Autumn 1 (5.1)	Autumn 2 (5.2)	Spring 1 (5.3)	Spring 2 (5.4)	Summer 1 (5.5)	Summer 2 (5.6)
Year 5	**Earth and Space**	**Forces and Magnets**	**States of Matter**		**Life Cycles & Human Development (Puberty) Animals Inc Humans**	
Fundamental Knowledge	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 the apparent movement of the sun across the sky.	Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.	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.		Describe the changes as humans develop to old age. 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.	
Interleaved Links	Sound	Electricity	States of Matter			
Learning Tasks	Information text	Investigation	Investigation		Labelled life cycle diagram	

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Cultural Capital				
Entitlement Vocabulary	Rocks, Stone, Pebble, Boulder, Grain, Crystals, Layers, Texture, Absorb, Marble, Chalk, Sate, Granite, Sandstone, Chemical fossil, Body fossil, Trace fossil, Cast fossil, Mould fossil, Replacement fossil, Extinct, Organic, Fossils, Soil, Igneous, Sedimentary, Metamorphic, Erosion, Mineral, Organic matter, Physical properties, Natural, Man-made, Permeability, Characteristics, Micro-organisms, Nutrients, Lava, Pedologist.			

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	Autumn 1 (6.1)	Autumn 2 (6.2)	Spring 1 (6.3)	Spring 2 (6.4)	Summer 1 (6.5)	Summer 2 (6.6)
Year 6	**Living things and their habitats**	**Light**	**Animals including Humans / Circulatory System**	**Evolution and Inheritance**	**Electricity**	
Fundamental Knowledge	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. Give reasons for classifying plants and animals based on specific characteristics	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	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 Recognise the impact of diet, exercise, drugs and lifestyle on the way their body's function.	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.	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. Use recognised symbols when representing a simple circuit in a diagram. SEX ED Technical names for reproductive anatomy. Menstruation Conception	

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Interleaved Links					
Learning Tasks	Information text Classification task	Investigation	Healthy living guide	Explanation text	Investigation
Cultural Capital					
Entitlement Vocabulary	Rocks, Stone, Pebble, Boulder, Grain, Crystals, Layers, Texture, Absorb, Marble, Chalk, Sate, Granite, Sandstone, Chemical fossil, Body fossil, Trace fossil, Cast fossil, Mould fossil, Replacement fossil, Extinct, Organic, Fossils, Soil, Igneous, Sedimentary, Metamorphic, Erosion, Mineral, Organic matter, Physical properties, Natural, Man-made, Permeability, Characteristics, Micro-organisms, Nutrients, Lava, Pedologist.				