



Science

National Curriculum

Sc3/1 Working Scientifically

- Sc3/1.1 asking relevant questions and using different types of scientific enquiries to answer them
- Sc3/1.2 setting up simple practical enquiries, comparative and fair tests
- Sc3/1.3 making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Sc3/1.4 gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Sc3/1.5 recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Sc3/1.6 reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Sc3/1.7 using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Sc3/1.8 identifying differences, similarities or changes related to simple scientific ideas and processes
- Sc3/1.9 using straightforward scientific evidence to answer questions or to support their findings.

Sc3/2.1 Plants

- Sc3/2.1a identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- Sc3/2.1b 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
- Sc3/2.1c investigate the way in which water is transported within plants
- Sc3/2.1d explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Sc3/2.2 Animals including humans

- Sc3/2.2a 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
- Sc3/2.2b identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Sc3/3.1 Rocks

- Sc3/3.1a compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- Sc3/3.1b describe in simple terms how fossils are formed when things that have lived are trapped within rock
- Sc3/3.1c recognise that soils are made from rocks and organic matter.

Sc3/4.1 Light

- Sc3/4.1a recognise that they need light in order to see things and that dark is the absence of light
- Sc3/4.1b notice that light is reflected from surfaces
- Sc3/4.1c recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Sc3/4.1d recognise that shadows are formed when the light from a light source is blocked by a solid object
- Sc3/4.1e find patterns in the way that the size of shadows change.

Sc3/4.2 Forces and Magnets

- Sc3/4.2a compare how things move on different surfaces
- Sc3/4.2b notice that some forces need contact between 2 objects, but magnetic forces can act at a distance
- Sc3/4.2c observe how magnets attract or repel each other and attract some materials and not others
- Sc3/4.2d 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
- Sc3/4.2e describe magnets as having 2 poles
- Sc3/4.2f predict whether 2 magnets will attract or repel each other, depending on which poles are facing.



Computing

National Curriculum

- Co2/1.1 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Co2/1.2 use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Co2/1.3 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- Co2/1.4 understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration
- Co2/1.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- Co2/1.6 select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Progression of Skills

Text and Multimedia	<ul style="list-style-type: none"> Record and present information integrating a range of appropriate media combining text and graphics in printable form and sound and video for on-screen presentations which include hyperlinks. Begin to show an awareness of the intended audience and seek feed-back.
Digital Images (photos, paint, animation)	<ul style="list-style-type: none"> Manipulate digital images using a range of tools in appropriate software to convey a specific mood or idea.
Sound and music (Inc. sound recorders)	<ul style="list-style-type: none"> Create a simple podcast, selecting and importing already existing music and sound effects as well as recording their own.
Electronic Communication	<ul style="list-style-type: none"> Begin to understand the need to abide by school e-safety rules.
Research and E Safety	<ul style="list-style-type: none"> Using another curriculum area as a starting point, children ask their own questions then use ICT sources to find answers, making use of search engines, an index, menu, hyperlinks as appropriate. Children use the information or resources they have found. Children talk about using ICT to find information / resources noting any frustrations and showing an emerging understanding of internet safety.
Control (algorithms)	<ul style="list-style-type: none"> Children are able to type a short sequence of instructions and to plan ahead when programming devices on and off screen.
Handling Information (databases and graphs)	<ul style="list-style-type: none"> Children use a simple database (the structure of which has been set up for them) to enter and save and save information on a given subject. They follow straight forward lines of enquiry to search their data for their own purposes. They talk about their experiences of using ICT to process data compared with other methods.
Modelling and Simulations (spreadsheets, adventure games and simulations)	<ul style="list-style-type: none"> Use models and simulations to find things out and solve problems. Recognise that simulations are useful in widening experience beyond the classroom. Make simple use of a spreadsheet to store data and produce graphs.
Data logging (science and maths)	<ul style="list-style-type: none"> Begin to use a data logger to sense physical data (sound, light, temperature).
Understanding Technologies (individual technologies)	<ul style="list-style-type: none"> Begin to show discernment in their use of computing devices and tools for a particular purpose and explain why their choice was made.
Understanding Technologies (networks)	<ul style="list-style-type: none"> Show an understanding that their password is the key to accessing a personalised set of resources and files (e.g. My Documents). Show an awareness of where passwords are critical in everyday use (e.g. parents accessing bank details)
Understanding Technologies (the	<ul style="list-style-type: none"> Show an awareness that not all the resources/tools they use are resident on the device they are using. Begin to show an understanding of URLs.



internet)	
Music	
National Curriculum	
Mu2/1.1	play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
Mu2/1.2	improvise and compose music for a range of purposes using the interrelated dimensions of music
Mu2/1.3	listen with attention to detail and recall sounds with increasing aural memory
Mu2/1.4	use and understand staff and other musical notations
Mu2/1.5	appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
Mu2/1.6	develop an understanding of the history of music.
Progression of Skills	
Singing songs with control and using the voice expressively.	<ul style="list-style-type: none"> • Sing with confidence using a wider vocal range. • Sing in tune. • Sing with awareness of pulse and control of rhythm. • Recognise simple structures. (Phrases). • Sing expressively with awareness and control at the expressive elements. E.g. timbre, tempo, dynamics. • Sing songs and create different vocal effects. • Understand how mouth shapes can affect voice sounds. • Internalise sounds by singing parts of a song 'in their heads.'
Listening, Memory and Movement.	<ul style="list-style-type: none"> • Identify melodic phrases and play them by ear. • Create sequences of movements in response to sounds. • Explore and chose different movements to describe animals. • Demonstrate the ability to recognise the use of structure and expressive elements through dance. • Identify phrases that could be used as an introduction, interlude and ending.
Controlling pulse and rhythm	<ul style="list-style-type: none"> • Recognise rhythmic patterns. • Perform a repeated pattern to a steady pulse. • Identify and recall rhythmic and melodic patterns. • Identify repeated patterns used in a variety of music. (Ostinato).
Exploring sounds, melody and accompaniment.	<ul style="list-style-type: none"> • Identify ways sounds are used to accompany a song. • Analyse and comment on how sounds are used to create different moods. • Explore and perform different types of accompaniment. • Explore and select different melodic patterns. • Recognise and explore different combinations of pitch sounds.
Control of instruments	<ul style="list-style-type: none"> • Identify melodic phrases and play them by ear. • Select instruments to describe visual images. • Choose instruments on the basis of internalised sounds.
Composition	<ul style="list-style-type: none"> • Create textures by combining sounds in different ways. • Create music that describes contrasting moods/emotions. • Improvise simple tunes based on the pentatonic scale. • Compose music in pairs and make improvements to their own work. • Create an accompaniment to a known song. • Create descriptive music in pairs or small groups.
Reading and writing notation	<ul style="list-style-type: none"> • Perform long and short sounds in response to symbols. • Create long and short sounds on instruments. • Play and sing phrase from dot notation. • Record their own ideas. • Make their own symbols as part of a class score.
Performance skills	<ul style="list-style-type: none"> • Perform in different ways, exploring the way the performers are a musical resource.



	<ul style="list-style-type: none"> • Perform with awareness of different parts.
Evaluating and appraising	<ul style="list-style-type: none"> • Recognise how music can reflect different intentions.

P.E

National Curriculum

PE2/1.1 Sport & Games

- PE2/1.1a use running, jumping, throwing and catching in isolation and in combination
- PE2/1.1b play competitive games, modified where appropriate, and apply basic principles suitable for attacking and defending
- PE2/1.1c develop flexibility, strength, technique, control and balance
- PE2/1.1d perform dances using a range of movement patterns
- PE2/1.1e take part in outdoor and adventurous activity challenges both individually and within a team
- PE2/1.1f compare their performances with previous ones and demonstrate improvement to achieve their personal best.

PE2/1.2 Swimming and water safety

- PE2/1.2a swim competently, confidently and proficiently over a distance of at least 25 metres
- PE2/1.2b use a range of strokes effectively
- PE2/1.2c perform safe self-rescue in different water-based situations.

Progression of Skills

Throwing	<ul style="list-style-type: none"> • I can throw an object (ball/ javelin/ discus)
Catching	<ul style="list-style-type: none"> • I can catch an object passed in a variety of ways from a range of distances.
Jumping	<ul style="list-style-type: none"> • I can perform a long jump using the correct technique (with a run up).
Striking	
Running/ Travelling	<ul style="list-style-type: none"> • I can run 60m. • I can perform a movement pattern that travels, changes direction and levels. • I can identify good things in a movement pattern.
Kicking	
Agility, Balance and Coordination	<ul style="list-style-type: none"> • I can control a movement when performing. • I can balance with two points of contact.
Team Work and Games	<ul style="list-style-type: none"> • I can apply skills taught to mini games. • I can communicate with team members.
Health and Lifestyle	<ul style="list-style-type: none"> • I can suggest alternative ways of being active.



Art	
National Curriculum	
Ar2/1.1	to create sketch books to record their observations and use them to review and revisit ideas
Ar2/1.2	to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials
Ar2/1.3	about great artists, architects and designers in history.
Progression of Skills	
Drawing	<ul style="list-style-type: none"> • As Year 2, plus • Experiment with the potential of various pencils (2B - HB) to show tone, texture etc. • Encourage close observation of objects in both the natural and man-made world. • Observe and draw simple shapes. • Make initial sketches as a preparation for painting and other work. • Encourage more accurate drawings of people – particularly faces looking closely at where feature and the detail they have.
Colour	<ul style="list-style-type: none"> • Build on KS1- • Extend exploring colour mixing to applying colour mixing. • Make colour wheels to show primary and secondary colours. • Introduce different types of brushes for specific purposes. • Begin to apply colour using dotting, scratching, splashing to imitate an artist. • Pointillism – control over coloured dots, so tone and shading is evident.
Texture	<ul style="list-style-type: none"> • Build on all previous experiences. • Use smaller eyed needles and finer threads. • Use colour to express an idea in weaving - seasons, moods, or create a picture - swamp, seascape. • Tie dying, batik – ways of colouring or patterning material. • Look at artists: Linda Caverley, Ellen Jackson, Alison King
Form	<ul style="list-style-type: none"> • Use the equipment and media with increasing confidence. • Shape, form, model and construct from observation and / or imagination with increasing confidence. • Plan and develop ideas in sketchbook and make simple choices about media. • Have an understanding of different adhesives and methods of construction • Begin to have some thought towards size • Simple discussion about aesthetics
Printing	<ul style="list-style-type: none"> • Use the equipment and media with increasing confidence. • Use relief and impressed printing processes. • Use sketchbook for recording textures/patterns. • Discuss own work and that of other artists. (Packaging, Hiroshige, Escher, etc.) • Explores images through monoprinting on a variety of papers • Explore colour mixing through overlapping colour prints deliberately.
Pattern	<ul style="list-style-type: none"> • Search for pattern around us in world, pictures, objects. • Use the environment and other sources to make own patterns, printing, rubbing. • Use sketchbooks to design own motif to repeat. • Create own patterns using ICT • Make patterns on a range of surfaces, in clay, dough, on fabric, paper, chalk on playground • Link to Maths – symmetry



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History

National Curriculum

Hi2/1.1 Pre-Roman Britain

Pupils should be taught about changes in Britain from the Stone Age to the Iron Age

This could include:

late Neolithic hunter-gatherers and early farmers, for example, Skara Brae

Bronze Age religion, technology and travel, for example, Stonehenge

Iron Age hill forts: tribal kingdoms, farming, art and culture

Hi2/1.2 Roman Britain

Pupils should be taught about the Roman empire and its impact on Britain

This could include:

Julius Caesar's attempted invasion in 55-54 BC

the Roman Empire by AD 42 and the power of its army

successful invasion by Claudius and conquest, including Hadrian's Wall

British resistance, for example, Boudica

"Romanisation" of Britain: sites such as Caerwent and the impact of technology, culture and beliefs, including early Christianity

Hi2/2.1 Local History

Pupils should be taught about an aspect of local history

For example:

a depth study linked to one of the British areas of study listed above

a study over time tracing how several aspects of national history are reflected in the locality (this can go beyond 1066)

a study of an aspect of history or a site dating from a period beyond 1066 that is significant in the locality.

Hi2/2.2 Extended chronological study

Pupils should be taught a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066

For example:

the changing power of monarchs using case studies such as John, Anne and Victoria

changes in an aspect of social history, such as crime and punishment from the Anglo-Saxons to the present or leisure and entertainment in the 20th Century

*the legacy of Greek or Roman culture (art, architecture or literature) on later periods in British history, including the present day
a significant turning point in British history, for example, the first railways or the Battle of Britain*

Progression of Skills

Chronology	<ul style="list-style-type: none"> Place the time studied on a time line Sequence events or artefacts Use dates related to the passing of time
Range and Depth of Historical Knowledge	<ul style="list-style-type: none"> Find out about everyday lives of people in time studied Compare with our life today Identify reasons for and results of people's actions Understand why people may have had to do something Study change through the lives of significant individuals (e.g. Queen Elizabeth I and Queen Elizabeth II)
Interpretations of History	<ul style="list-style-type: none"> Identify and give reasons for different ways in which the past is represented Distinguish between different sources and evaluate their usefulness Look at representations of the period – museum, cartoon etc.
Historical Enquiry	<ul style="list-style-type: none"> Use a range of sources to find out about a period Observe small details – artefacts, pictures Select and record information relevant to the study



	<ul style="list-style-type: none"> • Begin to use the library, e-learning for research • Ask and answer questions
Organisation and Communication	<ul style="list-style-type: none"> • Communicate knowledge and understanding in a variety of ways – discussions, pictures, writing, annotations, drama, mode

DT

National Curriculum

DT2/1.1 Design

- DT2/1.1a use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- DT2/1.1b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

DT2/1.2 Make

- DT2/1.2a select from and use a wider range of tools and equipment to perform practical tasks accurately
- DT2/1.2b select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

DT2/1.3 Evaluate

- DT2/1.3a investigate and analyse a range of existing products
- DT2/1.3b evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- DT2/1.3c understand how key events and individuals in design and technology have helped shape the world

DT2/1.4 Technological Knowledge

- DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- DT2/1.4b understand and use mechanical systems in their products
- DT2/1.4c understand and use electrical systems in their products
- DT2/1.4d apply their understanding of computing to programme, monitor and control their products.

DT2/2.1 Cooking & Nutrition

- DT2/2.1a understand and apply the principles of a healthy and varied diet
- DT2/2.1b cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- DT2/2.1c become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]
- DT2/2.1c understand the source, seasonality and characteristics of a broad range of ingredients

Progression of Skills

Developing planning and communicating ideas	<ul style="list-style-type: none"> • With growing confidence generate ideas for an item, considering its purpose and the user/s. • Start to order the main stages of making a product. • Identify a purpose and establish criteria for a successful product. • Understand how well products have been designed, made, what materials have been used and the construction technique. • Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. • Start to understand whether products can be recycled or reused. • Know to make drawings with labels when designing. • When planning explain their choice of materials and components including function and aesthetics.
Working with tools, equipment, materials and components to	<ul style="list-style-type: none"> • Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components. • Explain their choice of tools and equipment in relation to the skills and techniques they will be using.



make quality products	<ul style="list-style-type: none"> • Start to understand that mechanical and electrical systems have an input, process and output. • Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. • Know how simple electrical circuits and components can be used to create functional products. • Measure, mark out, cut, score and assemble components with more accuracy. • Start to work safely and accurately with a range of simple tools. • Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work. • Start to measure, tape or pin, cut and join fabric with some accuracy.
Evaluating processes and products	<ul style="list-style-type: none"> • Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose • Begin to disassemble and evaluate familiar products and consider the views of others to improve them. • Evaluate the key designs of individuals in design and technology has helped shape the world.
Food and Nutrition	<ul style="list-style-type: none"> • Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. • Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. • Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. • Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate' • Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.

Geography
National Curriculum

Ge2/1.1 Locational Knowledge	
Ge2/1.1a locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities	
Ge2/1.1b name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time	
Ge2/1.1c identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)	
Ge2/1.2 Place Knowledge	
Ge2/1.2a understand geographical similarities and differences through the study of human and physical geography Mersham: a region of the United Kingdom	
Ge2/1.3 Human and Physical Geography	
Ge2/1.3a describe and understand key aspects of physical geography, including: volcanoes	
Ge2/1.3b describe and understand key aspects of human geography, including: types of settlement and land use; local human and physical geography study	
Ge2/1.4 Geographical Skills and Fieldwork	
Ge2/1.4a use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied	
Ge2/1.4b use the 8 points of a compass, 4 and 6-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world	
Ge2/1.4c use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.	

Progression of skills

Geographical	<ul style="list-style-type: none"> • To describe route and direction –8 compass points e.g. N, S, E, W, NW, NE, SW, SE
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Year 3 National Curriculum and Progression of Skills



language	<ul style="list-style-type: none">• Link words to topic e.g. river/meander/flood/plain/location/industry/transport
Enquiry (builds on questions from previous years)	<ul style="list-style-type: none">• Ask geographical questions: where is this location? What do you think about it?• Analyse evidence and draw conclusions e.g. make comparisons between locations using photos/pictures, temperatures in different locations, population• Identify and explain different views of people including themselves e.g. views of different sections of community when developing holiday resort/new housing estate• Hold geographical issues through drama role play e.g. recycling• Collect and record evidence: construct questionnaire, use field sketch, sketch, brainstorm words about a place, sketch maps (e-learning, atlases)• Communicate in ways appropriate to task and audience creating a sense of place eg. use questionnaires, charts, graphs to show results, write views to local paper
Theme	<ul style="list-style-type: none">• Weather, environment, environmental change, sustainability
Fieldwork: where, why? Use fieldwork techniques	<ul style="list-style-type: none">• Use more detailed field sketches and diagrams
Map work/ atlas work	<ul style="list-style-type: none">• Draw maps more accurately• Plan view (from above) use key accurately• Use contents/index to locate page quickly and accurately (ICT)