Science Curriculum Overview

<table>
<tr><th></th><th>Autumn</th><th>Spring</th><th>Summer</th></tr>
<tr><td>EYFS</td><td>Changing season - Autumn & Winter
Understand the effect of changing seasons on the natural world around them.
(Planting bulbs ready for Spring in the Reflection garden)

Spiders
Explore the natural world around them.

Describe what they see, hear and feel whilst outside.

Light/Shadows
Explore the natural world around them.

Materials
Hands on exploration of natural materials
Which materials float or sink?</td><td>Changing Seasons - Winter & Spring
Understand the effect of changing seasons on the natural world around them.

Ice Melting
Explore the natural world around them.
Talk about the differences between materials and changes they notice.

Magnets and Forces
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 and talk about different forces they can feel.

Cooking - Pancakes
Talk about the differences between materials and changes they notice.</td><td>Changing Seasons - Summer
Understand the effect of changing seasons on the natural world around them.

Materials
The Queen’s Knickers
Explore the natural world around them.

Plants
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.

Cooking - Vegetable soup/ fruit salad
Talk about the differences between materials and changes they notice.</td></tr>
<tr><td>Year 1&2</td><td>Seasonal Change:
● observe changes across the four seasons
● observe and describe weather associated with the seasons and how day length varies.
Human Bodies
● describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
● Senses and which part of the body they relate to.
Year 1:
● Naming animal groups including mammals, reptiles, insects etc
● Comparing animals
● Animal diets
Year 2:
● Healthy eating
● Exercise keeping you healthy

Materials
Investigating materials - How can we keep Paddington’s sandwiches dry</td><td>Seasonal Change
● observe changes across the four seasons
● observe and describe weather associated with the seasons and how day length varies.

Plants
● Observing closely
● Performing simple tests
● Identifying and naming common wildflowers and garden plants, including deciduous and evergreen trees
● Identify and describe basic structure of a plant
● Observe how seeds grow
● Find out how and describe plants needing water, light and suitable temperature</td><td>Seasonal Change
● observe changes across the four seasons
● observe and describe weather associated with the seasons and how day length varies.

Living things and their habitats and minibeasts
● 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 animals, using the idea of a simple food chain, and identify and name different sources of food.</td></tr>
<tr><td>Year 3</td><td>ELECTRICITY
● Identify appliances that run off electricity
● Construct a simple circuit and switch
● Identify conductors and Appliances
● Conductors & insulators

FORCES AND MAGNETS
● Friction
● Magnets operate at a distance
● Attract & repel -Poles Compare how things move on different surfaces</td><td>ANIMALS INC. HUMANS
● Understand that nutrition
● comes from food
● skeletons and muscles
● Classify foods into groups

LIGHT
● Recognise that they need light to see things
● Notice that light is reflected from surfaces
● Safety around light and protecting eyes
● Shadows - how they are formed
● Finding patterns with size of shadows</td><td>ROCKS
● Compare and group different kinds of rocks
● Describe how fossils are formed
● Recognise that soils are made from rocks and organic matter

PLANTS
● Roots, stem/trunk, leaves and flowers
● Plants’ requirements
● Water transportation
● Pollination, seed formation and seed dispersal.</td></tr>
<tr><td>Year 4/5</td><td>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 the apparent movement of the sun across the sky</td><td>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</td><td>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</td><td>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</td></tr>
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		between moving surfaces ● recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect		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	
Year 6	● **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	**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	**ELECTRICITY** ● 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 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.	**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	**ANIMALS & HUMANS** ● describe the life process of reproduction in some plants and animals ● explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal ● describe the changes as humans develop to old age ● identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood ● 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 human