

# New National Curriculum

## English

### Upper Key Stage 2

#### Spoken Language (Years 1 to 6)

- listen and respond appropriately to adults and their peers
- ask relevant questions to extend their understanding and knowledge
- use relevant strategies to build their vocabulary
- articulate and justify answers, arguments and opinions
- give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
- maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
- use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
- speak audibly and fluently with an increasing command of Standard English
- participate in discussions, presentations, performances, role play, improvisations and debates
- gain, maintain and monitor the interest of the listener(s)
- consider and evaluate different viewpoints, attending to and building on the contributions of others
- select and use appropriate registers for effective communication.

#### Reading: Word Reading

- apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet.

#### Reading: Comprehension

Maintain positive attitudes to reading and understanding of what they read by:

- continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
- reading books that are structured in different ways and reading for a range of purposes
- increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions
- recommending books that they have read to their peers, giving reasons for their choices
- identifying and discussing themes and conventions in and across a wide range of writing
- making comparisons within and across books
- learning a wider range of poetry by heart
- preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience.

Understand what they read by:

- checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context
- asking questions to improve their understanding
- drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
- predicting what might happen from details stated and implied
- summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
- identifying how language, structure and presentation contribute to meaning
- discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
- distinguish between statements of fact and opinion
- retrieve, record and present information from non-fiction
- participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously
- explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary
- provide reasoned justifications for their views.

#### Writing: Transcription

- use further prefixes and suffixes and understand the guidance for adding them
- spell some words with 'silent' letters [for example, knight, psalm, solemn]
- continue to distinguish between homophones and other words which are often confused
- use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in English Appendix 1
- use dictionaries to check the spelling and meaning of words
- use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary
- use a thesaurus.

#### Writing: Handwriting & Presentation

Write legibly, fluently and with increasing speed by:

- choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters
- choosing the writing implement that is best suited for a task.

#### Writing: Composition

Plan their writing by:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary

## Math

### Number: Number & Place Value

- read, write, order and compare numbers to at least digit
- count forwards or backwards in steps of powers of 10
- interpret negative numbers in context, count forwards and backwards in steps of powers of 10, including through zero
- round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000, 100 000, 1 000 000 and 10 000 000
- solve number problems and practical problems that involve addition, subtraction, multiplication and division
- read Roman numerals to 1000 (M) and recognise year

### Number: Addition & Subtraction

- add and subtract whole numbers with more than 4 digits (columnar addition and subtraction)
- add and subtract numbers mentally with increasingly large numbers
- use rounding to check answers to calculations and to estimate and to mentally check approximate calculations
- solve addition and subtraction multi-step problems involving large numbers and explain their methods to use and why.

### Number: Multiplication & Division

- identify multiples and factors, including finding all factors of a number
- know and use the vocabulary of prime numbers, prime factors, multiples and square numbers
- establish whether a number up to 100 is prime and composite
- multiply numbers up to 4 digits by a one- or two-digit number including long multiplication for two-digit numbers
- multiply and divide numbers mentally drawing upon known facts
- divide numbers up to 4 digits by a one-digit number using long division and interpret remainders appropriately for the context
- multiply and divide whole numbers and those involving decimals and interpret remainders appropriately for the context
- recognise and use square numbers and cube numbers
- solve problems involving multiplication and division in contexts
- solve problems involving addition, subtraction, multiplication and division in contexts
- solve problems involving multiplication and division in contexts
- solve problems involving multiplication and division in contexts

### Number: Fractions

- compare and order fractions whose denominators are related to 10, 100 and 1000
- identify, name and write equivalent fractions of a given fraction
- recognise mixed numbers and improper fractions and convert between them
- write mathematical statements  $>1$  as a mixed number
- add and subtract fractions with the same denominator
- multiply proper fractions and mixed numbers by whole numbers
- read and write decimal numbers as fractions [for example,  $0.45 = \frac{45}{100}$ ]
- recognise and use thousandths and relate them to tenths and hundredths
- round decimals with two decimal places to the nearest whole number, to the nearest 10p, to the nearest 100p and to the nearest 1000p
- read, write, order and compare numbers with up to 3 decimal places
- solve problems involving number up to three decimal places
- recognise the per cent symbol (%) and understand that a percentage is a fraction of 100 and write percentages as a fraction with a denominator of 100 and vice versa
- solve problems which require knowing percentage of a quantity, including those which do not involve  $>100\%$  and those fractions with a denominator of a multiple of 100

### Measurement

- convert between different units of metric measure (for example, centimetre to millimetre; gram and kilogram; litre to millilitre)
- understand and use approximate equivalences between metric units and other units of measure such as inches, pounds and pints
- measure and calculate the perimeter of composite shapes
- calculate and compare the area of rectangles (including squares), triangles and right-angled triangles and use the formulae  $\text{area} = \text{length} \times \text{width}$  and  $\text{area} = \frac{1}{2} \times \text{base} \times \text{height}$
- estimate volume [for example, using 1 cm<sup>3</sup> blocks to measure the volume and capacity of a container (for example, using water)]
- solve problems involving converting between units of measure
- use all four operations to solve problems involving money [including simple addition and subtraction of money] using decimal notation, including scaling.

### Geometry: Properties of Shapes

- identify 3-D shapes, including cubes and other cuboids
- use the properties of rectangles to deduce related facts and to solve problems
- distinguish between regular and irregular polygons and identify their properties
- know angles are measured in degrees: estimate and draw angles
- draw given angles, and measure them in degrees (°)

# Curriculum 2014: Year 5

## Maths

count to at least 1 000 000 and determine the value of each digit in powers of 10 for any given number up to 1 000 000  
count forwards and backwards with positive and negative integers  
round to the nearest 10, 100, 1000, 10 000 and 100 000  
solve problems that involve all of the above  
recognise years written in Roman numerals.

multiply numbers with more than 4 digits, including using formal written methods  
multiply and divide increasingly large numbers  
solve problems and determine, in the context of a problem, levels of accuracy  
solve problems in contexts, deciding which operations and the order of operations to use

find all factor pairs of a number, and common factors and multiples  
identify prime numbers, prime factors and composite (non-prime) numbers  
recall prime numbers up to 19  
multiply a one-digit or two-digit number using a formal written method, including long multiplication  
divide a three-digit number using the formal written method of short division  
multiply and divide whole numbers involving decimals by 10, 100 and 1000  
recognise cube numbers, and the notation for squared (2) and cubed (3)

perform long and short division including using their knowledge of factors and multiples  
multiply, multiplication and division and a combination of multiplication and division, including scaling by simple fractions and percentages

recognise equivalent fractions are all multiples of the same number  
represent fractions of a given fraction, represented visually, including using number lines  
convert between equivalent fractions and convert from one form to the other and mixed number [for example,  $2/5 + 4/5 = 6/5 = 1 1/5$ ]  
recognise equivalent denominators that are multiples of the denominator  
multiply and divide numbers by whole numbers, supported by materials and diagrams

convert between fractions [for example,  $0.71 = 71/100$ ]  
convert between fractions and decimals  
round numbers to tenths, hundredths and decimal equivalents to the nearest whole number and to one decimal place  
round numbers to tenths, hundredths and thousandths with up to three decimal places  
round numbers to three decimal places  
understand that per cent relates to 'number of parts per hundred'  
calculate percentages with denominator 100, and as a decimal  
calculate percentages and decimal equivalents of  $1/2$ ,  $1/4$ ,  $1/5$ ,  $2/5$ ,  $3/5$ ,  $4/5$ ,  $1/10$ ,  $2/10$ ,  $3/10$ ,  $4/10$ ,  $1/20$ ,  $2/20$ ,  $3/20$ ,  $4/20$ ,  $5/20$ ,  $6/20$ ,  $7/20$ ,  $8/20$ ,  $9/20$ ,  $10/20$ ,  $11/20$ ,  $12/20$ ,  $13/20$ ,  $14/20$ ,  $15/20$ ,  $16/20$ ,  $17/20$ ,  $18/20$ ,  $19/20$ ,  $1/25$ ,  $2/25$ ,  $3/25$ ,  $4/25$ ,  $5/25$ ,  $6/25$ ,  $7/25$ ,  $8/25$ ,  $9/25$ ,  $10/25$ ,  $11/25$ ,  $12/25$ ,  $13/25$ ,  $14/25$ ,  $15/25$ ,  $16/25$ ,  $17/25$ ,  $18/25$ ,  $19/25$ ,  $1/50$ ,  $2/50$ ,  $3/50$ ,  $4/50$ ,  $5/50$ ,  $6/50$ ,  $7/50$ ,  $8/50$ ,  $9/50$ ,  $10/50$ ,  $11/50$ ,  $12/50$ ,  $13/50$ ,  $14/50$ ,  $15/50$ ,  $16/50$ ,  $17/50$ ,  $18/50$ ,  $19/50$ ,  $1/100$ ,  $2/100$ ,  $3/100$ ,  $4/100$ ,  $5/100$ ,  $6/100$ ,  $7/100$ ,  $8/100$ ,  $9/100$ ,  $10/100$ ,  $11/100$ ,  $12/100$ ,  $13/100$ ,  $14/100$ ,  $15/100$ ,  $16/100$ ,  $17/100$ ,  $18/100$ ,  $19/100$ ,  $1/200$ ,  $2/200$ ,  $3/200$ ,  $4/200$ ,  $5/200$ ,  $6/200$ ,  $7/200$ ,  $8/200$ ,  $9/200$ ,  $10/200$ ,  $11/200$ ,  $12/200$ ,  $13/200$ ,  $14/200$ ,  $15/200$ ,  $16/200$ ,  $17/200$ ,  $18/200$ ,  $19/200$ ,  $1/500$ ,  $2/500$ ,  $3/500$ ,  $4/500$ ,  $5/500$ ,  $6/500$ ,  $7/500$ ,  $8/500$ ,  $9/500$ ,  $10/500$ ,  $11/500$ ,  $12/500$ ,  $13/500$ ,  $14/500$ ,  $15/500$ ,  $16/500$ ,  $17/500$ ,  $18/500$ ,  $19/500$ ,  $1/1000$ ,  $2/1000$ ,  $3/1000$ ,  $4/1000$ ,  $5/1000$ ,  $6/1000$ ,  $7/1000$ ,  $8/1000$ ,  $9/1000$ ,  $10/1000$ ,  $11/1000$ ,  $12/1000$ ,  $13/1000$ ,  $14/1000$ ,  $15/1000$ ,  $16/1000$ ,  $17/1000$ ,  $18/1000$ ,  $19/1000$ ,  $1/2000$ ,  $2/2000$ ,  $3/2000$ ,  $4/2000$ ,  $5/2000$ ,  $6/2000$ ,  $7/2000$ ,  $8/2000$ ,  $9/2000$ ,  $10/2000$ ,  $11/2000$ ,  $12/2000$ ,  $13/2000$ ,  $14/2000$ ,  $15/2000$ ,  $16/2000$ ,  $17/2000$ ,  $18/2000$ ,  $19/2000$ ,  $1/5000$ ,  $2/5000$ ,  $3/5000$ ,  $4/5000$ ,  $5/5000$ ,  $6/5000$ ,  $7/5000$ ,  $8/5000$ ,  $9/5000$ ,  $10/5000$ ,  $11/5000$ ,  $12/5000$ ,  $13/5000$ ,  $14/5000$ ,  $15/5000$ ,  $16/5000$ ,  $17/5000$ ,  $18/5000$ ,  $19/5000$ ,  $1/10000$ ,  $2/10000$ ,  $3/10000$ ,  $4/10000$ ,  $5/10000$ ,  $6/10000$ ,  $7/10000$ ,  $8/10000$ ,  $9/10000$ ,  $10/10000$ ,  $11/10000$ ,  $12/10000$ ,  $13/10000$ ,  $14/10000$ ,  $15/10000$ ,  $16/10000$ ,  $17/10000$ ,  $18/10000$ ,  $19/10000$ ,  $1/20000$ ,  $2/20000$ ,  $3/20000$ ,  $4/20000$ ,  $5/20000$ ,  $6/20000$ ,  $7/20000$ ,  $8/20000$ ,  $9/20000$ ,  $10/20000$ ,  $11/20000$ ,  $12/20000$ ,  $13/20000$ ,  $14/20000$ ,  $15/20000$ ,  $16/20000$ ,  $17/20000$ ,  $18/20000$ ,  $19/20000$ ,  $1/50000$ ,  $2/50000$ ,  $3/50000$ ,  $4/50000$ ,  $5/50000$ ,  $6/50000$ ,  $7/50000$ ,  $8/50000$ ,  $9/50000$ ,  $10/50000$ ,  $11/50000$ ,  $12/50000$ ,  $13/50000$ ,  $14/50000$ ,  $15/50000$ ,  $16/50000$ ,  $17/50000$ ,  $18/50000$ ,  $19/50000$ ,  $1/100000$ ,  $2/100000$ ,  $3/100000$ ,  $4/100000$ ,  $5/100000$ ,  $6/100000$ ,  $7/100000$ ,  $8/100000$ ,  $9/100000$ ,  $10/100000$ ,  $11/100000$ ,  $12/100000$ ,  $13/100000$ ,  $14/100000$ ,  $15/100000$ ,  $16/100000$ ,  $17/100000$ ,  $18/100000$ ,  $19/100000$ ,  $1/200000$ ,  $2/200000$ ,  $3/200000$ ,  $4/200000$ ,  $5/200000$ ,  $6/200000$ ,  $7/200000$ ,  $8/200000$ ,  $9/200000$ ,  $10/200000$ ,  $11/200000$ ,  $12/200000$ ,  $13/200000$ ,  $14/200000$ ,  $15/200000$ ,  $16/200000$ ,  $17/200000$ ,  $18/200000$ ,  $19/200000$ ,  $1/500000$ ,  $2/500000$ ,  $3/500000$ ,  $4/500000$ ,  $5/500000$ ,  $6/500000$ ,  $7/500000$ ,  $8/500000$ ,  $9/500000$ ,  $10/500000$ ,  $11/500000$ ,  $12/500000$ ,  $13/500000$ ,  $14/500000$ ,  $15/500000$ ,  $16/500000$ ,  $17/500000$ ,  $18/500000$ ,  $19/500000$ ,  $1/1000000$ ,  $2/1000000$ ,  $3/1000000$ ,  $4/1000000$ ,  $5/1000000$ ,  $6/1000000$ ,  $7/1000000$ ,  $8/1000000$ ,  $9/1000000$ ,  $10/1000000$ ,  $11/1000000$ ,  $12/1000000$ ,  $13/1000000$ ,  $14/1000000$ ,  $15/1000000$ ,  $16/1000000$ ,  $17/1000000$ ,  $18/1000000$ ,  $19/1000000$

measure length, mass and capacity (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)  
convert between metric units and common imperial units

calculate the area and perimeter of composite rectilinear shapes in centimetres and metres  
calculate the area and perimeter of shapes including rectangles, squares, trapeziums, and other regular polygons (including circles), and including using standard units  
estimate and measure the area and perimeter of irregular shapes  
use 1 cm<sup>3</sup> blocks to build cuboids (including cubes) and capacity  
convert between units of time  
solve problems involving measure (for example, length, mass, volume, area and capacity), including scaling

draw and label diagrams of shapes, including rectangles, squares, triangles, circles, and other polygons based on reasoning about equal sides and angles  
estimate and compare acute, obtuse and reflex angles  
measure angles in degrees (°)

## Science

### Working Scientifically (Upper Key Stage 2)

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

### Living Things & their Habitats

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

### Animals (including humans)

- describe the changes as humans develop to old age.

### Properties & Changes of Materials

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

### Earth & Space

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

### Forces

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

## History

### Key Stage 2

*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.*

- changes in Britain from the Stone Age to the Iron Age
- the Roman Empire and its impact on Britain
- Britain's settlement by Anglo-Saxons and Scots
- the Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor
- a local history study
- a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
- 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

## Writing: Composition

Plan their writing by:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed.

Draft and write by:

- selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
- in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action
- summarising longer passages
- using a wide range of devices to build cohesion within and across paragraphs
- using further organisational and presentational devices to structure text and to guide the reader [for example, headings, bullet points, underlining].

Evaluate and edit by:

- assessing the effectiveness of their own and others' writing
- proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning
- ensuring the consistent and correct use of tense throughout a piece of writing
- ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register
- proof-read for spelling and punctuation errors
- perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear.

## Writing: Vocabulary, Grammar & Punctuation

Develop their understanding of the concepts set out in English Appendix 2 by:

- recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms
- using passive verbs to affect the presentation of information in a sentence
- using the perfect form of verbs to mark relationships of time and cause
- using expanded noun phrases to convey complicated information concisely
- using modal verbs or adverbs to indicate degrees of possibility
- using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun
- learning the grammar for years 5 and 6 in English Appendix 2.

Indicate grammatical and other features by:

- using commas to clarify meaning or avoid ambiguity in writing
- using hyphens to avoid ambiguity
- using brackets, dashes or commas to indicate parenthesis
- using semi-colons, colons or dashes to mark boundaries between independent clauses
- using a colon to introduce a list
- punctuating bullet points consistently
- use and understand the grammatical terminology in English Appendix 2 accurately and appropriately in discussing their writing and reading.

- use the properties of rectangles to deduce related triangles
- distinguish between regular and irregular polygons and angles.
- know angles are measured in degrees: estimate and draw given angles, and measure them in degrees ( $^{\circ}$ )
- identify angles at a point and one whole turn (total  $360^{\circ}$ )
- identify angles at a point on a straight line and half a turn
- identify other multiples of  $90^{\circ}$ .

## Geometry: Position & Direction

- identify, describe and represent the position of a shape on a map, using the appropriate language, and know that the shape is not affected by translation.

## Statistics

- solve comparison, sum and difference problems using bar models
- complete, read and interpret information in tables, including bar charts.

# Geography

## Key Stage 2

### Locational Knowledge

- locate the world's countries, using maps to focus on North and South America, concentrating on their environmental characteristics, countries, and major cities
- name and locate counties and cities of the United Kingdom, identifying human and physical characteristics, key topographical features (mountains, coasts and rivers), and land-use patterns; and how these have changed over time
- identify the position and significance of latitude, longitude, the Tropic of Cancer and the Tropic of Capricorn, the Prime/Greenwich Meridian and time zones (including the difference between GMT and BST).

### Place Knowledge

- understand geographical similarities and differences between the geography of a region of the United Kingdom, a region of North or South America.

### Human & Physical Geography

- Describe and understand key aspects of:
  - physical geography, including: climate zones, biomes, volcanoes and earthquakes, and the water cycle
  - human geography, including: types of settlement and land use, and the distribution of natural resources including rivers, coasts and mountains.

### Geographical Skills & Fieldwork

- use maps, atlases, globes and digital/computer map features studied
- use the eight points of a compass, four and six-figure grid references (the use of Ordnance Survey maps) to build their knowledge of the world
- use fieldwork to observe, measure, record and present data about the local area using a range of methods, including sketching and photography.

# Physical Education

## Key Stage 2

- 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 & Water Safety

- All schools must provide swimming instruction either in KS1 or KS2.
- swim competently, confidently and proficiently over a distance of at least 25 metres
- use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]
- perform safe self-rescue in different water-based situations.

# Music

## Key Stage 2

- 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 inter-related 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.

# Computing

## Key Stage 2

- design, write and debug programs that accomplish specific tasks, such as simple animation or games, and solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables to store and retrieve data
- 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 data is represented and exchanged on a network; and the opportunities they offer for communication and information
- use search technologies effectively, appreciate how results can be filtered and how data can be presented in different ways
- select, use and combine a variety of software (including programming languages and environments) to design and create a range of programs, systems and digital content
- collect, analyse, evaluate and present data and use technology safely, respectfully and responsibly; recognise and justify how they have used data and technology to identify a range of ways to report concerns about digital content.

Use related facts and find missing lengths and angles of polygons based on reasoning about equal sides and angles.

Estimate and compare acute, obtuse and reflex angles in degrees ( $^{\circ}$ ), a half turn (total  $360^{\circ}$ ) and a quarter turn (total  $180^{\circ}$ ).

Identify the image of a shape following a reflection or translation, using a coordinate grid: the shape has not changed.

Solve problems using information presented in a line graph and tables, including timetables.

## Geography

Focus on Europe (including the location of Russia) and their environmental regions, key physical and human features of the United Kingdom, geographical regions and their characteristics, key topographical features (including hills, rivers and patterns); and understand how some of these aspects affect the environment.

Understand latitude, longitude, Equator, Northern Hemisphere, Tropic of Cancer and Capricorn, Arctic and Antarctic Circle, the seasons (including day and night).

Compare differences through the study of human and physical geography, a region in a European country, and a region within the United Kingdom.

Identify human and physical features, including population density, land use, economic activity including trade and resources including energy, food, minerals and water.

Use computer mapping to locate countries and describe their features.

Use grid references and six-figure grid references, symbols and key (including the Ordnance Survey) to build their knowledge of the United Kingdom and the wider world.

Use a range of media to present the human and physical features in a presentation, including sketch maps, plans and graphs, and digital mapping.

## Computing

Use algorithms to accomplish specific goals, including controlling or simulating systems by decomposing them into smaller parts.

Use variables in programs; work with variables and various forms of input and output.

Understand how simple algorithms work and to detect and correct errors in programs.

Use the internet; how they can provide multiple services, such as email, social media; they offer for communication and collaboration; how to evaluate how results are selected and ranked, and be discerning about the information.

Use a range of digital devices (including internet services) on a range of digital devices and systems and content that accomplish given goals, including using data and information to solve problems; recognise acceptable/unacceptable behaviour; understand about content and contact.

- 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.

## Design & Technology

### Key Stage 2

#### 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 & Nutrition

- understand and apply the 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.

## Languages

### Key Stage 2

- 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 English.
- The starred (\*) content will not be applicable to ancient languages.

## Art & Design

### Key Stage 2

- 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.