**Aims for Design and Technology**

The national curriculum for design and technology aims to ensure that all pupils:

•develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world

•build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users

•critique, evaluate and test their ideas and products and the work of others

•understand and apply the principles of nutrition and learn how to cook

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

Pupils should be taught to:

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| ***Design***•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 •generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design |
| ***Make***•select from and use a wider range of tools and equipment to perform practical tasks [for example, 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 |
| ***Evaluate***•investigate and analyse a range of existing products•evaluate their ideas and products against their own design criteria and consider the views of others to improve their work•understand how key events and individuals in design and technology have helped shape the world |
| ***Technical Knowledge***•apply their understanding of how to strengthen, stiffen and reinforce more complex structures •understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]•understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] •apply their understanding of computing to program, monitor and control their products  |
| ***Cooking and Nutrition***•use the basic principles of a healthy and varied diet.•prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques•understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. |

## Aims for Computing

The national curriculum for computing aims to ensure that all pupils:

•can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

•can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems

•can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

•are responsible, competent, confident and creative users of information and communication technology

Pupils should be taught to:

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| •design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts•use sequence, selection, and repetition in programs; work with variables and various forms of input and output •use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs•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•use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content•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•use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact |

**Aims for Art and Design**

The national curriculum for art and design aims to ensure that all pupils:

•produce creative work, exploring their ideas and recording their experiences

•become proficient in drawing, painting, sculpture and other art, craft and design techniques

•evaluate and analyse creative works using the language of art, craft and design

•know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms

Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught to:

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| •to create sketch books to record their observations and use them to review and revisit ideas •to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] •about great artists, architects and designers in history |

## Aims for Geography

The national curriculum for geography aims to ensure that all pupils:

* develop contextual knowledge of the location of globally significant places – both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
* understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
* are competent in the geographical skills needed to:
* collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes
* interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)
* communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

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| Locational knowledge* 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
* 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
* 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)
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| Place knowledge* understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America
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| Human and physical geography* describe and understand key aspects of:
* physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
* human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water
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| Geographical skills and fieldwork* use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
* use the eight points of a compass, four and six-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
* 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.
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## Aims for History

The national curriculum for history aims to ensure that all pupils:

•know and understand the history of these islands as a coherent, chronological narrative, from the earliest times to the present day: how people’s lives have shaped this nation and how Britain has influenced and been influenced by the wider world

•know and understand significant aspects of the history of the wider world: the nature of ancient civilisations; the expansion and dissolution of empires; characteristic features of past non-European societies; achievements and follies of mankind

•gain and deploy a historically grounded understanding of abstract terms such as ‘empire’, ‘civilisation’, ‘parliament’ and ‘peasantry’

•understand historical concepts such as continuity and change, cause and consequence, similarity, difference and significance, and use them to make connections, draw contrasts, analyse trends, frame historically valid questions and create their own structured accounts, including written narratives and analyses

•understand the methods of historical enquiry, including how evidence is used rigorously to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed

•gain historical perspective by placing their growing knowledge into different contexts: understanding the connections between local, regional, national and international history; between cultural, economic, military, political, religious and social history; and between short- and long-term timescales

Pupils should continue to develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. They should note connections, contrasts and trends over time and develop the appropriate use of historical terms. They should regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. They should construct informed responses that involve thoughtful selection and organisation of relevant historical information. They should understand how our knowledge of the past is constructed from a range of sources.

In planning to ensure the progression described above through teaching the British, local and world history outlined below, teachers should combine overview and depth studies to help pupils understand both the long arc of development and the complexity of specific aspects of the content.

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| •changes in Britain from the Stone Age to the Iron AgeExamples (non-statutory)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 |
| •the Roman Empire and its impact on BritainExamples (non-statutory)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 |
| •Britain’s settlement by Anglo-Saxons and ScotsExamples (non-statutory)This could include:•Roman withdrawal from Britain in c. AD 410 and the fall of the western Roman Empire•Scots invasions from Ireland to north Britain (now Scotland)•Anglo-Saxon invasions, settlements and kingdoms: place names and village life•Anglo-Saxon art and culture•Christian conversion – Canterbury, Iona and Lindisfarne |
| •the Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the ConfessorExamples (non-statutory)This could include:•Viking raids and invasion•resistance by Alfred the Great and Athelstan, first king of England•further Viking invasions and Danegeld•Anglo-Saxon laws and justice•Edward the Confessor and his death in 1066 |
| •a local history studyExamples (non-statutory)•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 |
| •a study of an aspect or theme in British history that extends pupils’ chronological knowledge beyond 1066Examples (non-statutory)•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 |
| •the achievements of the earliest civilizations – an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer, The Indus Valley, Ancient Egypt, The Shang Dynasty of Ancient China |
| •Ancient Greece – a study of Greek life and achievements and their influence on the western world |
| •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; Benin (West Africa) c. AD 900-1300 |

## Aims for Music

The national curriculum for music aims to ensure that all pupils:

•perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians

•learn to sing and to use their voices, to create and compose music on their own and with others, have the opportunity to learn a musical instrument, use technology appropriately and have the opportunity to progress to the next level of musical excellence

•understand and explore how music is created, produced and communicated, including through the interrelated dimensions: pitch, duration, dynamics, tempo, timbre, texture, structure and appropriate musical notations

Pupils should be taught to sing and play musically with increasing confidence and control. They should develop an understanding of musical composition, organising and manipulating ideas within musical structures and reproducing sounds from aural memory.

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| •play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression •improvise and compose music for a range of purposes using the interrelated dimensions of music •listen with attention to detail and recall sounds with increasing aural memory •use and understand staff and other musical notations •appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians•develop an understanding of the history of music |

## Aims for PE

The national curriculum for physical education aims to ensure that all pupils:

•develop competence to excel in a broad range of physical activities

•are physically active for sustained periods of time

•engage in competitive sports and activities

•lead healthy, active lives

Pupils should continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.

Pupils should be taught to:

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| •use running, jumping, throwing and catching in isolation and in combination•play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending•develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]•perform dances using a range of movement patterns•take part in outdoor and adventurous activity challenges both individually and within a team•compare their performances with previous ones and demonstrate improvement to achieve their personal best |
| **Swimming and water safety**In particular pupils should be taught to:Swim competently, confidently and proficiently over a distance of at least 25mUse a range of strokes effectively (for example front crawl, backstroke and breaststroke)Perform safe self-rescue in different water-based situations. |

## Aims for Languages

The national curriculum for languages aims to ensure that all pupils:

•understand and respond to spoken and written language from a variety of authentic sources

•speak with increasing confidence, fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation

•can write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt

•discover and develop an appreciation of a range of writing in the language studied

Teaching may be of any modern or ancient foreign language and should focus on enabling pupils to make substantial progress in one language. The teaching should provide an appropriate balance of spoken and written language and should lay the foundations for further foreign language teaching at key stage 3. It should enable pupils to understand and communicate ideas, facts and feelings in speech and writing, focused on familiar and routine matters, using their knowledge of phonology, grammatical structures and vocabulary.

The focus of study in modern languages will be on practical communication. If an ancient language is chosen, the focus will be to provide a linguistic foundation for reading comprehension and an appreciation of classical civilisation. Pupils studying ancient languages may take part in simple oral exchanges, while discussion of what they read will be conducted in English. A linguistic foundation in ancient languages may support the study of modern languages at key stage 3.

Pupils should be taught to:

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| •listen attentively to spoken language and show understanding by joining in and responding•explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words•engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help\*•speak in sentences, using familiar vocabulary, phrases and basic language structures•develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases\*•present ideas and information orally to a range of audiences\*•read carefully and show understanding of words, phrases and simple writing•appreciate stories, songs, poems and rhymes in the language•broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary•write phrases from memory, and adapt these to create new sentences, to express ideas clearly•describe people, places, things and actions orally\* and in writing•understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to EnglishThe starred (\*) content above will not be applicable to ancient languages. |