

Science Year A		
Year 1/2		
Investigation skills 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.		
1.5 The Weather observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies <ul style="list-style-type: none"> <input type="checkbox"/> describe seasonal changes 		
Autumn	Spring	Summer
1.2 The Animal Kingdom 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 fish, amphibians, reptiles, birds and mammals, including pets, farm animals and zoo animals <ul style="list-style-type: none"> <input type="checkbox"/> group animals according to what they eat <input type="checkbox"/> describe and compare the observable features of animals from a range of groups 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"> <input type="checkbox"/> name and locate parts of the human body, including those related to the 	1.3 Everyday materials 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: waterproof / stiff / flexible / stretchy / compare and group together a variety of everyday materials on the basis of their simple physical properties find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching <ul style="list-style-type: none"> <input type="checkbox"/> distinguish objects from materials, describe their properties, identify and group everyday materials <input type="checkbox"/> compare their suitability for different 	1.4 Plants 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 the growth of bulbs and/or seeds 2.4 Plants 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"> <input type="checkbox"/> describe the basic needs of plants for survival <input type="checkbox"/> Describe the impact of changing these and the main changes as seeds and bulbs grow into mature plants

senses	uses	
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Investigation Skills

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.

Autumn

4.4 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
 recognise some common conductors and insulators, and associate metals with being good conductors

3 Light

recognise that light is needed in order to see things and that dark is the absence of light
 notice that light is reflected from surfaces
 Know 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

Spring

4.6 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.

- ❑ describe the characteristics of different states of matter and group materials on this basis;
- ❑ describe how materials change state at different temperatures, using this to explain everyday phenomena, including the water cycle

Summer

3.4 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.

- ❑ name, and locate the main parts of plants, including those involved in reproduction & transporting water and nutrients
- ❑ describe the requirements of plants for life and growth

3 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

<p>an opaque object find patterns in the way that the size of shadows change.</p> <ul style="list-style-type: none">❑ use the idea that light from light sources, or reflected light, travels to our eyes to explain how we see objects❑ Explain how opaque objects are involved in the formation and size of shadows		<p>when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter.</p> <ul style="list-style-type: none">❑ describe how fossils are formed❑ group materials including rocks, in different ways according to their properties, based on first-hand observation
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Investigation Skills

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.

Autumn**5.3 Earth in 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.

- ❑ **describe the shapes and relative movements of the Sun, Moon, Earth and other planets in the solar system;**
- ❑ **explain the apparent movement of the sun across the sky in terms of the Earth's rotation and that this results in day and night**

5.6 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 recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

- ❑ **identify simple mechanisms, including levers, gears and pulleys, that increase the effect of a force**

Spring**5.2 Living things Life Cycles**

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.

- ❑ **describe and compare different reproductive processes and life cycles in animals**
- ❑ **name, locate and describe the functions of the main parts of plants, involved in reproduction**

5.5 Human Development

describe the changes as humans develop to old age.

Summer**6.3 Classification**

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.

- ❑ **use the observable features of plants, animals and micro-organisms to group, classify and identify them into broad groups, using keys or other methods**

6.6 Evolution

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.

- ❑ **use the basic ideas of inheritance, variation and adaptation to describe how living things have changed over time and evolved**
- ❑ **describe how fossils are formed and**

- describe the effects of simple forces that involve contact (air and water resistance, friction)
- describe the effects of gravity

provide evidence for evolution