

Year 5 National Curriculum and Progression of Skills



Science

National Curriculum

Sc5/1 Working Scientifically

- Sc5/1.1 planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Sc5/1.2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision
- Sc5/1.3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs
- Sc5/1.4 using test results to make predictions to set up further comparative and fair tests
- Sc5/1.5 reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations
- Sc5/1.6 identifying scientific evidence that has been used to support or refute ideas or arguments.

Sc5/2.1 Living Things and their habitats

- Sc5/2.1a describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- Sc5/2.1b describe the life process of reproduction in some plants and animals.

Sc5/2.2 Animals, including humans

Sc5/2.2a describe the changes as humans develop to old age.

Sc5/3.1 Properties and Changes of Materials

- Sc5/3.1a 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
- Sc5/3.1b know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- Sc5/3.1c use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- Sc5/3.1d give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- Sc5/3.1e demonstrate that dissolving, mixing and changes of state are reversible changes
- Sc5/3.1f 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.

Sc5/4.1 Earth and Space

- Sc5/4.1a describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- Sc5/4.1b describe the movement of the Moon relative to the Earth
- Sc5/4.1c describe the Sun, Earth and Moon as approximately spherical bodies
- Sc5/4.1d use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.

Sc5/4.2 Forces

- Sc5/4.2a explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- Sc5/4.2b identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- Sc5/4.2c recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect







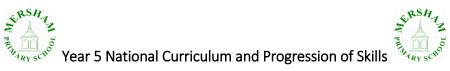
Computing

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	Use advanced tools in word processing/ DTP software such as tabs,	
Multimedia	appropriate text formatting, line spacing etc appropriately to create quality presentations appropriate for a known audience.	
Digital Images	Make a short film / animation from images (still and / or moving) that they have sourced, captured or	
(photos, paint,	created.	
animation)		
Sound and	Create multiple track compositions that contain a variety of sounds.	
music (Inc. sound		
recorders)		
Electronic	Share ICT work they have done electronically by email, VLE, or uploading to authorised sites.	
Communication	Where possible seek and respond to feedback.	
Research and E	Make use of copy and paste, beginning to understand the purpose of copyright regulations and the	
Safety	need to repurpose information for a particular audience.	
	They show an understanding that not all information on the internet is accurate.	
	Develop a growing awareness of how to stay safe when using the internet (in school and at home) and	
	that they abide by the school's internet safety policy.	
Control	Engage in Logo based problem solving activities that require children to write procedures etc. and to	
(algorithms)	predict, test and modify.	
	• Use control software to control devices (using output commands) or to simulate this on screen. Predict,	
	test and refine their programming.	
Handling	Children work as a class or group to create a data collection sheet and use it to setup a straight forward	
Information (databases	database to answer questions.	
and graphs)	Enter information and interrogate it (by searching, sorting, graphing etc).	
	Begin to reflect on how useful the collected data and their interrogation was and whether or not their	
	questions were answered.	
Modelling and	Set up and use a spreadsheet model to explore patterns and relationships. Make predictions.	
Simulations	Know how to enter simple formulae to assist this process.	
(spreadsheets, adventure		
games and simulations)		
Data logging	Use a data logger confidently, connected to the computer or remotely, to capture continuous or	
(science and maths)	intermittent data readings.	
	Interpret the results and use these in their investigations.	
	Realise the advantages of using ICT to collect data that might otherwise be problematic.	
Understanding	• Make choices about the devices and tools they use for specific purposes and explain them in relation to	
Technologies (individual	the context.	
technologies)	Begin to show an awareness of specific tools used in working life.	

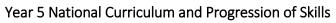






Understanding Technologies (networks)	Show an understanding of the school network and how it links computers to resources in school and beyond.
Understanding Technologies (the internet)	 Compare this with other networks they may encounter at home or in the wider world (e.g. banks) Perform a search using different search engines and check the results against each other, explaining why they might be different. Show an awareness of the need for accuracy in spelling and syntax to search effectively.







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.	 Sing songs with increasing control of breathing, posture and sound projection. Sing songs in tune and with an awareness of other parts. Identify phrases through breathing in appropriate places. Sing with expression and rehearse with others.
	 Sing a round in two parts and identify the melodic phrases and how they fit together. Sing confidently as a class, in small groups and alone, and begin to have an awareness of improvisation with the voice.
Listening, Memory and Movement.	 Internalise short melodies and play these on pitched percussion (play by ear). Create dances that reflect musical features. Identify different moods and textures. Identify how a mood is created by music and lyrics. Listen to longer pieces of music and identify features.
Controlling pulse and rhythm	 Identify different speeds of pulse (tempo) by clapping and moving. Improvise rhythm patterns. Perform an independent part keeping to a steady beat. Identify the metre of different songs through recognising the pattern of strong and weak beats. Subdivide the pulse while keeping to a steady beat.
Exploring sounds, melody and accompaniment.	Skills development for this element are to be found within 'Control of instruments' and 'Composition'.
Control of instruments	 Identify and control different ways percussion instruments make sounds. Play accompaniments with control and accuracy. Create different effects using combinations of pitched sounds. Use ICT to change and manipulate sounds.
Composition	 Identify different starting points or composing music. Explore, select combine and exploit a range of different sounds to compose a soundscape. Write lyrics to a known song. Compose a short song to own lyrics based on everyday phrases. Compose music individually or in pairs using a range of stimuli and developing their musical ideas into a completed composition.
Reading and writing notation	 Perform using notation as a support. Sing songs with staff notation as support.
Performance skills	Present performances effectively with awareness of audience, venue and occasion.
Evaluating and appraising	Improve their work through analysis, evaluation and comparison.







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	I can receive a ball, while moving, in hockey.	
Catching	I can receive a ball and use the correct footwork in netball to pass	
Jumping	I can pass a rugby ball backwards, while moving.	
Striking	I can perform a drop shot, serve and vertical swing in badminton.	
Running/ Travelling	I can run 150m.	
Kicking	I can run and pass a baton to a team member (from behind).	
Agility, Balance and Coordination	I can perform a triple jump, standing long jump and long jump using the correct technique. I can perform a movement pattern that travels, changes direction, level and speed and uses a range of body parts. I can suggest improvements for a movement pattern.	
Team Work and Games	I can solve a problem with my team	
Health and Lifestyle	I can discuss the effects of not taking enough exercise.	







	Art
	National Curriculum
	create sketch books to record their observations and use them to review and revisit ideas
	mprove their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials
Ar2/1.3 abo	out great artists, architects and designers in history. Progression of Skills
Drawing	
Drawing	Observe and use a variety of techniques to show the effect of light on objects and people e.g. use with any to light on variety of techniques to show the effect of light on objects and people e.g. use
	rubbers to lighten, use pencil to show tone, use tones of the same colour.
	Look at the effect of light on an object from different directions.
	Use a variety of techniques to interpret the texture of a surface e.g. mark making, different textured
	paint.
	Produce increasingly accurate drawings of people.
	Produce increasingly detailed preparatory sketches for painting and other work.
	Introduce the concept of perspective.
	Work on a variety of scales and collaboratively.
	Independently selects materials and techniques to use to create a specific outcome.
Colour	 Controlling and experimenting particular qualities of tone, shades, hue and mood.
	• Explore the use of texture in colour (link to texture unit) with sawdust, glue, shavings, sand and on
	different surfaces.
	Considering colour for purposes
	Use colour to express moods and feelings.
	• Explore the texture of paint - very wet and thin or thick and heavy - add PVA to the paint.
	• Encourage individual identification of suitable equipment for a particular purpose e.g. size of
	paintbrush or paper needed.
	Consider artists use of colour and application of it (Pollock, Monet, Chagall
Texture	Select and use materials to achieve a specific outcome.
	• Embellish work, using a variety of techniques, including drawing, painting and printing on top of
	textural work. Consider methods of making fabric.
	• Look at work of other artists using textiles i.e, molly Williams, Jill Denton, Linda Caverley
Form	Use sketchbook to inform, plan and develop ideas.
	Shape, form, model and join with confidence.
	Produce more intricate patterns and textures.
	Work directly from observation or imagination with confidence.
	Take into account the properties of media being used.
	Discuss and evaluate own work and that of other sculptors in detail (Goldsworthy, Calder, Segal,
5	Leach, recycled sculptures from Africa and India, Giacometti, etc.)
Printing	Experienced in combining prints taken from different objects to produce an end piece. For exist and a site ideas to also in electric basels.
	Experiment with ideas, to plan in sketchbook. Superior and in past division printerial and patterned prints.
	 Experienced in producing pictorial and patterned prints. Designs prints for fabrics, book covers and wallpaper
	 Designs prints for fabrics, book covers and wallpaper Makes connections between own work and patterns in their local environment (e.g. curtains,
	wallpaper)
	 Discuss and evaluate own work and that of others. (Morris, labelling, etc.)
Pattern	Organise own patterns
	 Use shape to create patterns
	Create own abstract pattern
	Patterns reflect personal experiences and expression.
	 Creating pattern for purposes e.g. wallpaper, clothes, puppets, boxes, folders, book covers etc.
	 Creating pattern for purposes e.g. waiipaper, clothes, puppers, boxes, folders, book covers etc. Look at various artists creation of pattern and discuss effect, ie. Morris, Sol Lewitt, Matisse (pattern
	within pattern), Bridget Riley, Miro)
	• Discuss own and artists work, drawing comparisons and reflecting on their own creations.







History

National Curriculum

Hi2/2.1 Local History YEAR 3 4 5 6

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 YEAR 3 4 5 6

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

Hi2/2.4 Ancient Greece YEAR 5

Pupils should be taught a study of Greek life and achievements and their influence on the western world

Hi2/2.5 Non-European Study YEAR 5

Pupils should be taught about a non-European society that provides contrasts with British history - one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; or Benin (West Africa) c. AD 900-1300

Progression of Skills		
Chronology	place current study on time line in relation to other studies	
	know and sequence key events of time studied	
	use relevant terms and periods labels	
	relate current studies to previous studies	
	make comparisons between different times in history	
Range and Depth of	study different aspects of life of different people – differences between men and women	
Historical Knowledge	examine causes and results of great events and the impact on people	
	compare life in early and late times studied	
	compare an aspect of life with the same aspect in another period	
	Study an ancient civilization in detail (e.g. Benin, Shang Dynasty, Eygpt)	
Interpretations of History	Compare accounts of events from different sources. Fact or fiction	
	offer some reasons for different versions of events	
Historical Enquiry	begin to identify primary and secondary sources	
	use evidence to build up a picture of life in time studied	
	select relevant sections of information	
	confident use of library, e-learning, research	
Organisation and	fit events into a display sorted by theme time	
Communication	use appropriate terms, matching dates to people and events	
Communication	• record and communicate knowledge in different forms· work independently and in groups showing initiative	



Year 5 National Curriculum and Progression of Skills



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

- Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross- sectional and exploded diagrams, prototypes, pattern pieces and CAD.
- Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
- With growing confidence apply a range of finishing techniques, including those from art and design
- Draw up a specification for their design- link with Mathematics and Science.
- Use results of investigations, information sources, including ICT when developing design ideas.
- With growing confidence select appropriate materials, tools and techniques.
- Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.

Working with tools, equipment, materials and components to make quality products

- Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately.
- 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.
- Understand how mechanical systems such as cams or pulleys or gears create movement.
- Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.
- Understand that mechanical and electrical systems have an input, process and output.
- Begin to measure and mark out more accurately.

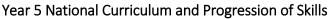






	 With growing confidence cut and join with accuracy to ensure a good-quality finish to the product Weigh and measure accurately (time, dry ingredients, liquids). Use finishing techniques to strengthen and improve the appearance of their product using a range of
	equipment including ICT
Evaluating processes and	Start to evaluate a product against the original design specification and by carrying out tests.
products	 Evaluate their work both during and at the end of the assignment.
products	Begin to evaluate it personally and seek evaluation from others.
	 Evaluate the key designs of individuals in design and technology has helped shape the world.
Food and Nutrition	Understand 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.
	Begin to understand that seasons may affect the food available.
	Understand how food is processed into ingredients that can be eaten or used in cooking.
	Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically
	including, where appropriate, the use of a heat source
	Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
	Begin to understand that different food and drink contain different
	Substances – nutrients, water and fibre – that are needed for health.







Geography

National Curriculum

Ge2/1.1 Locational Knowledge Years 3, 4, 5, 6

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 Year 5

Ge2/1.2a understand geographical similarities and differences through the study of human and physical geography a region in a European country

Ge2/1.3 Human and Physical Geography

Ge2/1.3a describe and understand key aspects of physical geography, including: rivers, the water cycle

Ge2/1.3b describe and understand key aspects of human geography, including: and the distribution of natural resources including energy, food, minerals and water; contrasting location

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 language	 to describe route and direction, location linking 8 points of compass to degrees on compass link words to theme e.g. river – erosion/ depositation/ transportation: coasts – long shore drift/ headland
Enquiry (builds on questions from previous years)	 askquestions:whatisthis landscape like? howhas it changed? what made it change? how is it changing? analyse evidence and draw conclusions e.g. compare historical maps of varying scales: temperature of various locations – influence on people/ everyday life identify and explain different views of people including themselves design and use questionnaires to obtain views of community on subject collect and record evidence. conduct a land use survey categorise codes communicate in ways appropriate to task and audience e.g. persuasive writing – show information on map overlays in showing levels of information e.g. old/ new
Theme	e.g. water and effects on the environment, settlement, environmental change, sustainability
Fieldwork: where, why? Use fieldwork techniques	field sketches should show understanding of pattern/ movement/ change
Map work/ atlas work	draw in scale – accuracy of scale locate information/ place with speed and accuracy use key to make deductions about landscape/ industry/ features etc.