Year 3 & 4 English – Year 4 Maths - 2014 National Curriculum Programmes of Study

Spoken language (Y1 to Y6)
✳listen & respond ✳ask questions to extend understanding & knowledge ✳build vocabulary ✳articulate & justify answers, arguments and opinions ✳give well-structured description ✳participate actively in collaborative conversations ✳speculate, hypothesise, imagine & exploring ideas ✳participate in discussions, presentations, performances, role play, improvisations & debates ✳gain, maintain & monitor the interest of the listener(s) ✳consider & evaluate different viewpoints

Handwriting • use the diagonal and horizontal strokes that are needed to join letters and understand which letters, when adjacent to one another, are best left unjoined • increase the legibility, consistency and quality of their handwriting [for example, by ensuring that the downstrokes of letters are parallel and equidistant; that lines of writing are spaced sufficiently so that the ascenders and descenders of letters do not touch].

Reading – word level
- apply their growing knowledge of root words, prefixes & suffixes (etymology & morphology) as listed in English Appendix 1, both to read aloud & to understand the meaning of new words they meet · read further exception words, noting the unusual correspondences between spelling & sound, & where these occur in the word.

Reading - comprehension
develop positive attitudes to reading & understanding of what they read by:
- listening to & discussing a wide range of fiction, poetry, plays, non-fiction & reference books or textbooks
- reading books that are structured in different ways & reading for a range of purposes
- using dictionaries to check the meaning of words that they have read
- increasing their familiarity with a wide range of books, including fairy stories, myths & legends, & retelling some of these orally
- identifying themes & conventions in a wide range of books
- preparing poems & play scripts to read aloud & to perform, showing understanding through intonation, tone, volume & action
- discussing words & phrases that capture the reader's interest & imagination

recognising some different forms of poetry [for example, free verse, narrative poetry] · understand what they read, in books they can read independently, by:
- checking that the text makes sense to them, discussing their understanding & explaining the meaning of words in context
- asking questions to improve their understanding of a text
- drawing inferences such as inferring characters' feelings, thoughts & motives from their actions, & justifying inferences with evidence
- predicting what might happen from details stated & implied
- identifying main ideas drawn from more than one paragraph & summarising these
- identifying how language, structure, & presentation contribute to meaning
- retrieve & record information from non-fiction
- participate in discussion about both books that are read to them & those they can read for themselves, taking turns & listening to what others say.

Writing – transcription
- use further prefixes & suffixes & understand how to add them (English Appendix 1)
- spell further homophones · spell words that are often misspelt (English Appendix 1)
- place the possessive apostrophe accurately in words with regular plurals [for example, girls', boys'] & in words with irregular plurals [for example, children's]
- use the first two or three letters of a word to check its spelling in a dictionary
- write from memory simple sentences, dictated by the teacher, that include words & punctuation taught so far.

Writing – composition (appendix 2)
plan their writing by:
- discussing writing similar to that which they are planning to write in order to understand & learn from its structure, vocabulary & grammar
- discussing & recording ideas

draft & write by:
- composing & rehearsing sentences orally (including dialogue), progressively building a varied & rich vocabulary & an increasing range of sentence structures (English Appendix 2)
- organising paragraphs around a theme
- in narratives, creating settings, characters & plot
- in non-narrative material, using simple organisational devices [for example, headings & sub-headings]

evaluate & edit by:
- assessing the effectiveness of their own & others' writing & suggesting improvements
- proposing changes to grammar & vocabulary to improve consistency, including the accurate use of pronouns in sentences
- proof-read for spelling & punctuation errors
- read aloud their own writing, to a group or the whole class, using appropriate intonation & controlling the tone & volume so that the meaning is clear.

Writing – vocabulary, grammar & punctuation
develop their understanding of the concepts set out in English Appendix 2 by:
- extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although
- using the present perfect form of verbs in contrast to the past tense
- choosing nouns or pronouns appropriately for clarity & cohesion & to avoid repetition
- using conjunctions, adverbs & prepositions to express time & cause
- using fronted adverbials
- learning the grammar for years 3 & 4 in English Appendix 2

indicate grammatical & other features by:
- using commas after fronted adverbials
- indicating possession by using the possessive apostrophe with plural nouns
- using & punctuating direct speech
- use & understand the grammatical terminology in English Appendix 2 accurately & appropriately when discussing their writing & reading.

Number – number and place value
- count in multiples of 6, 7, 9, 25 & 1000
- find 1000 more or less than a given number
- count backwards through zero to include negative numbers
- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, & ones)
- order & compare numbers beyond 1000
- identify, represent & estimate numbers using different representations
- round any number to the nearest 10, 100 or 1000
- solve number & practical problems that involve all of the above & with increasingly large positive numbers
- read Roman numerals to 100 (I to C) & know that over time, the numeral system changed to include the concept of zero & place value.

Number – addition and subtraction
- add & subtract numbers with up to 4 digits using the formal written methods of columnar addition & subtraction where appropriate
- estimate & use inverse operations to check answers to a calculation
- solve addition & subtraction two-step problems in contexts, deciding which operations & methods to use & why

Number – multiplication and division
- recall multiplication & division facts for multiplication tables up to 12 × 12
- use place value, known & derived facts to multiply & divide mentally, including: multiplying by 0 & 1; dividing by 1; multiplying together three numbers
- recognise & use factor pairs & commutativity in mental calculations
- multiply two-digit & three-digit numbers by a one-digit number using formal written layout
- solve problems involving multiplying & adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems & harder correspondence problems such as n objects are connected to m objects

Number – fractions
- recognise & show, using diagrams, families of common equivalent fractions
- count up & down in hundredths; recognise that hundredths arise when dividing an object by one hundred & dividing tenths by ten
- solve problems involving increasingly harder fractions to calculate quantities, & fractions to divide quantities, including non-unit fractions where the answer is a whole number
- add & subtract fractions with the same denominator
- recognise & write decimal equivalents of any number of tenths or hundredths

recognise & write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- find the effect of dividing a one- or two-digit number by 10 & 100, identifying the value of the digits in the answer as ones, tenths & hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
- solve simple measure & money problems involving fractions & decimals to two decimal places.

Measurement
- Convert between different units of measure [for example, kilometre to metre; hour to minute]
- measure & calculate the perimeter of a rectilinear figure (including squares) in centimetres & metres
- find the area of rectilinear shapes by counting squares
- estimate, compare & calculate different measures, including money in pounds & pence
- read, write & convert time between analogue & digital 12- & 24-hour clocks
- solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

Geometry – Properties of shape
- compare & classify geometric shapes, including quadrilaterals & triangles, based on their properties & sizes
- identify acute & obtuse angles & compare & order angles up to two right angles by size
- identify lines of symmetry in 2-D shapes presented in different orientations
- complete a simple symmetric figure with respect to a specific line of symmetry.

Position & direction
- describe positions on a 2-D grid as coordinates in the first quadrant
- describe movements between positions as translations of a given unit to the left/right & up/down
- plot specified points & draw sides to complete a given polygon.

Statistics
- interpret & present discrete & continuous data using appropriate graphical methods, including bar charts & time graphs.
- solve comparison, sum & difference problems using information presented in bar charts, pictograms, tables & other graphs.

Year 4 - Science. KS2 – Foundation Subjects - 2014 National Curriculum Programmes of Study

Working scientifically

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

Living things and their habitats

- recognise that living things can be grouped in a variety of ways
- explore & use classification keys to help group, identify & name a variety of living things in their local & wider environment
- recognise that environments can change & that this can sometimes pose dangers to living things

States of matter

- compare & group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, & measure or research the temperature at which this happens in degrees Celsius (°C)
- identify the part played by evaporation & condensation in the water cycle & associate the rate of evaporation with temperature.

Animals, including humans

- describe the simple functions of the basic parts of the digestive system in humans
- identify the different types of teeth in humans & their simple functions
- construct &interpret a variety of food chains, identifying producers, predators & prey.

Sound

- identify how sounds are made, associating some of them with something vibrating
- recognise that vibrations from sounds travel through a medium to the ear
- find patterns between the pitch of a sound & features of the object that produced it
- find patterns between the volume of a sound & the strength of the vibrations that produced it
- recognise that sounds get fainter as the distance from the sound source increases.

Electricity

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying & naming its basic parts, including cells, wires, bulbs, switches & buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens & closes a circuit & associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors & insulators, & associate metals with being good conductors.

Art & Design

- Pupils should be taught to develop their techniques, including their control & their use of materials, with creativity, experimentation & an increasing awareness of different kinds of art, craft & design.
- Pupils should be taught:
- to create sketch books to record their observations & use them to review & revisit ideas
- to improve their mastery of art & design techniques, including drawing, painting & sculpture with a range of materials [for example, pencil, charcoal, paint, clay]
- about great artists, sculptors, architects & designers in history.

Computing

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

Design & Technology

Design:

- Use research & 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 & communicate their ideas through discussion, annotated sketches, cross-sectional & exploded diagrams, prototypes, pattern pieces & computer-aided design

Make:

- Select from & use a wider range of tools & equipment to perform practical tasks [eg, cutting, shaping, joining & finishing], accurately
- Select from & use a wider range of materials & components, including construction materials, textiles & ingredients, according to their functional properties & aesthetic qualities

Evaluate:

- Investigate & analyse a range of existing products
- Evaluate their ideas & products against their own design criteria & consider the views of others to improve their work
- Understand how key events & individuals in design & technology have helped shape the world

Technical knowledge

- Apply their understanding of how to strengthen, stiffen & reinforce more complex structures.
- Understand & use mechanical systems in their products [eg, gears, pulleys, cams, levers & linkages].
- Understand & use electrical systems in their products [eg, series circuits incorporating switches, bulbs, buzzers & motors].
- Apply their understanding of computing to program, monitor & control their products.

Cooking & nutrition

- Understand & apply the principles of a healthy & varied diet
- Prepare & cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, & know where & how a variety of ingredients are grown, reared, caught & processed

Geography

Locational knowledge

- locate the world's countries, using maps to focus on Europe (including the location of Russia) & North & South America, concentrating on their environmental regions, key physical & human characteristics, countries, & major cities
- name & locate counties & cities of the United Kingdom, geographical regions & their identifying human & physical characteristics, key topographical features (including hills, mountains, coasts & rivers), & land-use patterns; & understand how some of these aspects have changed over time
- identify the position & significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer & Capricorn, Arctic & Antarctic Circle, the Prime/Greenwich Meridian & time zones (including day & night)

Place knowledge

- understand geographical similarities & differences through the study of human & physical geography of a region of the United Kingdom, a region in a European country, & a region within South America

Human & physical geography

- describe & understand key aspects of:
- physical geography, including: climate zones, biomes & vegetation belts, rivers, mountains, volcanoes & earthquakes, & the water cycle
- human geography, including: types of settlement & land use, economic activity including trade links, & the distribution of natural resources including energy, food, minerals & water

Geographical skills & fieldwork

- use maps, atlases, globes & digital/computer mapping to locate countries & describe features studied
- use the eight points of a compass, four & six-figure grid references, symbols & key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom & the wider world
- use fieldwork to observe, measure, record & present the human & physical features in the local area using a range of methods, including sketch maps, plans & graphs, & digital technologies.

History

- the Roman Empire & its impact on Britain
- Britain's settlement by Anglo-Saxons & Scots
- a local history study
- a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066 (Tudors, WW11)
- the achievements of the earliest civilizations – an overview of where & when the first civilizations appeared & a depth study of Ancient Egypt
- a non-European society that provides contrasts with British history (South America- Brazilian Rainforest)

PE

- use running, jumping, throwing & catching in isolation & in combination
- play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders & tennis], & apply basic principles suitable for attacking & defending
- develop flexibility, strength, technique, control & balance [for example, through athletics & gymnastics]
- perform dances using a range of movement patterns
- take part in outdoor & adventurous activity challenges both individually & within a team
- compare their performances with previous ones & demonstrate improvement to achieve their personal best.

Swimming & water safety

- All schools must provide swimming instruction either in key stage 1 or key stage 2.
- In particular, pupils should be taught to:
- swim competently, confidently & proficiently over a distance of at least 25 metres
- use a range of strokes effectively [for example, front crawl, backstroke & breaststroke]
- perform safe self-rescue in different water-based situations

Music

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

Languages

- listen attentively to spoken language & show understanding by joining in & responding
- explore the patterns & sounds of language through songs & rhymes & link the spelling, sound & meaning of words
- engage in conversations; ask & answer questions; express opinions & respond to those of others; seek clarification & help*
- speak in sentences, using familiar vocabulary, phrases & basic language structures
- develop accurate pronunciation & intonation so that others understand when they are reading aloud or using familiar words & phrases*
- present ideas & information orally to a range of audiences*
- read carefully & show understanding of words, phrases & simple writing
- appreciate stories, songs, poems & rhymes in the language
- broaden their vocabulary & develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
- write phrases from memory, & adapt these to create new sentences, to express ideas clearly
- describe people, places, things & actions orally* & in writing
- understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine & neuter forms & the conjugation of high-frequency verbs; key features & patterns of the language; how to apply these, for instance, to build sentences; & how these differ from or are similar to English

Religious Education - Continue to follow locally agreed syllabus for RE