

Science Non-Negotiable Key Skills, Knowledge and Vocabulary YEAR 1

National Curriculum:

Working Scientifically:

- During year 1, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:
- 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.

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.

Animals including humans:

- 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)
- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

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
- compare and group together a variety of everyday materials on the basis of their simple physical properties

Seasonal Changes:

- observe changes across the four seasons
- observe and describe weather associated with the seasons and how day length varies.

Key Concepts:

Working Scientifically: *Use practical scientific methods, processes and skills to understand how ideas and theories are investigated and how this improves scientific knowledge and skills*

Plants: *Plants are living organisms that require specific conditions to adapt and grow.*

Animals including humans: *All animals, including humans, share life processes, which allows them to adapt and grow.*

Everyday materials: *Objects are made up of a variety of materials and are used for particular things based upon their properties.*

Seasonal changes: *Weather and day length varies dependant on season.*

Topic	Key Skills	Subject Knowledge	Key Vocabulary
Working scientifically	<ul style="list-style-type: none"> Ask simple questions about the world around me. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use my observations and ideas to suggest answers to questions 	<p>To know:</p> <ul style="list-style-type: none"> What an appropriate question is What an observation is What to observe and measure in a simple test How to predict How to report findings in oral form How to use scientific language to explain and describe How to draw a conclusion based on aims 	<p>Pattern changes plan record observe identify classify data question answer compare measure equipment test sort group label list larger smaller faster slower stronger weaker brighter dimmer louder quicker data logger</p>
Plants	<p>Identify and name (variety of common wild and garden plants, including deciduous and evergreen trees).</p> <p>Identify and describe (basic structure of a variety of common flowering plants, including trees).</p>	<p>To know:</p> <ul style="list-style-type: none"> Parts of a plant (stem, root, leaf/leaves, flower) Plants need light, water and space to grow What makes a tree deciduous What makes a tree evergreen 	<p>root stem leaf flower air sunlight water nutrient soil pollination seed growth deciduous evergreen habitat petal wild fruit bulb branch trunk blossom bud plant oak holly birch beech</p>
Animals including humans	<p>Identify and name (variety of common animals including fish, amphibians, reptiles, birds and mammals)</p> <p>Identify and name (variety of common animals that are carnivores, herbivores and omnivores)</p>	<p>To know:</p> <ul style="list-style-type: none"> The properties of common animals fish including amphibians, reptiles, birds and mammals What makes an animal a carnivore, herbivore or omnivore Parts of the human body Which parts of the body are associated with the 5 senses. 	<p>Bird fish amphibian reptile mammal carnivore herbivore omnivore skeleton habitat life cycle vertebrate skull bone teeth swim fly feathers scales fur skin diet nocturnal pet Sight touch hearing smell taste legs arms hands fingers foot eyes nose mouth ears head human body heart brain lungs stomach hair</p>

	<p>Describe and compare (structure of a variety of common animals - fish, amphibians, reptiles, birds and mammals).</p> <p>Identify, name, draw and label (basic parts of the human body and say which part of the body is associated with each sense)</p>		<p>elbows neck teeth food breathe pump blood think digest</p>
Everyday materials	<p>Investigate and describe (simple physical properties of a variety of everyday materials)</p> <p>Compare and group together (variety of everyday materials on the basis of their simple physical properties)</p>	<p>To know:</p> <ul style="list-style-type: none"> • A variety of everyday materials including wood, plastic, glass, metal, water, and rock • How to identify an object based upon what it is made • Basic physical properties of materials 	<p>materials properties wood plastic glass metal rock uses objects waterproof absorbent strength structures brick paper elastic natural man-made shiny dull smooth rough stretchy stiff opaque transparent hard soft</p>
Seasonal changes	<p>Research and observe (changes across the four seasons)</p> <p>Observe and describe (weather associated with the seasons and how day length varies).</p>	<p>To know:</p> <ul style="list-style-type: none"> • The four seasons • How the weather changes according to season • That the season affects day length 	<p>Winter summer spring autumn temperature daylight hours night dark Sun Earth Moon weather rain snow ice clouds fog wind</p>