

Science

CURRICULUM FRAMEWORK FOR KEY STAGE 1 AND 2

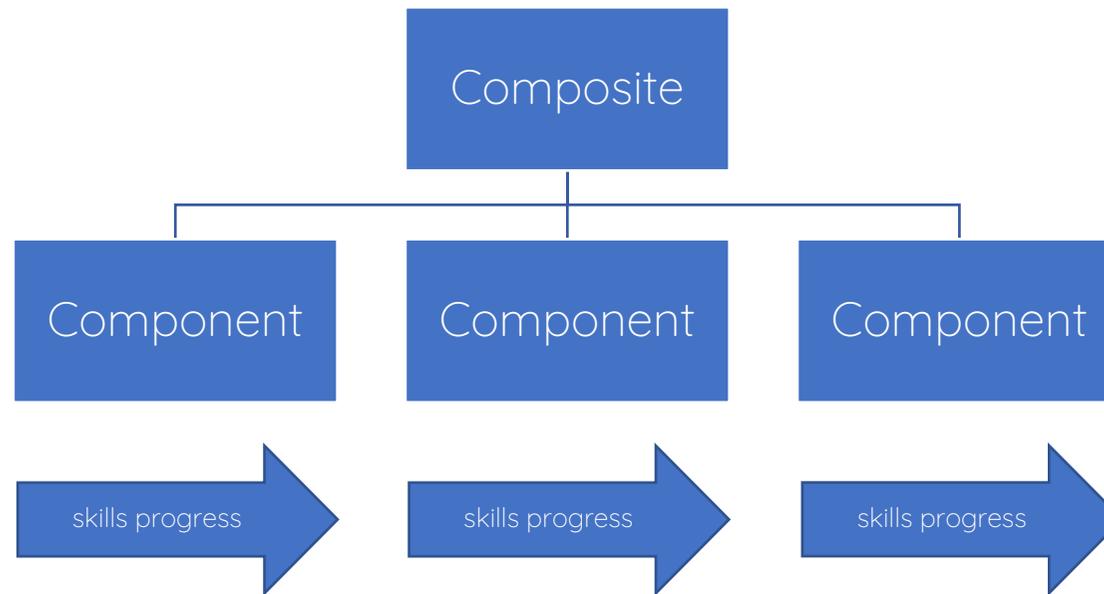
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Subject leaders need to ensure that there is clear progression through each year group towards the national curriculum requirements for their subject. This will ensure that there is a clear year-on-year acquisition of key knowledge as well as skills.

The National Curriculum is the top-level 'composite' outcomes but not the curricular components to get there – the intent. This document shows the subject progress through different components, highlighted in bold. Each component has a skill set that shows progress through each key stage.

The framework document also provides further planning opportunities for planning resources, texts, cross-curricular opportunities and cultural capital opportunities for your individual school.



National Curriculum coverage

	Biology				Chemistry				Physics					
	Plants	Animals, including humans	Living things and habitats	Evolution and Inheritance	Rocks	Everyday materials	Properties and changes of materials	States of matter	Light	Sound	Forces and magnets	Seasonal changes	Earth and space	Electricity
Y1														
Y2														
Y3														
Y4														
Y5														
Y6														

Science – Key Stage 1				
	Working Scientifically	Biology	Chemistry	Physics
National Curriculum – Year 1	<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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 	<p>Plants - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 <p>Animals, including humans - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 	<p>Everyday materials - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 	<p>Seasonal changes - pupils should be taught to:</p> <ul style="list-style-type: none"> • observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies

Science – Key Stage 1				
	Working Scientifically	Biology	Chemistry	Physics
Year 1	<p>Observing closely</p> <ul style="list-style-type: none"> • Talk about what they see, touch, smell, hear or taste • Use simple equipment to help make observations <p>Performing simple tests</p> <ul style="list-style-type: none"> • Perform a simple test • Tell other people about what they have done <p>Identifying and classifying</p> <ul style="list-style-type: none"> • Identify and classify things they observe • Think of some questions to ask • Answer some scientific questions • Give a simple reason for their answer • Explain what they have found out • Talk about similarities and differences • Explain what they have found out using scientific vocabulary <p>Recording findings</p> <ul style="list-style-type: none"> • Show work using pictures, labels and captions • Record findings using standard units • Put some information in a chart or table • Use IT to show working • Make accurate measurements 	<p>Plants</p> <ul style="list-style-type: none"> • Name the petals, stem, leaf and root of a plant • Identify and name a range of common plants and trees • Recognise deciduous and evergreen trees • Describe the parts of a plant - roots, stem, leaves, flowers • Name the main parts of a flowering plant <p>Animals, including humans</p> <ul style="list-style-type: none"> • Point out some of the differences between different animals • Describe how an animal is suited to its environment • Point out differences between living things and non-living things • Name the parts of an animal's body • Name a range of domestic animals • Compare the bodies of different animals • Say why certain animals have certain characteristics • Name a range of wild animals <p>Humans</p> <ul style="list-style-type: none"> • Name the parts of the human body that they can see • Identify the main parts of the human body and link them to their senses • Name some parts of the human body that cannot be seen <p>Variation and classification</p> <ul style="list-style-type: none"> • Sort some plants by size • Sort some plants by those that can be eaten and those that cannot • Sort some animals by body covering - scales, fur and skin • Sort some animals on a simple branching diagram • Classify animals by what they eat - carnivore, herbivore, omnivore • Sort photographs of living things and non-living things • Classify common animal - birds, fish, amphibians, reptiles, mammals, invertebrates • Begin to classify animals according to a number of given criteria 	<p>Classifying and grouping materials</p> <ul style="list-style-type: none"> • Describe materials using their senses • Describe materials using their senses, using specific scientific words • Explain what material objects are made from • Explain why a material might be useful for a specific job • Name some different materials • Sort materials into groups by a given criteria • Explain how solid shapes can be changed by squashing, bending, twisting and stretching • Describe things that are similar and different between materials <p>Changing materials</p> <ul style="list-style-type: none"> • Explain what happens to certain materials when they are heated, eg, bread, ice, chocolate • Explain what happens to certain materials when they are cooled, eg, jelly, heated chocolate 	<p>Light</p> <ul style="list-style-type: none"> • Identify and name the sources of light • Identify and name sources of light that we can see • Explain what darkness is • Compare sources of light -brightest, dimmest, darker, lighter • Observe and describe shadows during the day • Describe changes in light that result from action/s • Describe how light and temperature are different during the night and day • Know that the sun lights up the earth • Stay safe when observing the sun • Describe how the sun moves across the sky • Know that the sun moves across the sky during the day • Explain why they can't see stars in the day time

Science – Key Stage 1				
Year 1	Working Scientifically	Biology	Chemistry	Physics
Software/websites/ texts				
Topic/Curriculum opportunities				
Cultural Capital opportunities				
SMSC	<p>Spiritual</p> <p>Science supports spiritual development by providing many opportunities for children to think and spend time reflecting on the amazing wonders which occur in our natural world.</p>	<p>Moral</p> <p>Science supports moral development by showing children that different opinions need to be respected and valued. There are many moral and ethical issues that we cover in science including discussions about environmental and human issues.</p>	<p>Social</p> <p>Science supports social development by exposing children to the power of collaborative working in the science community which has led to some amazing and life changing breakthroughs in medicine. When undertaking experiments and research children work collaboratively.</p>	<p>Cultural</p> <p>Science supports cultural development by looking at how scientists from a range of cultures have had a significant impact globally. It also helps children to understand how important science is to the economy and culture of the UK.</p>

Science – Key Stage 1				
	Working Scientifically	Biology	Chemistry	Physics
National Curriculum – Year 2	<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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 	<p>Living things and their habitats - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 micro-habitats • 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 <p>Plants - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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. <p>Animals, including humans - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 	<p>Uses of everyday materials - pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 	<p>No coverage</p>