

# Curriculum 2014

# Statutory Requirements

## Year 6

This document contains all of the statutory requirements of the National Curriculum (2014) broken down by subject. Please note this document should also be real in conjunction with the English and Maths appendices.

The document is to support the long, medium and short term planning processes to ensure both full coverage and progression. In the other subjects it is important that teachers plan for progression as this is not prescribed within the curriculum document. This document will form the start of the planning process and can bused as a monitoring tool to ensure all elements of the core areas are covered within the National Curriculum Year Group.

## English - Writing

#### Grammar, Voabulary and Transcription Handwriting Composition Punctuation Spelling (see English Appendix 1) Pupils should be taught to: Pupils should be taught to: Pupils should be taught to: develop their understanding of the write legibly, fluently and with plan their writing by: Pupils should be taught to: identifying the audience for and increasing speed by: use further prefixes and suffixes and concepts set out in English Appendix 2 understand the guidance for adding choosing which shape of a purpose of the writing, selecting the by: recognising vocabulary and letter to use when given appropriate form and using other them spell some words with 'silent' letters choices and deciding whether similar writing as models for their structures that are appropriate [for example, knight, psalm, solemn] or not to join specific little for formal speech and writing, own continue to distinguish between choosing the writing noting and developing initial ideas, including subjunctive forms homophones and other words which implement that is best suited drawing on reading and research using passive verbs to affect the are often confused for a task. where necessary presentation of information in a use knowledge of morphology and in writing narratives, considering how sentence using the perfect form of verbs etymology in spelling and understand authors have developed characters that the spelling of some words needs and settings in what pupils have read, to mark relationships of time and to be learnt specifically, as listed in listened to or seen performed cause English Appendix 1 draft and write by: using expanded noun phrases to use dictionaries to check the spelling selecting appropriate grammar and convey complicated information vocabulary, understanding how such and meaning of words concisely using modal verbs or adverbs to use the first three or four letters of choices can change and enhance a word to check spelling, meaning or indicate degrees of possibility meaning in narratives, describing settings, using relative clauses beginning both of these in a dictionary use a thesaurus. characters and atmosphere and with who, which, where, when, integrating dialogue to convey whose, that or with an implied (i.e. character and advance the action omitted) relative pronoun précising longer passages learning the grammar for years 5

using a wide range of devices to build

cohesion within and across

using further organisational and

presentational devices to structure

paragraphs

and 6 in English Appendix 2

indicate grammatical and other features

or avoid ambiguity in writing

using commas to clarify meaning

by:

text and to guide the reader [for	<ul> <li>using hyphens to avoid ambiguity</li> </ul>
example, headings, bullet points,	<ul> <li>using brackets, dashes or commas</li> </ul>
underlining]	to indicate parenthesis
evaluate and edit by:	<ul><li>using semi-colons, colons or</li></ul>
<ul> <li>assessing the effectiveness of their</li> </ul>	dashes to mark boundaries
own and others' writing	between independent clauses
<ul><li>proposing changes to vocabulary,</li></ul>	<ul> <li>using a colon to introduce a list</li> </ul>
grammar and punctuation to enhance	<ul> <li>punctuating bullet points</li> </ul>
effects and clarify meaning	consistently
<ul> <li>ensuring the consistent and correct</li> </ul>	<ul><li>use and understand the</li></ul>
use of tense throughout a piece of	grammatical terminology in
writing	English Appendix 2 accurately and
<ul> <li>ensuring correct subject and verb</li> </ul>	appropriately in discussing their
agreement when using singular and	writing and reading.
plural, distinguishing between the	
language of speech and writing and	
choosing the appropriate register	
<ul> <li>proof-read for spelling and</li> </ul>	
punctuation errors	
perform their own compositions,	
using appropriate intonation, volume,	
and movement so that meaning is	
clear.	
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	English - Reading	
Spoken Word	Word Reading	Comprehension
Pupils should be taught to:  listen and respond appropriately to adults and their	Pupils should be taught to: apply their growing knowledge of root words,	Pupils should be taught to:  maintain positive attitudes to reading and

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.

prefixes and suffixes (morphology and etymology), as listed in <u>English Appendix 1</u>, both to read aloud and to understand the meaning of new words that they meet.

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

<ul> <li>identifying how language, structure and</li> </ul>
presentation contribute to meaning
<ul> <li>discuss and evaluate how authors use language,</li> </ul>
including figurative language, considering the impact on
the reader
<ul> <li>distinguish between statements of fact and opinion</li> </ul>
<ul> <li>retrieve, record and present information from non-</li> </ul>
fiction
<ul> <li>participate in discussions about books that are read to</li> </ul>
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.

Maths - Number				
Number - Number and Place Value	Number - Addition and subtraction, Multiplication and division	Number - fractions inc decimals & %	Ratio & Proportion	Algebra
Pupils should be taught to:  read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	Pupils should be taught to:  multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long	Pupils should be taught to:  use common factors to simplify fractions; use common multiples to express fractions in the same denomination	Pupils should be taught to:  solve problems involving the relative sizes of two quantities where missing values can be found by using integer	Pupils should be taught to:  use simple formulae  generate and describe linear number sequences  express missing number

- round any whole number to a required degree of accuracy
- use negative numbers in context, and calculate intervals across zero
- solve number and practical problems that involve all of the above.

- multiplication
- divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- perform mental calculations, including with mixed operations and large numbers
- identify common factors, common multiples and prime numbers
- use their knowledge of the order of operations to carry out calculations involving the four operations
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction,

- compare and order fractions, including fractions > 1
- add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- multiply simple pairs of proper fractions, writing the answer in its simplest form [for example,  $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ]
- divide proper fractions by whole numbers [for example,  $\frac{1}{3}$

$$\div 2 = \frac{1}{6}$$

- associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example,  $\frac{3}{8}$ ]
- identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- multiply one-digit numbers with up to two decimal places by whole numbers
- use written division methods in cases where the answer has up to two decimal places
- solve problems which require answers to be rounded to

- multiplication and division facts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
- solve problems involving similar shapes where the scale factor is known or can be found
- solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

- problems algebraically
- find pairs of numbers that satisfy an equation with two unknowns
- enumerate possibilities of combinations of two variables.

<ul> <li>multiplication and division</li> <li>use estimation to check</li> <li>answers to calculations and</li> </ul>	specified degrees of accuracy  recall and use equivalences between simple fractions,
determine, in the context of a problem, an appropriate degree of accuracy.	including in different contexts

	Maths		
Measurement	Geometry – Properties of shape	Geometry - Position and direction	Statisitics
Pupils should be taught to:  solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate  use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places  convert between miles and kilometres  recognise that shapes with the same areas can	Pupils should be taught to:  draw 2-D shapes using given dimensions and angles  recognise, describe and build simple 3-D shapes, including making nets  compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons  illustrate and name parts of circles, including radius, diameter and circumference and know that the	Pupils should be taught to:  describe positions on the full coordinate grid (all four quadrants)  draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Pupils should be taught to:  interpret and construct pie charts and line graphs and use these to solve problem  calculate and interpret the mean as an average.

recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.  are volume of dard units, cm³) and cubic or other units [for
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## Science

# Working Scientifically

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- 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 and their habitats	Animals, inc Humans	Evolution & Inheritance	Light	Electricity
Pupils should be taught to:  describe how living things are classified into broad groups according to common observable characteristics and based on similarities and	Pupils should be taught to:  identify and name the main parts of the human circulatory system, and describe the functions of the	Pupils should be taught to:  recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago  recognise that living things produce offspring of the same kind, but normally	Pupils should be taught to:  recognise that light appears to travel in straight lines  use the idea that light travels in straight lines to explain that objects are	Pupils should be taught to:  associate the brightness of lamp or the volume of a buzzer with the number and voltage of cells used in the circuit  compare and give reasons for

differences, including	heart, blood vessels	offspring vary and are not identical to their	seen because they give out	variations in how component:
micro-organisms, plants	and blood	parents	or reflect light into the	function, including the
and animals	<ul> <li>recognise the impact</li> </ul>	identify how animals and plants are adapted	eye	brightness of bulbs, the
give reasons for	of diet, exercise, drugs	to suit their environment in different ways	<ul><li>explain that we see things</li></ul>	loudness of buzzers and the
classifying plants and	and lifestyle on the	and that adaptation may lead to evolution.	because light travels from	on/off position of switches
animals based on specific	way their bodies		light sources to our eyes	<ul> <li>use recognised symbols when</li> </ul>
characteristics.	function		or from light sources to	representing a simple circuit
	<ul> <li>describe the ways in</li> </ul>		objects and then to our	in a diagram.
	which nutrients and		eyes	
	water are transported		<ul> <li>use the idea that light</li> </ul>	
	within animals,		travels in straight lines to	
	including humans.		explain why shadows have	
			the same shape as the	
			objects that cast them.	

listen attentively to spoken language and show     use r	ould be taught to: running, jumping, throwing and catching in isolation and
listen attentively to spoken language and show     use r	running, jumping, throwing and catching in isolation and
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  example to the spelling, example to the sound to those suitable to those of others; ask and answer suitable to those of others; seek clarification and help*  balance to the specific to the spelling, and the spelling, an	competitive games, modified where appropriate [for imple, badminton, basketball, cricket, football, hockey, ball, rounders and tennis], and apply basic principles able for attacking and defending elop flexibility, strength, technique, control and ince [for example, through athletics and gymnastics] form dances using a range of movement patterns a part in outdoor and adventurous activity challenges in individually and within a team pare their performances with previous ones and constrate improvement to achieve their personal best.

	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 above will not be applicable
	to ancient languages.

## Art & Design

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 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.

# Computing

Pupils should be taught to:

- 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.

# Design & Technology

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]. When designing and making, pupils should be taught to:

#### 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, crosssectional 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

<ul> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products.</li> </ul>
Cooking and 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.

### Other Subjects History Geography Music Pupils should extend their knowledge and understanding

beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and

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

Pupils should be taught to:

- 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

place knowledge.
Pupils should be taught to:

#### 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)

### 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

### 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

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.

Pupils should be taught about:

- 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.

- 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.

including trade links, and the distribution of natural resources including energy, food, minerals and water

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.