Primary Curriculum 2014

Detailed breakdown of changes in the core subjects

English

Mathematics

Science

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Contents

This document contains details breakdown comparisons of the new curriculum against the old national strategies and curriculum documentation. Rather than directly comparing against the 1999 curriculum, subjects are compared to the more detailed provisions that were made in more recent documents:

English Curriculum 2014	-	Primary Framework 2006
Mathematics Curriculum 2014	-	Primary Framework 2006
Science Curriculum 2014	-	QCA Scheme of Work, c2000

There is a section for each subject area, and each is divided into year groups for reference.

English

Maths

Science

Changes to the English Curriculum: Year 1

At a glance

How does the new curriculum compare to the Primary Framework (2006)?

What's gone?	What's been added?
• Requirement to write non-narrative texts • Chronological & non-chronological texts • Typing skills	• Reading of phonically-suitable texts • Reading words with contractions • Reading words with regular endings • Making inferences from texts • Learning and reciting poetry • Re-reading own writing to check for sense • Using capital letters for proper nouns • Name the letters of the alphabet • Spell the names of the days of the week • Adopt a suitable writing position • Form capital letters and digits 0-9 • Practise handwriting letter 'families'

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Year 1; green content is new to Year 1

Speaking & Listening **The National Curriculum objectives for Spoken Language are generic across Key Stages 1 and 2**	
Tell stories and describe incidents from their own experience in an audible voice	speak audibly and fluently with an increasing command of Standard English
Retell stories, ordering events using story language	*Reading objective: becoming very familiar with key stories, fairy stories and traditional tales, retelling them and considering their particular characteristics*
Interpret a text by reading aloud with some variety in pace and emphasis	
Experiment with and build new stores of words to communicate in different contexts	use relevant strategies to build their vocabulary
Listen with sustained concentration, building new stores of words in different contexts	maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
Listen to and follow instructions accurately, asking for help and clarification if necessary	
Listen to tapes or video and express views about how a story or information has been presented	
Take turns to speak, listen to others' suggestions and talk about what they are going to do	listen and respond appropriately to adults and their peers
Ask and answer questions, make relevant contributions, offer suggestions and take turns	ask relevant questions to extend their understanding and knowledge
Explain their views to others in a small group, decide how to report the group's views to the class	articulate and justify answers, arguments and opinions give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
Explore familiar themes and characters through improvisation and roleplay	participate in discussions, presentations, performances, roleplay/improvisations and debates
Act out their own and well-known stories, using voices for characters	

Reading: Word reading skills & strategies	
read longer words including simple two and three syllable words, for example 'yesterday'	read other words of more than one syllable that contain taught GPCs
use phonics to read unknown or difficult words	apply phonic knowledge and skills as the route to decode words
recognise all common digraphs and trigraphs, including more complex long vowel phonemes	respond speedily with the correct sound to graphemes (letters or groups of letters) for all 40+ phonemes, including, where applicable, alternative sounds for graphemes read accurately by blending sounds in unfamiliar words containing GPCs that have been taught
read automatically high frequency words	read common exception words, noting unusual correspondences between spelling and sound and where these occur in the word
use syntax and context to self-correct when reading for accuracy and meaning	No longer included
	read words containing taught GPCs and –s, –es, –ing, –ed, –er and –est endings
	read words with contractions, and understand that the apostrophe represents the omitted letter(s)
	read books aloud, accurately that are consistent with their developing phonic knowledge and that do not require them to use other strategies to work out words reread these books to build up their fluency and confidence in word reading.

Reading: Understanding & Interpreting Texts ; Engaging with reading	
identify the main events and characters in stories, and find specific information in simple texts	explain clearly their understanding of what is read to them
make predictions showing an understanding of ideas, events and characters	predicting what might happen on the basis of what has been read so far
recognise the main elements that shape different texts	discussing the significance of the title and events
explain the effect of patterns of language and repeated words and phrases	recognising and joining in with predictable phrases learning to appreciate rhymes and poems, and to recite some by heart
select books for personal reading and give reasons for choices	
visualise and comment on events, characters and ideas, making imaginative links to own experiences	discussing the significance of the title and events being encouraged to link what they read or hear to their own experiences
distinguish fiction and non-fiction texts and the different purposes for reading them	listening to and discussing a wide range of poems, stories and non-fiction at a level beyond that at which they can read independently
	becoming very familiar with key stories, fairy stories and traditional tales, retelling them and considering their particular characteristics
	making inferences on the basis of what is being said and done
	learning to appreciate rhymes and poems, and to recite some by heart discussing word meanings, linking new meanings to those already known

Writing: Create & Shape Texts; Text Structure & Organisation	
independently choose what to write about, plan and follow it through	write sentences by: saying out loud what they are going to write about composing a sentence orally before writing it
use key features of narrative in their own writing	Not required in new NC
convey information and ideas in simple non-narrative forms	Not required in new NC
find and use new and interesting words and phrases, including 'story language'	Not required in new NC
create short simple texts on paper and on screen which combine words with images (and sounds)	sequencing sentences to form short narratives
write chronological and non-chronological texts using simple structures	Not required in new NC
group written sentences together in chunks of meaning or subject	sequencing sentences to form short narratives
	re-reading what they have written to check that it makes sense
	discuss what they have written with the teacher or other pupils

Writing: Sentence Structures	
compose and write simple sentences independently to communicate meaning	write sentences by: saying out loud what they are going to write about composing a sentence orally before writing it
use capital letters and full stops when punctuating simple sentences	beginning to punctuate sentences using a capital letter and a full stop, question mark or exclamation mark
	using a capital letter for names of people, places, the days of the week, and the personal pronoun 'I'
	joining words and joining clauses using "and"

Writing: Word Structure & Spelling	
segment sounds in order to spell longer words including words with common digraphs and adjacent consonants	
write correct spelling for common vowel phonemes including long vowel phonemes	write from memory simple sentences dictated by the teacher that include words using the GPCs and common exception words taught so far.
use knowledge of related words and familiar suffixes in spelling new words	add prefixes and suffixes: -using the spelling rule for adding –s or –es as the plural marker for nouns and the third person singular marker for verbs -using the prefix un– -using –ing, –ed, –er and –est where no change is needed in the spelling of root words
	spell: -words containing each of the 40+ phonemes already taught -common exception words -the days of the week
	-naming the letters of the alphabet in order -using letter names to distinguish between alternative spellings of the same sound

	See also, the substantial Spelling Appendix document

Writing: Presentation	
write most letters, correctly formed and orientated	begin to form lower-case letters in the correct direction, starting and finishing in the right place
write with spaces between words accurately	leaving spaces between words
use the space bar and keyboard to type name and simple text	
	sit correctly at a table, holding a pencil comfortably and correctly
	Form capital letters
	Form digits 0-9
	understand which letters belong to which handwriting 'families' (ie letters that are formed in similar ways) and to practise these

Changes to the English Curriculum: Year 2

At a glance

How does the new curriculum compare to the Primary Framework (2006)?

What's gone?	What's been added?
• Specific mention of groupwork and discussion • Use of syntax & context for reading unfamiliar vocabulary • Use of different presentational features • Word processing	• Sooner use of phonics without overt blending • Contemporary & classic poetry • Reciting poetry • Evaluating & proof-reading own writing • Increased use of subordination • Higher expectations of spelling, including from dictation • Required introduction of joined writing

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Year 2; content now covered in Year 1; green content is new to Year 2

Speaking & Listening **The National Curriculum objectives for Spoken Language are generic across Key Stages 1 and 2**	
speak with clarity and use intonation when reading and reciting texts	select and use appropriate registers for effective communication
tell real and imagined stories using the conventions of familiar story language	*Reading objective: becoming increasingly familiar with and retelling a wider range of stories, fairy stories and traditional tales*
explain ideas and processes using language and gesture appropriately	give well-structured descriptions, explanations & and narratives for different purposes, including for expressing feelings.
listen to others in class, ask relevant questions and follow instructions	listen and respond appropriately to adults and their peers
listen to talk by an adult, remember some specific points and identify what they have learned	listen and respond appropriately to adults and their peers
respond to presentations by describing characters, repeating some highlight and commenting constructively	maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
ensure everyone contributes, allocate tasks, and consider alternatives and reach agreement	No specific mention of group work
work effectively in groups by ensuring each group member takes a turn challenging, supporting and moving on	No specific mention of group work
listen to each other's views and preferences, agree the next steps to take and identify contributions by each group member	No specific mention of group work *(Reading criterion: participate in discussion about books, poems and other works that are read to them and those that they can read for themselves, taking turns and listening to what others say)*
adopt appropriate roles in small or large groups and consider alternative courses of action	No specific mention of group work
present part of traditional stores, own stories or work from different parts of the curriculum for members of their own class	participate in discussions, presentations, performances, roleplay/improvisations and debates
consider how mood and atmosphere are created in live or recorded performance	

Reading: Word reading skills & strategies	
recognise less common digraphs and trigraphs, exploring word families	continue to apply phonic knowledge and skills as the route to decode words until automatic decoding has become embedded and reading is fluent read words containing common suffixes
routinely apply phonic knowledge for reading unknown or difficult words	read accurately by blending the sounds in words that contain the graphemes taught so far, especially recognising alternative sounds for graphemes
use syntax, context and word structure when reading for meaning	No longer mentioned
use knowledge of word structure to support reading, including polysyllabic words	read accurately words of two or more syllables that contain the same graphemes as above
	read further common exception words, noting unusual correspondence between spelling and sound and where these occur in the word
	read most words quickly and accurately, without overt sounding and blending , when they have been frequently encountered
	read aloud books closely matched to their improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation re-read these books to build up their fluency and confidence in word reading.

Reading: Understanding & Interpreting Texts ; Engaging with reading	
draw together ideas and information from across a whole text, using simple signposts in the text	discussing the sequence of events in books and how items of information are related
give some reasons for why things happen or characters change	making inferences on the basis of what is being said and done answering and asking questions
explain organisational features of texts, including alphabetical order, layout, diagrams, captions, hyperlinks and bullet points	being introduced to non-fiction books that are structured in different ways
explore how particular words are used, including words and expressions with similar meanings	discussing and clarifying the meanings of words, linking new meanings to known vocabulary discussing their favourite words and phrases
read whole books on their own, choosing and justifying selections	explain and discuss their understanding of books, poems and other material, both those that they listen to and those that they read for themselves.
engage with books through exploring and enacting interpretations	develop pleasure in reading, motivation to read, vocabulary and understanding
explain their reactions to texts, commenting on important aspects	explain and discuss their understanding of books, poems and other material, both those that they listen to and those that they read for themselves.
	a wide range of contemporary and classic poetry, stories and non-fiction
	becoming increasingly familiar with and retelling a wider range of stories, fairy stories and traditional tales
	continuing to build up a repertoire of poems learnt by heart, appreciating these and reciting some, with appropriate intonation to make the meaning clear

Writing: Create & Shape Texts; Text Structure & Organisation	
draw on knowledge and experience of texts in deciding and planning what and how to write	Consider what they are going to write before beginning by: planning or saying out loud what they are going to write about writing down ideas and/or key words, including new vocabulary encapsulating what they want to say, sentence by sentence
sustain form in narrative, including use of person and time	Learn to use the present and past tenses correctly and consistently including the progressive form
maintain consistency in non-narrative, including purpose and tense	
make adventurous word and language choices appropriate to style and purpose of text	writing down ideas and/or key words, including new vocabulary
select from different presentational features to suit particular writing purposes on paper and on screen	No longer required
use planning to establish clear sections for writing	See first box above
use appropriate language to make sections hang together	
	writing narratives about personal experiences and those of others (real and fictional) writing about real events writing poetry writing for different purposes
	make simple additions, revisions and corrections to their own writing by: -evaluating their writing with the teacher and other pupils -rereading to check that their writing makes sense and that verbs to indicate time are used correctly and consistently, including verbs in the continuous form -proofreading to check for errors in spelling, grammar and punctuation (for example, ends of sentences punctuated correctly)

Writing: Sentence Structures	
write simple and compound sentences and begin to use subordination in relation to time and reason	Learn to use subordination (using when, if, that, or because) and co-ordination (using or, and, or but)
use tense consistently (present, past and imperative)	Learn to use the present and past tenses correctly and consistently including the progressive form
use question marks and use commas to separate items in a list	learning how to use both familiar and new punctuation correctly (see English Appendix 2) , including full stops, capital letters, exclamation marks, question marks, commas for lists and apostrophes for contracted forms and the possessive

Writing: Word Structure & Spelling	
spell new words using phonics and a range of self-checking strategies	segmenting spoken words into phonemes and representing these by graphemes, spelling many correctly learning new ways of spelling phonemes for which 1 or more spellings are already known, and learn some words with each spelling, including a few common homophones
spell correctly common inflections, including plurals, tenses (*-ing*, *-ed*), words with double letters and common prefixes	add suffixes to spell longer words, including –ment, –ness, –ful, –less, –ly
	learning to spell common exception words
	learning to spell more words with contracted forms
	learning the possessive apostrophe (singular)
	write from memory simple sentences dictated by the teacher that include words using the GPCs, common exception words and punctuation taught so far.
	See also, the substantial Spelling Appendix document

Writing: Presentation	
write legibly, with ascenders and descenders distinguished	Moved to Y1
use upper and lower case letters appropriately within words	write capital letters and digits of the correct size, orientation and relationship to one another and to lower-case letters
word process short narrative and non-narrative texts	No longer required
	form lower-case letters of the correct size relative to one another
	start using some of the diagonal and horizontal strokes needed to join letters and understand which letters, when adjacent to one another, are best left unjoined
	use spacing between words that reflects the size of the letters.

Changes to the English Curriculum: Year 3

Note that the new curriculum has Years 3 and 4 combined in one programme of study

At a glance

How does the new curriculum compare to the Primary Framework (2006)?

What's gone?	What's been added? (To the Year 3 and 4 curriculum)
• Identifying presentational features of broadcast texts • Explicit mentions of drama (except performing scripts) • Use of layout, graphics & font for presentation • Keyboard/typing skills	• Recognise different forms of poetry • Prepare poetry for performance • Using fronted adverbials • Increased requirements for spelling & grammar *(see appendices mentioned below)* • Evaluate, edit & proof-read own writing

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Year 3; content now covered in KS1; green content is new to Year 3

Speaking & Listening **The National Curriculum objectives for Spoken Language are generic across Key Stages 1 and 2**	
choose and prepare poems or stories for performance, identifying appropriate expression, tone, volume and use of voices and other sounds	speak audibly and fluently with an increasing command of Standard English select and use appropriate registers for effective communication
explain process or present information, ensuring items are clearly sequenced, relevant details are included and accounts ended effectively	give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
sustain conversation, explain or giving reasons for their views or choices	maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments consider and evaluate different viewpoints, attending to and building on the contributions of others
follow up others' points and show whether they agree or disagree in whole class-discussion	
identify the presentational features used to communicate the main points in a broadcast	Not specifically mentioned
identify key sections of an informative broadcast, noting how the language used signals changes or transitions in focus	Not specifically mentioned
use talk to organise roles and action	use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
Actively include and respond to all members of the group	No mention of group work
Use the language of possibility to investigate and reflect on feelings, behaviour or relationships	give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
present events and characters through dialogue to engage the interest of an audience	Drama no longer mentioned
use some drama strategies to explore stories or issues	Drama no longer mentioned
identify and discuss qualities of others' performances, including gesture, action, costume	Drama no longer mentioned

Reading: Word reading skills & strategies	
read independently using phonics, including the full range of digraphs and trigraphs, to decode unknown words, and syntax, context and word structure when reading for meaning	apply their growing knowledge of root words, prefixes and suffixes (etymology and morphology) as listed in Appendix 1, both to read aloud and to understand the meaning of new words they meet
recognise a range of prefixes and suffixes and how they modify meaning	
	read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word.

Reading: Understanding & Interpreting Texts ; Engaging with reading	
identify and make notes of the main points of section(s) of text	retrieve and record information from non-fiction identifying main ideas drawn from more than 1 paragraph and summarising these
infer characters' feelings in fiction and consequences in logical explanations	drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
identify how different texts are organised, including reference texts, magazines, leaflets, on paper & screen	identifying how language, structure, and presentation contribute to meaning
explore how different texts appeal to readers using varied sentence structures and descriptive language	
share and compare reasons for reading preferences, extending range of books read	listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks participate in discussion about both books that are read to them and those they can read for themselves, taking turns and listening to what others say
empathise with characters and debate moral dilemmas portrayed in texts	
identify features that writers use to provoke readers' reactions	identifying themes and conventions in a wide range of books
	using dictionaries to check the meaning of words that they have read
	preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action
	Recognising some different forms of poetry

Writing: Create & Shape Texts; Text Structure & Organisation	
make decisions about form and purpose, identify success criteria and use them to evaluate their writing	Plan their writing by discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar
use beginning, middle and end to write narratives in which events are sequenced logically and conflicts resolved	in narratives, creating settings, characters and plot
write non-narrative texts using structures of different text types	in non-narrative material, using simple organisational devices
select and use a range of technical and descriptive vocabulary	composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich

	vocabulary
use layout, format, graphics, illustrations for different purposes	No longer required
signal sequence, place and time to give coherence	using conjunctions, adverbs and prepositions to express time and cause
group related material into paragraphs	organising paragraphs around a theme
	Evaluate and edit by: -assessing the effectiveness of their own and others' writing and suggesting improvements -proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences

Writing: Sentence Structures	
show relationships of time, reason and cause, through subordination and connectives	extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although using conjunctions, adverbs and prepositions to express time and cause
compose sentences using adjectives, verbs and nouns for precision, clarity and impact	choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition
clarify meaning through the use of exclamation marks and speech marks	using and punctuating direct speech
	using the present perfect form of verbs in contrast to the past tense
	using fronted adverbials
	using commas after fronted adverbials
	indicating possession by using the possessive apostrophe with singular and plural nouns
	Using the details from the grammar Appendix 2

Writing: Word Structure & Spelling	
spell unfamiliar words using known conventions and rules and a range of strategies including phonemic, morphemic and etymological	Implied for KS1
spell words containing short vowels, prefixes and suffixes and inflections, doubling the final consonant where necessary	use further prefixes and suffixes and understand how to add them
	spell further homophones
	spell words that are often misspelt
	place the possessive apostrophe accurately in words with regular plurals and in words with irregular plurals
	use the first 2 or 4 letters of a word to check its spelling in a dictionary
	write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far.

Writing: Presentation	
write neatly and legibly with handwriting generally joined, consistent in size and spacing	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
use keyboard skills to type, edit and redraft	No longer required

Changes to the English Curriculum: Year 4

Note that the new curriculum has Years 3 and 4 combined in one programme of study

At a glance

How does the new curriculum compare to the Primary Framework (2006)?

What's gone?	What's been added? (To the Year 3 and 4 curriculum)
• Identifying presentational features of broadcast texts • Explicit mentions of drama (except performing scripts) • Explaining why writers write • Keyboard/typing skills	• Recognise different forms of poetry • Prepare poetry for performance • Using fronted adverbials • Increased requirements for spelling & grammar *(see appendices mentioned below)* • Evaluate, edit & proof-read own writing

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Year 4; content now covered in KS1; green content is new to Year 4

Speaking & Listening **The National Curriculum objectives for Spoken Language are generic across Key Stages 1 and 2**	
choose and prepare poems or stories for performance, identifying appropriate expression, tone, volume and use of voices and other sounds	speak audibly and fluently with an increasing command of Standard English select and use appropriate registers for effective communication
explain process or present information, ensuring items are clearly sequenced, relevant details are included and accounts ended effectively	give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
sustain conversation, explain or giving reasons for their views or choices	maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments consider and evaluate different viewpoints, attending to and building on the contributions of others
follow up others' points and show whether they agree or disagree in whole class-discussion	
identify the presentational features used to communicate the main points in a broadcast	Not specifically mentioned
identify key sections of an informative broadcast, noting how the language used signals changes or transitions in focus	Not specifically mentioned
use talk to organise roles and action	use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
Actively include and respond to all members of the group	No mention of group work
Use the language of possibility to investigate and reflect on feelings, behaviour or relationships	give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
present events and characters through dialogue to engage the interest of an audience	Drama no longer mentioned
use some drama strategies to explore stories or issues	Drama no longer mentioned
identify and discuss qualities of others' performances, including gesture, action, costume	Drama no longer mentioned

Reading: Word reading skills & strategies	
use knowledge of word structure and a more extensive range of prefixes and suffixes to construct the meaning of words in context	apply their growing knowledge of root words, prefixes and suffixes (etymology and morphology) as listed in Appendix 1, both to read aloud and to understand the meaning of new words they meet read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word.

Reading: Understanding & Interpreting Texts ; Engaging with reading	
deduce characters' reasons for behaviour from their actions and explain how ideas are developed in non-fiction texts	drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence identifying main ideas drawn from more than 1 paragraph and summarising these identifying how language, structure, and presentation contribute to meaning
use knowledge of different organisational features of texts to find information effectively	identifying main ideas drawn from more than 1 paragraph and summarising these retrieve and record information from non-fiction
explain how writers use figurative and expressive language to create images and atmosphere	identifying how language, structure, and presentation contribute to meaning discussing words and phrases that capture the reader's interest and imagination
read extensively favourite authors/genres and experiment with other types of text	listening to and discussing a 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
interrogate texts to deepen and clarify understanding and response	asking questions to improve their understanding of a text identifying themes and conventions in a wide range of books
explore why and how writers write, including through face-to-face and online contact with authors	No longer required
	preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action
	recognising some different forms of poetry

Writing: Create & Shape Texts; Text Structure & Organisation	
develop and refine ideas in writing using planning and problem-solving strategies	Plan their writing by: -discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar -discussing and recording ideas
use settings and characterisation to engage readers' interest	in narratives, creating settings, characters and plot
summarise and shape material and ideas from different sources to write convincing and informative non-narrative texts	Organise paragraphs around a theme in non-narrative material, using simple organisational devices

show imagination through language used to create emphasis, humour, atmosphere or suspense	No longer explicitly mentioned
choose and combine words, images and other features for particular effects	composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich vocabulary and an increasing range of sentence structures
organise texts into paragraphs to distinguish between different information, events or processes	organising paragraphs around a theme
use adverbs and conjunctions to establish cohesion within paragraphs	using conjunctions, adverbs and prepositions to express time and cause using fronted adverbials
	Evaluate and edit by: -assessing the effectiveness of their own and others' writing and suggesting improvements -proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences
	proofread for spelling and punctuation errors

Writing: Sentence Structures	
clarify meaning and point of view by using phrases, clauses and adverbials	extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although using fronted adverbials
use commas to mark clauses and the apostrophe for possession	using commas after fronted adverbials indicating possession by using the possessive apostrophe with singular and plural nouns
	choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition
	Also see the grammar document: Appendix 2

Writing: Word Structure & Spelling	
spell unfamiliar words using phonemic, morphemic and etymological strategies	*See detail below*
distinguish the spelling and meaning of common homophones	spell further homophones
	spell words that are often misspelt
	place the possessive apostrophe accurately in words with regular plurals and in words with irregular plurals
	use the first 2 or 4 letters of a word to check its spelling in a dictionary
	write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far.

Writing: Presentation	
write consistently with neat, legible and joined 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
use word processing packages to present written work	No longer required

Changes to the English Curriculum: Year 5

Note that the new curriculum has Years 5 and 6 combined in one programme of study

At a glance

How does the new curriculum compare to the Primary Framework (2006)?

What's gone?	What's been added? (To Year 5 & 6)
• Specific mention of working in groups • Specific mention of dramatic skills • Creating multi-layered texts	• Preparing poetry for performance • Learning poems by heart • Formal presentations about reading • Précising long passages of writing • Greatly detailed grammar specifics (see sentence structure section below)

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Year 5; content now covered in Year Y3/4; green content is new to Year 5

Speaking & Listening **The National Curriculum objectives for Spoken Language are generic across Key Stages 1 and 2**	
tell a story using notes designed to cue techniques, such as repetition, recap and humour	gain, maintain and monitor the interest of the listener(s)
present a spoken argument, sequencing points logically, defending views with evidence and making use of persuasive language	articulate and justify answers, arguments and opinions
use and explore different question types	ask relevant questions to extend their understanding and knowledge
identify different question types and evaluate impact on audience	
identify some aspects of talk which vary between formal and informal occasions	speak audibly and fluently with an increasing command of Standard English select and use appropriate registers for effective communication
analyse the use of persuasive language	use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
plan and manage a group task over time using different levels of planning	No explicit mention of group work
understand different ways to take the lead and support others in groups	No explicit mention of group work
understand the process of decision making	No explicit mention of group work
reflect on how working in role helps to explore complex issues	No explicit mention of group work
perform a scripted scene making use of dramatic conventions	participate in discussions, presentations, performances, roleplay/improvisations and debates
use and recognise the impact of theatrical effects in drama	No specific mention of drama

Reading: Word reading skills & strategies	
use knowledge of words, roots, derivations and spelling patterns to read unknown words	apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), both to read aloud and to understand the meaning of new words that they meet.

Reading: Understanding & Interpreting Texts ; Engaging with reading	
make notes on and use evidence from across a text to explain events or ideas	summarising the main ideas drawn from more than 1 paragraph, identifying key details that support the main ideas
infer writers' perspectives from what is written and from what is implied	drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
compare different types of narrative and information texts and identify how they are structured	reading books that are structured in different ways and reading for a range of purposes identifying how language, structure and presentation contribute to meaning
explore how writers use language for comic and dramatic effects	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
reflect on reading habits and preferences and plan personal reading goals	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 recommending books that they have read to their peers, giving reasons for their choices
compare the usefulness of techniques such as visualisation, prediction, empathy in exploring the meaning of texts	discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
compare how a common theme is presented in poetry, prose and other media	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
	distinguish between statements of fact and opinion
	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

Writing: Create & Shape Texts; Text Structure & Organisation	
reflect independently and critically on own writing and edit and improve it	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 proofread for spelling and punctuation errors
experiment with different narrative forms and styles to write their own stories	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 -in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed -in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action
adapt non-narrative forms and styles to write fiction or factual texts, including poems	Not explicitly mentioned
vary pace and develop viewpoint through the use of direct and reported speech, portrayal of action, selection of detail	Implied from Y3/4
create multi-layered texts, including use of hyperlinks, linked web pages	No longer required
experiment with the order of sections and paragraphs to achieve different effects	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
change the order of material within a paragraph, moving the topic sentence	
	Draft and write by selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
	précising longer passages
	ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register

Writing: Sentence Structures	
adapt sentence construction to different text types, purposes and readers	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 (ie omitted) relative pronoun
punctuate sentences accurately, including use of speech marks and apostrophes	using commas to clarify meaning or avoid ambiguity in writing using hyphens to avoid ambiguity using brackets, dashes or commas to indicate

	parenthesis using semicolons, colons or dashes to mark boundaries between independent clauses using a colon to introduce a list punctuating bullet points consistently
	Also see the grammar document: Appendix 2

Writing: Word Structure & Spelling	
spell words containing unstressed vowels and more complex prefixes and suffixes, e.g. *im-, ir-, -tion, -cian*.	use further prefixes and suffixes and understand the guidance for adding them
group and classify words with regular spelling patterns and their meanings	
	spell some words with 'silent' letters
	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
	use dictionaries to check the spelling and meaning of words use the first 3 or 4 letters of a word to check spelling, meaning or both of these in a dictionary
	use a thesaurus

Writing: Presentation	
adapt handwriting to specific purposes, e.g. printing, use of italics	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
use a range of ICT programmes to present texts	No longer required

Changes to the English Curriculum: Year 6

Note that the new curriculum has Years 5 and 6 combined in one programme of study

At a glance

How does the new curriculum compare to the Primary Framework (2006)?

What's gone?	What's been added? (To Year 5 & 6)
• Specific mention of working in groups • Specific mention of dramatic skills • Comparison of writers' styles from different times and places • Integrate words, images and sound • Using ICT to present text	• Preparing poetry for performance • Learning poems by heart • Formal presentations about reading • Précising long passages of writing • Greatly detailed grammar specifics (see sentence structure section below)

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Year 6; green content is new to Year 6

Speaking & Listening **The National Curriculum objectives for Spoken Language are generic across Key Stages 1 and 2**	
use a range of oral techniques to present persuasive arguments and engaging narratives	articulate and justify answers, arguments and opinions give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
participate in whole-class debate using the conventions and language of debate, including Standard English	speak audibly and fluently with an increasing command of Standard English
use the techniques of dialogic talk to explore ideas, topics or issues	use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
make notes when listening for a sustained period and discuss how note taking varies depending on context and purpose	listen and respond appropriately to adults and their peers
analyse and evaluate how speakers present points effectively through use of language and gesture	No explicit mention
listen for language variation in formal and informal contexts	No explicit mention
identify the ways spoken language varies according to differences in context and purpose of use	select and use appropriate registers for effective communication
consider examples of conflict and resolution, exploring language used	No explicit mention
understand and use a variety of ways to criticise constructively and respond to criticism	No explicit mention
improvise using a range of drama strategies and conventions to explore themes such as hopes, fears, desires	Drama strategies no longer required
consider the overall impact of a live or recorded performance, identifying dramatic ways of conveying characters' ideas and building tension [creative entitlement	Drama strategies no longer required
devise a performance considering how to adapt the performance for a specific audience	Drama strategies no longer required

Reading: Word reading skills & strategies	
use knowledge of word derivations and word structure, eg affixes, acronyms and letter omission, to construct the meaning of words in context	use further prefixes and suffixes and understand the guidance for adding them use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in Appendix 1
	spell some words with 'silent' letters
	continue to distinguish between homophones and other words which are often confused
	use dictionaries to check the spelling and meaning of words use the first 3 or 4 letters of a word to check spelling, meaning or both of these in a dictionary
	use a thesaurus

Reading: Understanding & Interpreting Texts ; Engaging with reading	
appraise a text quickly, deciding on its value/quality/usefulness	Not explicitly mentioned
understand underlying themes, causes and points of view	identifying and discussing themes and conventions in and across a wide range of writing
understand how writers use different structures to create coherence and impact	identifying how language, structure and presentation contribute to meaning
recognise rhetorical devices used to argue, persuade, mislead and sway the reader	discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
read extensively and discuss personal reading with others, including in reading groups	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
sustain engagement with longer texts, using different techniques to make the text come alive	Not explicitly mentioned
compare how writers from different times and places present experiences and use language	No longer required
	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

Writing: Create & Shape Texts; Text Structure & Organisation	
set own challenges to extend achievement and experience in writing	Not explicitly mentioned
use different narrative techniques to engage and entertain the reader	in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed
in non-narrative, establish, balance and maintain viewpoints	No explicitly mentioned
select words and language drawing on their knowledge of literary features and formal and informal writing	selecting appropriate grammar and vocabulary, understanding choices can change and enhance meaning
integrate words, images and sounds imaginatively for different purposes	No longer required
use varied structures to shape and organise texts coherently	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
use paragraphs to achieve pace and emphasis	Paragraphing required in Y3/4; no further mention
	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

Writing: Sentence Structures	
express subtle distinctions of meaning, including hypothesis, speculation and supposition, by constructing sentences in varied ways	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 (ie omitted) relative pronoun
use punctuation to clarify meaning in complex sentences	using commas to clarify meaning or avoid ambiguity in writing using hyphens to avoid ambiguity using brackets, dashes or commas to indicate parenthesis using semicolons, colons or dashes to mark boundaries between independent clauses using a colon to introduce a list punctuating bullet points consistently
	Also see the grammar document: Appendix 2

Writing: Word Structure & Spelling	
spell familiar words correctly and employ a range of strategies to spell difficult and unfamiliar words	
use a range of appropriate strategies to edit, proofread and correct spelling in own work, on paper and on screen	proofread for spelling and punctuation errors
	spell some words with 'silent' letters
	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
	use dictionaries to check the spelling and meaning of words use the first 3 or 4 letters of a word to check spelling, meaning or both of these in a dictionary

Writing: Presentation	
use different styles of handwriting fir different purposes with a range of media, developing a consistent and personal legible style	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
select from a variety of ICT programmes to present text effectively and communicate information and ideas	No longer required

Changes to the Maths Curriculum: Year 1

At a glance

How does the new curriculum compare to the primary framework for Mathematics (2006)?

What's gone?	What's been added?
• Data handling/Statistics is removed from Y1 • No specific requirement to describe patterns • No specific requirements to describe ways of solving problems or explain choices	• Counting & writing numerals to 100 • Write numbers in words up to 20 • Number bonds secured to 20 • Use of vocabulary such as equal, more than, less than, fewer, etc.

In detail

A direct reference to the former objectives of the primary framework. Where an objective was covered in more than one block, it is only recorded once.

Red indicates no longer required in Y1; green content is new to Year 1

Use and apply mathematics	
Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money; recognise the value of coins	"solve one-step problems that involve addition & subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = [] – 9" "recognise and know the value of different denominations of coins and notes"
Describe a problem using numbers, practical materials and diagrams; use these to solve the problem and set the solution back in the original context	See above
Answer a question by selecting and using suitable equipment, and sorting information, shapes or objects; display results using tables and pictures	See above
Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions	Not explicitly required in new Programme of Study
Describe ways of solving problems and explain choices and decisions orally or using pictures	

Counting & Number Relationships	
Count reliably at least 20 objects recognising that when rearranged the number of objects stays the same; relate addition to counting on and count on or back in ones, twos, fives and tens; estimate a number of objects that can be checked by counting	**Extended to counting to 100** Similar
Compare and order numbers, using the related vocabulary; use the equals (=) sign	Use **+ -** and =
Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and number line	**Extended to numerals to 100; words to 20**
Say the number that is one more or less than any given number, and ten more or less for multiples of ten	Similar **use the language of: equal to, more than, less than (fewer), most, least**
Use the vocabulary of halves and quarters in context	"recognise, find and name a half as one of two equal parts of an object, shape or quantity" "recognise, find and name a quarter as one of four equal parts of an object, shape or quantity."

Number Facts	
Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts	**"represent and use number bonds and related subtraction facts within 20"**
Use knowledge of counting in twos, fives and tens to derive the multiples of 2, 5 and 10 to the tenth multiple	count in multiples of twos, fives and tens
Recall the doubles of all numbers to at least 10	"represent and use number bonds and related subtraction facts within 20"

Calculations	
Recognise that addition can be done in any order and use this to add mentally a one-digit number or a multiple of 10 to a one-digit or two-digit number	"add and subtract one-digit and two-digit numbers to 20, including zero"
Subtract one-digit numbers from one-digit and two-digit numbers and a multiple of 10 from a two-digit number; apply addition and subtraction strategies, e.g. counting on to find the difference	"add and subtract one-digit and two-digit numbers to 20, including zero"
Understand subtraction as both 'taking away' and 'difference' and use the related vocabulary and symbols to describe and record addition and subtraction number sentences	"read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs"
Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups	" solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher."

Position & Transformation	
Visualise and name common 2-D shapes and 3-D solids and describe their features; use them to make patterns	"recognise and name common 2-D and 3-D shapes"
Identify objects that rotate; recognise and make whole	"describe position, directions and movements, including half, quarter and three-quarter turn"
Visualise and describe the position of objects and direction and distance when moving them	

Measure	
Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments, e.g. a lever balance, metre stick or measuring jug	Compare, describe, measure and begin to record and solve practical problems for length/height/capacity/time
Use vocabulary related to time; order days of the week and months; read the time to the hour and half hour	"recognise and use language relating to dates, including days of the week, weeks, months and years" "tell the time to the hour and half past the hour and draw the hands on a clock face to show these times."

Data handling	
Answer a question by recording information in lists and tables; present outcomes using practical resources, pictures, block graphs or pictograms	No statistics work is included in the Year 1 programme of study
Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects	

Changes to the Maths Curriculum: Year 2

At a glance

How does the new curriculum compare to the primary framework for Mathematics (2006)?

What's gone?	What's been added?
• Rounding two-digit numbers to the nearest 10 • Halving/doubling no longer explicitly required • Using lists/tables/diagrams to sort objects	• Solving problems with subtraction • Finding/writing fractions of quantities (and lengths) • Adding two 2-digit numbers • Adding three 1-digit numbers • Demonstrating commutativity of addition & multiplication • Describing properties of shape (e.g. edges, vertices) • Measuring temperature in °C • Tell time to nearest 5 minutes • Make comparisons using < > = symbols • Recognise £ p symbols and solve simple money problems*

*Was required in 2000 Programme of Study for KS1

In detail

A direct reference to the former objectives of the primary framework. Where an objective was covered in more than one block, it is only recorded once.

Red indicates no longer required in Y2; purple content has been moved to Y1; green content is new to Year 2

Use and apply mathematics	
Solve problems involving addition	Solve problems with addition & subtraction
Identify and record the number sentences involved in a problem	Moved to Y1
Follow a line of enquiry and answer questions by selecting and using suitable equipment and information and organising and presenting the information in lists	
Describe patterns and relationships involving numbers or shapes	"order and arrange combinations of mathematical objects in patterns"
Present solutions to problems in an organised way; explain decisions	

Counting & Number Relationships	
Read and write two- and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers	"read and write numbers to at least 100 in numerals and in words" "recognising odd and even numbers"
Count up to 100 objects by grouping them and counting in tens, fives or twos; explain what each digit in a two-digit number represents, including numbers where 0 is a place holder; partition two-digit numbers in different ways, including into multiples of ten and one	"count in steps of 2, 3, and 5 from 0" "recognise the place value of each digit in a two-digit number" "use place value and number facts to solve problems."
Order two-digit numbers and position them on a number line; use the greater than (>), less than (<) signs	compare and order numbers from 0 up to 100; use <, > and = signs
Estimate a number of objects and round two-digit numbers to the nearest 10	Not explicitly mentioned
Find one half, one quarter and three quarters of shapes and sets of objects	recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity
	Adds "write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2."

Number Facts	
Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100	**Moves to Y1** "recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100"
Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves	Not explicitly mentioned
Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10	" recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables"
Use knowledge of number facts and operations to check answers to calculations	"use…number facts to solve problems"

Calculations	
Add or subtract mentally a single-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to support addition and subtraction of two-digit numbers	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers
Understand that subtraction reverses addition and vice versa and use this to derive and record related addition and subtraction number sentences	"recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems."
Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support multiplication and division calculations, including those with remainders	"solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts."
Use the symbols +, –, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence, e.g. 30 – ≤ = 24, ≤ ÷ 2 = 6	"calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs"
	Adds "show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot"; and "show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot"

Position & Transformation	
Visualise common 2-D shapes and 3-D solids and identify them from pictures of them in different positions and orientations; sort, make and describe shapes, referring to their properties	"identify 2-D shapes on the surface of 3-D shapes" "compare and sort common 2-D and 3-D shapes and everyday objects."
Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in shapes	"describe the properties of 2-D shapes, including … symmetry in a vertical line"
	Adds "describe the properties of 2-D shapes, including the number of sides"; and "describe the properties of 3-D shapes, including the number of edges, vertices and faces"
Follow and give instructions involving position, direction and movement	"use mathematical vocabulary to describe position, direction and movement"
Recognise and use whole, half and quarter turns, both clockwise and anti-clockwise; know that a right angle represents a quarter turn	"distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)"

Measure	
Estimate, compare and measure lengths, masses and capacities using standard units (m, cm, kg, litre) and suitable measuring instruments	"choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml)"
Read the numbered divisions on a scale, and interpret the divisions between them, e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered; use a ruler to draw and measure lines to the nearest centimetre	"to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels""
Use units of time (seconds, minutes, hours, days) and know the relationships between them; read the time to the quarter hour and identify time intervals, including those that cross the hour boundary	"compare and sequence intervals of time " "tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times"
	Adds "compare and order [measurements] using >, < and ="; and "recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value"; and " solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change"

Data handling	
Answer a question by recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data	" interpret and construct simple pictograms, tally charts, block diagrams and simple tables" "ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity"
Use lists, tables and diagrams to sort objects against one or two criteria; explain choices using appropriate language, including not	Not explicitly required in Programme of Study

Changes to the Maths Curriculum: Year 3

At a glance

How does the new curriculum compare to the primary framework for Mathematics (2006)?

What's gone?	What's been added?
• Specific detail of problem-solving strategies (although • the requirement to solve problems remains) • Rounding to nearest 10/100 moves to Year 4 • Reflective symmetry moves to Year 4 • Converting between metric units moves to Year 4 • No requirement to use Carroll/Venn diagrams	• Adding tens or hundreds to 3-digit numbers • Formal written methods for addition/subtraction • 8 times table replaces 6 times tables (!) • Counting in tenths • Comparing, ordering, adding & subtracting fractions with common denominators • Indentifying angles larger than/smaller than right angles • Indentify horizontal, vertical, parallel and perpendicular lines • Tell time to the nearest minute, including 24-hour clock and using Roman numerals • Know the number of seconds in a minute and the number of days in each month, year and leap year

In detail

A direct reference to the former objectives of the primary framework. Where an objective was covered in more than one block, it is only recorded once.

Red indicates no longer required in Y3; purple content has been moved to KS1; green content is new to Year 3

Use and apply mathematics	
Solve one- and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	Becomes "*solve number problems and practical problems*"
Represent the information in a problem using numbers and images; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure	No longer explicit in the Programme of Study Moved to Year 2
Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information	Becomes broader "*interpret and present data using bar charts,pictograms and tables*" Line of enquiry no longer required
Use patterns, properties of and relationships between numbers or shapes to identify similarities and differences, and to solve puzzles	No longer explicit in the Programme of Study
Describe and explain methods, choices and solutions to problems, orally and in writing, using pictures and diagrams	No longer explicit in the Programme of Study

Counting & Number Relationships	
Order whole numbers to at least 1000 and position them on a number line	Becomes "*compare and order numbers up to 1000* " and "*read and write numbers up to 1000 in numerals and in words*" Becomes "count from 0 in multiples of 4, 8, 50 and 100" building on counting in multiples of 2, 3, 5 & 10 in KS1.
Partition three-digit numbers in different ways, including into multiples of one hundred, ten and one	Becomes "*recognise the place value of each digit in a three-digit number (hundreds, tens, ones)*"
Round two- or three-digit numbers to the nearest 10 or 100 and give estimates and approximations to their sums and differences	Moves to Year 4
Read and write proper fractions, e.g. 3/7, 9/10, interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify fractions of shapes and use diagrams to compare fractions and establish equivalents	Children are expected to: • Understand and count in tenths • Recognise & find fractions of sets of objects • Recognise & use fractions • Show equivalent fractions using diagrams • Add & subtract fractions with common denominators • Compare & order unit fractions & those with common denominators

Number Facts	
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	Moves to Year 2
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts	2, 5 and 10 times-tables moved to Year 2 3, 4 and 8 required in Year 3
Use knowledge of number operations and corresponding inverses to check calculations	Becomes "*estimate the answer to a calculation and use inverse operations to check answers*"

Calculations	
Add or subtract mentally combinations of one-digit and two-digit numbers	Moves to Year 2 Adds "*add units, tens or hundreds to 3-digit numbers mentally*"
Develop and refine written methods to support, record or explain the addition and subtraction of two-digit and three-digit numbers	Becomes more explicit "*add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction*"
Multiply one- and two-digit numbers by 10 or 100, and describe the effect	Multiplying by 10 covered in Year 2; further scale left to upper KS2
Use practical and informal written methods to support multiplication and division of two-digit numbers (e.g. 13 × 3, 30 ÷ 4); round remainders up or down, depending on the context	Becomes "*write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods*"
Understand that division reverses multiplication and vice versa and use to derive and record related multiplication and division number sentences	Narrowed to "*write and calculate mathematical statements for multiplication and division using the multiplication tables that they know*"
Find unit fractions of numbers and quantities, e.g. 1/2, 1/3, 1/4 and 1/6 of 12 litres	Begins in Y2 as "*write simple fractions e.g. 1/2 of 6 = 3*"

Position & Transformation	
Relate 2-D shapes and 3-D solids to drawings of them, and describe, classify, draw and make the shapes	Becomes "*draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them*"
Draw and complete shapes with reflective symmetry and draw the reflection of a shape in a mirror line along one side	Moves to Year 4
Read and record the vocabulary of position, direction and movement, using the four compass directions to describe movement about a grid	Moves to Year 4
Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that two right angles can form a straight line	Becomes more detailed "*identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle*"
	Adds *" identify horizontal and vertical lines and pairs of perpendicular and parallel lines"*

Measure	
Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure, and record measurements	Moves to Year 4 Moves to Year 2
Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy	Reading to nearest whole unit moves to Year 2 Students measure, compare, add & subtract using common metric measures
Read the time on a 12-hour digital clock and to the nearest five minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval	Moves to year 2; Y3 must tell time to nearest minute and use specific vocab, inc. seconds, a.m., p.m., etc. Students must also use Roman numerals and 24-hour clock.
	Adds: "know the number of seconds in a minute and the number of days in each month, year and leap year"

Data handling	
Answer a question by organising, representing and interpreting data; use tally charts, frequency tables, pictograms and bar charts to highlight results and observations; use ICT to create a simple bar chart	Becomes narrower: "*solve one-step and two-step using information presented in scaled bar charts and pictograms and tables*"
Use Venn diagrams or Carroll diagrams to sort data and objects using more than one criterion	No longer explicit in Programme of Study

Changes to the Maths Curriculum: Year 4

At a glance

How does the new curriculum compare to the primary framework for Mathematics (2006)?

What's gone?	What's been added?
• Specific detail on lines of enquiry, representing problems and find strategies to solve problems and explaining methods (i.e. largely from old Ma1) • Using mixed numbers (moved to Y5) • Most ratio work moved to Y6 • Written division methods (moved to Y5) • All calculator skills removed from KS2 PoS • Measuring angles in degrees (moved to Y5)	• Solving problems with fractions and decimals to two decimal places • Rounding decimals to whole numbers • Roman numerals to 100 • Recognising equivalent fractions • Knowing equivalent decimals to common fractions • Dividing by 10 and 100 (incl. with decimal answers) • Using factor pairs • Translation of shapes • Finding perimeter/area of compound shapes • Solve time conversion problems

In detail

A direct reference to the former objectives of the primary framework. Where an objective was covered in more than one block, it is only recorded once.

Red indicates no longer required in Y4; purple content has moved to Y3; green content is new to Year 4

Use and apply mathematics	
Solve one- and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate	"*solve addition and subtraction two-step problems in contexts*" and "*solve problems involving multiplying and adding*" "*solve simple measure and money problems involving fractions and decimals to two decimal places*."
Represent a problem using number sentences and diagrams, use these to find a strategy to solve the problem and present the solution in the context of the problem	No longer explicitly in Programme of Study
Suggest a line of enquiry and the strategy needed to pursue it; collect, organise and interpret selected information to find answers	No longer explicitly in Programme of Study
Use knowledge of numbers and shapes to identify patterns, properties and relationships, and apply them to unfamiliar situations; investigate a statement involving numbers and test it with examples	No longer explicitly in Programme of Study
Report solutions to problems, explanations and reasoning orally and in writing	No longer explicitly in Programme of Study

Number Facts	
Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000	Largely moved to Y2
Identify the doubles of two-digit numbers; use to calculate doubles of multiples of 10 and 100 and derive the corresponding halves	Doubling is only mentioned in Y1; not otherwise recorded explicitly in Programme of Study
Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple	recall multiplication and division facts for multiplication tables up to 12 × 12
Use knowledge of rounding, number operations and inverses to check calculations	*"round any number to the nearest 10, 100 or 1000"* and "*use inverse operations to check answers to a calculation*"
Identify pairs of fractions that total 1	Adds "*Recognise and show families of common equivalent fractions*"; and "*Recognise/write decimal equivalent to ¼, ½, & ¾.* "

Counting & Number Relationships	
Use positive and negative numbers in context; position them on a number line and state inequalities using the symbols < and >, e.g. –3 > –5, –1 > +1	"*count backwards through zero to include negative numbers*" (< > Symbols are used from Y2)
Use decimal notation for tenths and hundredths, relating the notation to money and measurement; position one- and two-place decimals on a number line	"*compare numbers with the same number of decimal places up to two decimal places*"
Recognise the equivalence between decimal and fraction forms of tenths and hundredths	" *recognise and write decimal equivalents of any number of tenths or hundredths*"
Use fractions to identify subsets of a set of objects use diagrams to identify equivalent fractions, e.g. 6/8 and 3/4, or 70/100 and 7/10; interpret mixed numbers and position them on a number line, e.g. 31/2	Becomes more challenging "*solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number*" Moves to Year 5
Use the vocabulary of ratio and proportion to describe the relationship between two quantities, e.g. 2 to every 3, and between part and whole, e.g. 2 in every 5; estimate proportion, e.g. 'for every 1 red car there are about 4 silver cars', or 'I'm asleep for about 1/3 of the day'	Solve problems relating to "harder correspondence problems such as n objects are connected to m objects" Most ratio work moves to Year 6
	Adds "*round decimals with one decimal place to the nearest whole number*"; and "*read Roman numerals to 100*"; "*understand the introduction of zero*"

Calculations	
Add or subtract mentally pairs of two-digit whole numbers, e.g. 47 + 58, 91 – 35	Moves to Year 2+
Use the standard written methods for addition and subtraction of two-digit and three-digit whole numbers and calculations with £.p	Becomes "*add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate*" and "*use the distributive law to multiply two digit numbers by one digit*"
Multiply or divide numbers to 1000 by 10 and then 100 (whole number answers), understanding the effect; relate to scaling up or down	"*find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths*"
Develop and refine written methods for multiplying and dividing a two-digit number by a one-digit number, to include division with remainders, e.g. 15 × 9, 98 ÷ 6	"*multiply two-digit and three-digit numbers by a one-digit number using formal written layout*" Written methods for division move to Y5
Find fractions of numbers, quantities or shapes, e.g. 1/5 of 30 plums, 3/8 of a 6 by 4 rectangle	Moves to Year 3
Use a calculator to carry out one- and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money	All calculator skills move to KS3 Programme of Study (guidance says some potential calculator use in upper KS2)
	Adds "*multiply & divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together three numbers*"; and " *recognise and use factor pairs and commutativity in mental calculations*"

Position & Transformation	
Draw polygons and classify them by identifying their properties	"*compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes*"
Visualise 3-D objects from 2-D drawings and make nets of common solids	Not explicitly required in Programme of Study
Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares	Moves to Year 3 Required in KS2 Geography "*describe positions on a 2-D grid as coordinates in the first quadrant*"
Know that angles are measured in degrees and that one whole turn is 360º compare and order angles less than 180º	Moves to Year 5 "*identify acute and obtuse angles and compare and order angles up to two right angles by size*"
	Adds "*describe movements as translations*"; and "*plot points and draw sides to complete a given polygon*"

Measure	
Use standard metric units and their abbreviations when estimating, measuring and recording length, mass and capacity; know the meaning of kilo, centi and milli and, where appropriate, use decimal notation to record measurements, e.g. 1.3 m or 0.6 kg	Moves to Year 3 "*estimate, compare and calculate different measures, including money in pounds and pence*" "*convert between different units of measure (e.g. kilometre to metre; hour to minute)*"
Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit	Scale-reading begins in Y2; there are no further specific mentions
Draw rectangles and measure and calculate their perimeters, find the area of rectilinear shapes drawn on a square grid by counting squares	"*measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres*" and "*find the area of rectilinear shapes by counting squares*"
Read time to the nearest minute; use am, pm and 12-hour clock notation; calculate time intervals from clocks and timetables	Moves to Year 3 Adds "*read, write and convert time between analogue and digital 12 and 24-hour clocks*"; and "*solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days*"

Data handling	
Determine the data needed to answer a specific question; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate	"interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs" No need for specific questions, presentation, etc.
Compare the impact of representations where scales have intervals of differing step size	No longer mentioned in Programme of Study

Changes to the Maths Curriculum: Year 5

At a glance

How does the new curriculum compare to the primary framework for Mathematics (2006)?

What's gone?	What's been added?
• Detail of problem-solving process and data handling cycle no longer required • Calculator skills moved to KS3 • Probability moves to KS3 Several elements are now expected to be covered in lower KS2, e.g. decimals/fractions knowledge, points in the first quadrant; parallel/perpendicular lines	• Understand & use decimals to 3dp • Solve problems using up to 3dp, and fractions • Write %ages as fractions; fractions as decimals • Use vocabulary of primes, prime factors, composite numbers, etc. • Know prime numbers to 20 • Understand square and cube numbers • Use standard multiplication & division methods for up to 4 digits • add and subtract fractions with the same denominator • multiply proper fractions and mixed numbers by whole numbers • deduce facts based on shape knowledge • distinguish regular and irregular polygons • calculate the mean average

In detail

A direct reference to the former objectives of the primary framework. Where an objective was covered in more than one block, it is only recorded once.

Red indicates no longer required in Y5; purple content has moved to lower KS2; green content is new to Year 5

Use and apply mathematics	
Solve one and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate methods, including calculator use	"*solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why*"; and "*solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign*"; and "*solve problems involving number up to three decimal places*"; and "*solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25*"
Represent a problem by identifying and recording the calculations needed to solve it; find possible solutions and confirm them in the context of the problem	Not explicitly mentioned in Programme of Study
Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry	Not explicitly mentioned in Programme of Study
Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false	Not explicitly mentioned in Programme of Study
Explain reasoning using diagrams, graphs and text	Not explicitly mentioned in Programme of Study

Counting & Number Relationships	
Count from any given number in whole number steps and decimal number steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line	"*count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000*"
Explain what each digit represents in whole numbers and numbers with up to two decimal places, and partition these numbers	Decimals to 2dp covered in Year 4; Year 5 adds "*recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents*"; and "*read, write, order and compare numbers with up to three decimal places*"
Use sequences to scale numbers up or down; solve problems involving proportions of quantities and measurements, e.g. decrease quantities in a recipe designed to feed six people	"*scaling by simple fractions and problems involving simple rates*"
Express a smaller whole number as a fraction of a larger one; find equivalent fractions, including equivalent improper fractions and mixed numbers; relate fractions to their decimal representations	Expected in lower KS2 " *recognise mixed numbers and improper fractions and convert from one form to the other*"; and "*identify, name and write equivalent fractions of a given fraction*" Becomes "*read and write decimal numbers as fractions (e.g. 0.71 = 71/100)*"
Understand percentage as the number of parts in every 100 and express tenths and hundredths as percentages	"*recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator hundred, and as a decimal fraction*"
	Adds: "*compare and order fractions whose denominators are all multiples of the same number*"; and "*know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers*"; and "*establish whether a number up to 100 is prime and recall prime numbers up to 19*"

Number Facts	
Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences, doubles and halves of decimals, e.g. 6.5 ± 2.7, halve 5.6, double 0.34	Moves to lower KS2
Recall quickly multiplication facts up to 10 × 10, use to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts	Table knowledge expected by Y4 to 12x12 "*multiply and divide numbers mentally drawing upon known facts*"
Identify pairs of factors of two-digit whole numbers and find common multiples, e.g. for 6 and 9	"*identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.*"
Use knowledge of number facts, place value and rounding to estimate and to check calculations	"*use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy*"; and "*round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000*"; and "*round decimals with two decimal places to the nearest whole number and to one decimal place*"
`	Adds: " *recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})*"

Calculations	
Multiply mentally TU × U; use mental methods in special cases, e.g. to subtract 1995 from 6007, to multiply 18 by 25	"*multiply and divide numbers mentally drawing upon known facts*"
Use the standard written methods for addition and subtraction of whole numbers and decimals with one or two places	Moves to Year 4
Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000	*"multiply and divide whole numbers and those involving decimals by 10, 100 and 1000"*
Use the standard written methods for multiplication and division calculations of HTU × U, U.t × U, TU × TU and HTU ÷ U	*"multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers";* and *"divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context"*
Find fractions using division, e.g. 1/100 of 5 kg, and percentages of numbers and quantities, e.g. 10%, 5% and 15% of £80	Moves to lower KS2; Year 5 adds: *"add and subtract fractions with the same denominator and multiples of the same number"*; and "multiply proper fractions and mixed numbers by whole numbers"
Use a calculator to solve problems, including those involving decimals or fractions, e.g. to find 3/4 of 150 g; interpret the display correctly in the context of measurement	Calculator skills are all moved to KS3 Programme of Study
	Adds: *"solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors*"

Position & Transformation	
Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes and identify and draw nets of 3-D shapes	"*identify 3-D shapes, including cubes and other cuboids, from 2-D representations*"
Read and plot co-ordinates in the first quadrant and recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw perpendicular and parallel lines	Plotting points moves to Year 4 Parallel & Perpendicular lines moves to Year 3
Complete patterns with up to two lines of symmetry and draw the position of a shape after a reflection or translation	Translation moved to Year 4; Symmetry introduced in Y4; "*identify, describe and represent the position of a shape following a reflection or translation*"
Estimate, draw and measure acute and obtuse angles using an angle measurer or protractor to a suitable degree of accuracy; calculate angles in a straight line	"*know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles*"; *"draw given angles, and measure them in degrees (^{o})" &* *"identify* angles at a point on a straight line and ½ a turn (total 180^{o})"

Measure	
Read, use and record standard metric units to estimate and measure length, mass and capacity; convert larger to smaller units using decimals to one place, e.g. change 2.6 kg to 2600 g	"*convert between different units of metric measure*"; and "*estimate volume and capacity* "
Estimate measurements of length, mass and capacity to a required degree of accuracy, e.g. the nearest centimetre; interpret a reading that lies between two unnumbered divisions on a scale	"*estimate volume and capacity* " Not explicitly mentioned in Programme of Study
Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate its area	"*measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres*"; and " *calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes*" Adds: "*use the properties of rectangles to deduce related facts and find missing lengths and angles*"; and "*distinguish between regular and irregular polygons based on reasoning about equal sides and angles*"
Read timetables and time using 24-hour clock notation; use a calendar to calculate time intervals	24-hour clock used in lower KS2 "*complete, read and interpret information in tables, including timetables*" "solve problems involving converting between units of time"

Data handling	
Describe the occurrence of familiar events using the language of chance or likelihood	Probability moves to KS3 Programme of Study
Determine the data needed to answer a set of related questions; select and organise relevant data using frequency tables; construct pictograms and bar graphs, and line graphs that represent the frequencies of events and changes over time; use ICT to present and highlight features that lead to further questions	Narrows to "*solve comparison, sum and difference problems using information presented in a line graph*" (i.e. removes need for ICT, data process, selecting/organising data, etc.)
Find and interpret the mode of a set of data	Not explicitly mentioned in Programme of Study

Changes to the Maths Curriculum: Year 6

At a glance

How does the new curriculum compare to the primary framework for Mathematics (2006)?

What's gone?	What's been added?
• Detail of problem-solving processes no longer explicit • Divisibility tests • Calculator skills move to KS3 PoS • Rotation moves to KS3 • Probability moves to KS3 • Median/Mode/Range no longer required	• Compare and ordering fractions greater than 1 • Long division • 4 operations with fractions • Calculate decimal equivalent of fractions • Understand & use order of operations • Plot points in all 4 quadrants • Convert between miles and kilometres • Name radius/diameter and know relationship • Use formulae for area/volume of shapes • Calculate area of triangles & parallelograms • Calculate volume of 3-d shapes • Use letters to represent unknowns (algebra) • Generate and describe linear sequences • Find solutions to unknowns in problems

In detail

A direct reference to the former objectives of the primary framework. Where an objective was covered in more than one block, it is only recorded once.

Red indicates no longer required in Y6; purple content has moved to Y5; green content is new to Year 6

Use and apply mathematics	
Solve multi-step problems, and problems involving fractions, decimals and percentages, choosing and using appropriate and efficient methods at each stage, including calculator use	*"solve problems involving addition, subtraction, multiplication and division"; "solve problems which require answers to be rounded to specified degrees of accuracy"; and "solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate"*
Represent a problem by identifying and recording the calculations needed to solve it, using symbols for unknown quantities where appropriate; set solutions in the original context and check their accuracy	*"solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why"* *"use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy."* *(See also algebra notes at foot of page)*
Suggest, plan and develop lines of enquiry; collect, organise and represent information, interpret results and review methods; identify and answer related questions	Not explicitly in Programme of Study
Recognise and use sequences, patterns and relationships involving numbers and shapes; suggest hypotheses and test them systematically	Not explicitly in Programme of Study
Explain reasoning and conclusions, using symbols where appropriate	Not explicitly in Programme of Study

Counting & Number Relationships	
Find the difference between a positive and a negative integer, or two negative integers, in context	"*use negative numbers in context, and calculate intervals across zero*"
Use decimal notation for tenths, hundredths and thousandths, partition and order numbers with up to three decimal places, and position them on the number line	Moves to Year 5
Round numbers, including those with up to three decimal places	Becomes "*round any whole number to a required degree of accuracy*" and "*solve problems which require answers to be rounded to specified degrees of accuracy*"
Use fractions, percentages and the vocabulary of ratio and proportion to describe the relationships between two quantities and solve problems, e.g. identify the quantities needed to make a fruit drink by mixing water and juice in a given ratio	**"***solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts*"
Express a larger whole number as a fraction of a smaller one; simplify fractions; order a set of fractions by converting them to fractions with a common denominator	Expected lower in KS2 "*use common factors to simplify fractions; use common multiples to express fractions in the same denomination*"
Express one quantity as a percentage of another, e.g. express £400 as a percentage of £1000; find equivalent percentages, decimals and fractions	*"solve problems involving the calculation of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison"*
	Adds: "compare and order fractions, including fractions >1"

Number Facts	
Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimal numbers, e.g. 0.8 × 7, 4.8 ÷ 6	**"***multiply one-digit numbers with up to two decimal places by whole numbers*"
Use knowledge of multiplication facts to derive quickly squares of numbers to 12 × 12 the corresponding squares of multiples of 10	Expected from lower KS2 Not explicitly mentioned in Programme of Study
Recognise that prime numbers have only two factors and identify prime numbers less than 100; find the prime factors of two-digit whole numbers	Moves to Year 5 *"identify common factors, common multiples and prime numbers"*
Use approximations and apply tests of divisibility to check results	Not explicitly mentioned in Programme of Study

Calculations	
Calculate mentally with whole numbers and decimals, e.g. U.t ± U.t, TU × U, U.t × U, TU ÷ U, U.t ÷ U	*"perform mental calculations, including with mixed operations and large numbers"*
Consolidate the use of standard written methods to add, subtract, multiply and divide integers and decimal numbers; calculate the answer to HTU ÷ U and U.t ÷ U to one or two decimal places	*"multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication"* *"use written division methods in cases where the answer has up to two decimal places"* *"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"*
Find fractions and percentages of whole-number quantities, e.g. 5/8 of 96, 65% of £260	Expected lower in KS2.
Use a calculator to solve problems involving multi-step calculations; carry out calculations involving time by converting hours and minutes to minutes	Calculator skills move to KS3 Programme of Study
	Adds: *"use their knowledge of the order of operations to carry out calculations involving the four operations"*
	Adds: *"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"; *"divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6)"* *"associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (eg. 3/8)"*

Position & Transformation	
Describe, identify and visualise parallel and perpendicular edges or faces and use these properties to classify 2-D shapes and 3-D solids	*" recognise, describe and build simple 3-D shapes, including making nets"*
Make and draw shapes with increasing accuracy and apply knowledge of their properties	*"draw 2-D shapes using given dimensions and angles"*
Visualise and draw on grids of different types where a shape will be after reflection, after translations or after rotation through 90º or 180º about its centre or one of its vertices; transform images using ICT	*"draw and translate simple shapes on the coordinate plane, and reflect them in the axes."* *Rotation moved to KS3 Programme of Study*
Use coordinates in the first quadrant to draw and locate shapes	Moves to Year 4 Becomes "*describe positions on the full coordinate grid (all four quadrants)*"
Use a protractor to estimate, measure and draw angles, on their own and in shapes; calculate angles in a triangle or around a point	*"recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles."*
	Adds: "solve problems involving similar shapes where the scale factor is known or can be found"
	Adds: "compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons"
	Adds: "illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius"

Measure	
Use standard metric units of measure and convert between units using decimals to two places notation, e.g. change 2.75 litres to 2750 ml, or vice versa	*"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"*
Measure and calculate using imperials units still in everyday use; know their approximate equivalent metric values	Common conversions included in Year 5 *Adds "convert between miles and kilometres"*
Read scales and record results to a required degree of accuracy, recognising that the measurement made is approximate	"*use, read, write and convert between standard units, […], using decimal notation to up to three decimal places*"
Calculate the perimeter and area of rectilinear shapes; estimate the area of an irregular shape by counting squares	Moves to Year 4/5 Adds:"*recognise that shapes with the same areas can have different perimeters and vice versa*"; "recognise when it is possible to use formulae for area and volume of shapes"; "*calculate the area of parallelograms and triangles*"; and "*calculate, estimate and compare volume of cubes and cuboids using standard units*"

Data handling	
Describe and predict outcomes from data using the language of chance or likelihood	Probability moves to KS3 Programme of Study
Solve problems involving selecting, processing, presenting and interpreting data, using ICT where appropriate; construct and interpret frequency tables, bar charts with grouped discrete data, and line graphs; interpret pie charts; draw conclusions and identify further questions to ask	*"interpret and construct pie charts and line graphs and use these to solve problems"* No detail about data handling process is included

Describe and interpret results and solutions to problems using the mode, range, median and mean	*"calculate and interpret the mean as an average."* *(Other averages are not explicitly mentioned)*

Algebra	
using symbols for unknown quantities where appropriate	• express missing number problems algebraically • use simple formulae expressed in words • generate and describe linear number sequences • find pairs of numbers that satisfy number sentences involving two unknowns • enumerate all possibilities of combinations of two variables.

Changes to the Science Curriculum: Year 1

At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
• Making predictions and judging unfair tests • Reviewing & communicating results • Life processes (e.g. movement, growth, change) • Plant requirements (e.g. light, water, etc.) • Uses of materials according to properties • Light & dark • Sound & Hearing • Forces	• Identification and naming of plants and animals in key groups • Seasonal change • Weather

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y1; green content is new to Year 1

Scientific Investigation	
it is important to collect evidence by making observations and measurements when trying to answer a question	"observing closely, using simple equipment performing simple tests" "using their observations and ideas to suggest answers to questions"
ask questions and decide how they might find answers to them	"asking simple questions and recognising that they can be answered in different ways"
use first-hand experience and simple information sources to answer questions	"performing simple tests" "gathering and recording data to help in answering questions"
think about what might happen before deciding what to do	Not explicitly required in new PoS
recognise when a test or comparison is unfair	Not explicitly required in new PoS
follow simple instructions to control the risks to themselves and to others	Not explicitly required in new PoS
explore, using the senses of sight, hearing, smell, touch and taste as appropriate, and make and record observations and measurements	"identifying and classifying"
communicate what happened in a variety of ways, including using ICT	Not explicitly required in new PoS
make simple comparisons and identify simple patterns or associations	"identifying and classifying"
compare what happened with what they expected would happen, and try to explain it, drawing on their knowledge and understanding	"using their observations and ideas to suggest answers to questions"
review their work and explain what they did to others	Not explicitly required in new PoS

Biology 1: Ourselves	
the differences between things that are living and things that have never been alive	Not required until Y2
that animals, including humans, move, feed, grow, use their senses and reproduce	Not required until Y2
to recognise and compare the main external parts of the bodies of humans and other animals	"describe and compare the structure of a variety of common animals"
that humans and other animals need food and water to stay alive	Not required until Y2
about the senses that enable humans and other animals to be aware of the world around them	"identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each

	sense”
	“ identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals”
	“ identify and name a variety of common animals that are carnivores, herbivores and omnivores”

Biology 2: Growing Plants	
to relate life processes to animals and plants found in the local environment	Not required until Y2
to recognise that plants need light and water to grow	Not required until Y2
to recognise and name the leaf, flower, stem and root of flowering plants	“ identify and describe the basic structure of a variety of common flowering plants, including trees”
	“identify and name a variety of common wild and garden plants, including deciduous and evergreen trees”

Chemistry 1: Sorting & Using Materials	
use their senses to explore and recognise the similarities and differences between materials	“describe the simple physical properties of a variety of everyday materials”
sort objects into groups on the basis of simple material properties	“distinguish between an object and the material from which it is made” “compare and group together a variety of everyday materials on the basis of their simple physical properties”
recognise and name common types of material and recognise that some of them are found naturally	“ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock”
find out about the uses of a variety of materials and how these are chosen for specific uses on the basis of their simple properties	Moved to Year 2

Physics 1: Light & Dark	
to identify different light sources, including the Sun	No longer required in KS1
that darkness is the absence of light	No longer required in KS1

Physics 2: Pushes & Pulls	
to find out about, and describe the movement of, familiar things	compare how things move on different surfaces
that both pushes and pulls are examples of forces	No longer required in KS1
to recognise that when things speed up, slow down or change direction, there is a cause	No longer required in KS1

Physics 3: Sound & Hearing	
that there are many kinds of sound and sources of sound	No longer required in KS1
that sounds travel away from sources, getting fainter as they do so, and that they are heard when they enter the ear	No longer required in KS1

Additional Content	
	observe changes across the 4 seasons
	observe and describe weather associated with the seasons and how day length varies

Changes to the Science Curriculum: Year 2

At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
• Making predictions and judging unfair tests • Reviewing & communicating results • Drugs as medicines • Treating others & animals with care/sensitivity • Care for the environment • Changes to materials with heating/cooling • Forces & movement • Electricity	• Simple food chains • Identify suitable materials for uses (moved from Y1) • Movement on different surfaces

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y2; purple content has been moved to Y1; green content is new to Year 2

Scientific Investigation	
it is important to collect evidence by making observations and measurements when trying to answer a question	"observing closely, using simple equipment performing simple tests" "using their observations and ideas to suggest answers to questions"
ask questions and decide how they might find answers to them	"asking simple questions and recognising that they can be answered in different ways"
use first-hand experience and simple information sources to answer questions	"performing simple tests" "gathering and recording data to help in answering questions"
think about what might happen before deciding what to do	Not explicitly required in new PoS
recognise when a test or comparison is unfair	Not explicitly required in new PoS
follow simple instructions to control the risks to themselves and to others	Not explicitly required in new PoS
explore, using the senses of sight, hearing, smell, touch and taste as appropriate, and make and record observations and measurements	"identifying and classifying"
communicate what happened in a variety of ways, including using ICT	Not explicitly required in new PoS
make simple comparisons and identify simple patterns or associations	"identifying and classifying"
compare what happened with what they expected would happen, and try to explain it, drawing on their knowledge and understanding	"using their observations and ideas to suggest answers to questions"
review their work and explain what they did to others	Not explicitly required in new PoS

Biology 1: Health & Growth	
that animals, including humans, move, feed, grow, use their senses and reproduce	"explore and compare the differences between things that are living, dead, and things that have never been alive"
that humans and other animals need food and water to stay alive	"find out about and describe the basic needs of animals, including humans, for survival (water, food and air)"
that taking exercise and eating the right types and amounts of food help humans to keep healthy	" describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene."
about the role of drugs as medicines	Not required in KS1
that humans and other animals can produce offspring and that these offspring grow into adults	"notice that animals, including humans, have offspring which grow into adults"

Biology 2: Plants & Animals in the local environment	
that animals, including humans, move, feed, grow, use their senses and reproduce	"explore and compare the differences between things that are living, dead, and things that have never been alive" "describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food."
identify similarities and differences between local environments and ways in which these affect animals and plants that are found there	"identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other"
find out about the different kinds of plants and animals in the local environment to relate life processes to animals and plants found in the local environment	"identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other"
how to treat animals with care and sensitivity	No longer mentioned in PoS
to recognise and name the leaf, flower, stem and root of flowering plants	Covered in Year 1
that seeds grow into flowering plants	"observe and describe how seeds and bulbs grow into mature plants" "find out and describe how plants need water, light and a suitable temperature to grow and stay healthy."
care for the environment	No longer mentioned in PoS
	"identify and name a variety of plants and animals in their habitats, including microhabitats"

Biology 3: Variation	
to recognise and compare the main external parts of the bodies of humans and other animals	Covered in Y1
recognise similarities and differences between themselves and others, and to treat others with sensitivity	Not explicitly required in PoS
group living things according to observable similarities and differences	Could be part of new 'Thinking Scientifically' requirement

Chemistry 1: Grouping & Changing Materials	
recognise and name common types of material and recognise that some of them are found naturally	Moved to Y1
find out how the shapes of objects made from some materials can be changed by some processes, including squashing, bending, twisting and stretching	"find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching"
explore and describe the way some everyday materials change when they are heated or cooled	No longer required at KS1
(moved from Y1 unit)	"identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses"
(linked to former Sc4 material)	compare how things move on different surfaces.

Physics 1: Forces & Movement	
to find out about, and describe the movement of, familiar things	No longer required in KS1
to recognise that when things speed up, slow down or change direction, there is a cause	No longer required in KS1

Physics 2: Using Electricity	
about everyday appliances that use electricity	No longer required in KS1
about simple series circuits involving batteries, wires, bulbs and other components	No longer required in KS1
how a switch can be used to break a circuit	No longer required in KS1

Changes to the Science Curriculum: Year 3

At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
• Functions/care of teeth • Human life processes • Grouping materials by properties • Opposing forces	• Skeletons & muscles in humans • Flowers as part of the plant life cycle • Fossils • Soils as rocks + organic matter • Light reflected off surfaces

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y3; purple content has been moved to Y2; green content is new to Year 3

Scientific Investigation	
that science is about thinking creatively to try to explain how living and non-living things work, and to establish links between causes and effects	Not explicitly mentioned
that it is important to test ideas using evidence from observation and measurement	"using straightforward scientific evidence to answer questions or to support their findings"
ask questions that can be investigated scientifically and decide how to find answers	"asking relevant questions and using different types of scientific enquiries to answer them"
consider what sources of information, including first-hand experience and a range of other sources, they will use to answer questions	"using straightforward scientific evidence to answer questions or to support their findings"
think about what might happen or try things out when deciding what to do, what kind of evidence to collect, and what equipment and materials to use	"setting up simple practical enquiries, comparative and fair tests"
make a fair test or comparison by changing one factor and observing or measuring the effect while keeping other factors the same	"setting up simple practical enquiries, comparative and fair tests"
use simple equipment and materials appropriately and take action to control risks	"making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers"
make systematic observations and measurements, including the use of ICT for datalogging	
check observations and measurements by repeating them where appropriate	Not explicitly mentioned
use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner	"recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables"
make comparisons and identify simple patterns or associations in their own observations and measurements or other data	" identifying differences, similarities or changes related to simple scientific ideas and processes"
use observations, measurements or other data to draw conclusions	"gathering, recording, classifying and presenting data in a variety of ways to help in answering questions"
decide whether these conclusions agree with any prediction made and/or whether they enable further predictions to be made	"using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions"
use their scientific knowledge and understanding to explain observations, measurements or other data or conclusions	"reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions"
review their work and the work of others and describe its significance and limitations	Not explicitly mentioned

Biology 1: Teeth & Eating	
about the functions and care of teeth	Moved to Year 4
about the need for food for activity and growth, and about the importance of an adequate and varied diet for health	"identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat"
	identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Biology 2: Helping Plants Grow Well	
that the life processes common to humans and other animals include nutrition, movement, growth and reproduction	"explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal"
the effect of light, air, water and temperature on plant growth	"explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant"
the role of the leaf in producing new material for growth	"identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers" " investigate the way in which water is transported within plants"
that the root anchors the plant, and that water and minerals are taken in through the root and transported through the stem to other parts of the plant	

Chemistry 1: Characteristics of Materials	
to compare everyday materials and objects on the basis of their material properties, including hardness, strength, flexibility and magnetic behaviour, and to relate these properties to everyday uses of the materials	Covered in Y5

Chemistry 2: Rocks and Soils	
to describe and group rocks and soils on the basis of their characteristics, including appearance, texture and permeability	"compare and group together different kinds of rocks on the basis of their appearance and simple physical properties"
	"describe in simple terms how fossils are formed when things that have lived are trapped within rock"
	"recognise that soils are made from rocks and organic matter."

Physics 1: Magnets & Springs	
about the forces of attraction and repulsion between magnets, and about the forces of attraction between magnets and magnetic materials	"notice that some forces need contact between 2 objects, but magnetic forces can act at a distance" "observe how magnets attract or repel each other and attract some materials and not others" "compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials" "describe magnets as having 2 poles" "predict whether 2 magnets will attract or repel each other, depending on which poles are facing."
that when objects are pushed or pulled, an opposing pull or push can be felt	Not explicitly mentioned in PoS

Physics 2: Light & Shadows	
that light travels from a source	Implied by other statements
that light cannot pass through some materials, and how this leads to the formation of shadows	"recognise that shadows are formed when the light from a light source is blocked by a solid object"
how the position of the Sun appears to change during the day, and how shadows change as this happens	"find patterns in the way that the size of shadows change."
Moved up from KS1	"recognise that they need light in order to see things and that dark is the absence of light"
	"notice that light is reflected from surfaces"
	"recognise that light from the sun can be dangerous and that there are ways to protect their eyes"

Additional Content	
	compare how things move on different surfaces

Changes to the Science Curriculum: Year 4

At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
• Skeletons & muscles (moved to Y3) • Adaptation to environment • Thermal insulators • Separating mixtures • Friction & forces • Changing brightness of bulbs in circuits	• Digestive system • Teeth • Changing environments • Changes of state/water cycle • Common uses of electricity • Sound as vibrations

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y4; purple content has been moved to Y3; green content is new to Year 4

Scientific Investigation	
that science is about thinking creatively to try to explain how living and non-living things work, and to establish links between causes and effects	Not explicitly mentioned
that it is important to test ideas using evidence from observation and measurement	"using straightforward scientific evidence to answer questions or to support their findings"
ask questions that can be investigated scientifically and decide how to find answers	"asking relevant questions and using different types of scientific enquiries to answer them"
consider what sources of information, including first-hand experience and a range of other sources, they will use to answer questions	"using straightforward scientific evidence to answer questions or to support their findings"
think about what might happen or try things out when deciding what to do, what kind of evidence to collect, and what equipment and materials to use	"setting up simple practical enquiries, comparative and fair tests"
make a fair test or comparison by changing one factor and observing or measuring the effect while keeping other factors the same	"setting up simple practical enquiries, comparative and fair tests"
use simple equipment and materials appropriately and take action to control risks	"making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers"
make systematic observations and measurements, including the use of ICT for datalogging	
check observations and measurements by repeating them where appropriate	Not explicitly mentioned
use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner	"recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables"
make comparisons and identify simple patterns or associations in their own observations and measurements or other data	" identifying differences, similarities or changes related to simple scientific ideas and processes"
use observations, measurements or other data to draw conclusions	"gathering, recording, classifying and presenting data in a variety of ways to help in answering questions"
decide whether these conclusions agree with any prediction made and/or whether they enable further predictions to be made	"using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions"
use their scientific knowledge and understanding to explain observations, measurements or other data or conclusions	"reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions"
review their work and the work of others and describe its significance and limitations	Not explicitly mentioned

Biology 1: Moving & Growing	
that humans and some other animals have skeletons and muscles to support and protect their bodies and to help them to move	Moved to Y3
Moved from Y3	"describe the simple functions of the basic parts of the digestive system in humans"
	"identify the different types of teeth in humans and their simple functions"

Biology 2: Habitats	
how locally occurring animals and plants can be identified and assigned to groups	"explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment"
that the variety of plants and animals makes it important to identify them and assign them to groups	"recognise that living things can be grouped in a variety of ways"
about the different plants and animals found in different habitats	Implied by other objectives
how animals and plants in two different habitats are suited to their environment	Covered mainly in Y6
to use food chains to show feeding relationships in a habitat	"construct and interpret a variety of food chains, identifying producers, predators and prey"
about how nearly all food chains start with a green plant	
	"recognise that environments can change and that this can sometimes pose dangers to living things."

Chemistry 1: Keeping Warm	
that some materials are better thermal insulators than others	Moved to Y5
that temperature is a measure of how hot or cold things are	Implied by chemistry content

Chemistry 2: Solids, liquids & how they can be separated	
how to separate solid particles of different sizes by sieving	Moved to Y5
that some solids dissolve in water to give solutions but some do not	Moved to Y5
how to separate insoluble solids from liquids by filtering	Moved to Y5
to use knowledge of solids, liquids and gases to decide how mixtures might be separated	"compare and group materials together, according to whether they are solids, liquids or gases"
	"observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)"
	"identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature."

Physics 1: Friction	
about friction, including air resistance, as a force that slows moving objects and may prevent objects from starting to move	Moved to Year 5
how to measure forces and identify the direction in which they act	Moved to Year 5

Physics 2: Circuits & Conductors	
to construct circuits, incorporating a battery or power supply and a range of switches, to make electrical devices work	"construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and 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 and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit"
how changing the number or type of components in a series circuit can make bulbs brighter or dimmer	Moved to Year 6
Moved from KS1	identify common appliances that run on electricity

Additional Content: Sound	
Moved from Year 5	"identify how sounds are made, associating some of them with something vibrating"
Moved from Year 5	" recognise that vibrations from sounds travel through a medium to the ear"
Moved from Year 5	" find patterns between the pitch of a sound and features of the object that produced it"
Moved from Year 5	"find patterns between the volume of a sound and the strength of the vibrations that produced it."
Moved from KS1	"recognise that sounds get fainter as the distance from the sound source increases"

Changes to the Science Curriculum: Year 5

At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
• Heart & Circulation (moved to Y6) • Health, diet, drugs & exercise (moved to Y6) • Water Cycle (moved to Y4) • Sounds as vibrations (moved to Y4)	• Life cycles of non-mammals • Reversible & irreversible changes • Materials' properties • Planets in the solar system • Gravity & other forces • Mechanisms

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y5; purple content has been moved to Y4; green content is new to Year 5

Scientific Investigation	
that science is about thinking creatively to try to explain how living and non-living things work, and to establish links between causes and effects	Not explicitly mentioned
that it is important to test ideas using evidence from observation and measurement	"using straightforward scientific evidence to answer questions or to support their findings"
ask questions that can be investigated scientifically and decide how to find answers	"asking relevant questions and using different types of scientific enquiries to answer them"
consider what sources of information, including first-hand experience and a range of other sources, they will use to answer questions	"using straightforward scientific evidence to answer questions or to support their findings"
think about what might happen or try things out when deciding what to do, what kind of evidence to collect, and what equipment and materials to use	"setting up simple practical enquiries, comparative and fair tests"
make a fair test or comparison by changing one factor and observing or measuring the effect while keeping other factors the same	"setting up simple practical enquiries, comparative and fair tests"
use simple equipment and materials appropriately and take action to control risks	"making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers"
make systematic observations and measurements, including the use of ICT for datalogging	
check observations and measurements by repeating them where appropriate	Not explicitly mentioned
use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner	"recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables"
make comparisons and identify simple patterns or associations in their own observations and measurements or other data	" identifying differences, similarities or changes related to simple scientific ideas and processes"
use observations, measurements or other data to draw conclusions	"gathering, recording, classifying and presenting data in a variety of ways to help in answering questions"
decide whether these conclusions agree with any prediction made and/or whether they enable further predictions to be made	"using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions"
use their scientific knowledge and understanding to explain observations, measurements or other data or conclusions	"reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions"
review their work and the work of others and describe its significance and limitations	Not explicitly mentioned

Biology 1: Keeping Healthy	
that the heart acts as a pump to circulate the blood through vessels around the body, including through the lungs	Moved to Year 6
about the effect of exercise and rest on pulse rate	
about the effects on the human body of tobacco, alcohol and other drugs, and how these relate to their personal health	
about the importance of exercise for good health	

Biology 2: Life Cycles	
that the life processes common to plants include *growth, nutrition and* reproduction	Not explicitly mentioned, although implied by statements across several year groups
about the parts of the flower and their role in the life cycle of flowering plants, including pollination, seed formation, seed dispersal and germination	describe the life process of reproduction in some plants and animals.
about the main stages of the human life cycle	describe the changes as humans develop to old age. describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird

Chemistry 1: Gases Around Us	
to recognise differences between solids, liquids and gases, in terms of ease of flow and maintenance of shape and volume	Implied in statements below

Chemistry 2: Changing State	
the part played by evaporation and condensation in the water cycle	Moved down to Year 4
Moved from Y6	"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 "
	"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."

Additional Content: Properties 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"
	"give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic"

Physics 1: Earth, Sun & Moon	
that the Sun, Earth and Moon are approximately spherical	"describe the Sun, Earth and Moon as approximately spherical bodies"
how the position of the Sun appears to change during the day, and how shadows change as this happens	"use the idea of the Earth's rotation to explain the apparent movement of the sun across the sky"

how day and night are related to the spin of the Earth on its own axis	"use the idea of the Earth's rotation to explain day and night"
that the Earth orbits the Sun once each year, and that the Moon takes approximately 28 days to orbit the Earth	"describe the movement of the Moon relative to the Earth"
	describe the movement of the Earth, and other planets, relative to the Sun in the solar system

Physics 2: Changing Sounds	
that sounds are made when objects vibrate but that vibrations are not always directly visible	All moved to Year 4
how to change the pitch and loudness of sounds produced by some vibrating objects	
that vibrations from sound sources require a medium [for example, metal, wood, glass, air] through which to travel to the ear	

Additional Content: 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"

Changes to the Science Curriculum: Year 6

At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
• Protecting the environment • Food chains • Usefulness of micro-organisms • Reversible & Irreversible changes (moved to Y5) • Gravity & forces	• Classification of plants & animals • Evolution • Circulatory system • Diet, exercise, drugs & lifestyle

In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y6; purple content has been moved to Y5; green content is new to Year 6

Scientific Investigation	
that science is about thinking creatively to try to explain how living and non-living things work, and to establish links between causes and effects	Not explicitly mentioned
that it is important to test ideas using evidence from observation and measurement	"using straightforward scientific evidence to answer questions or to support their findings"
ask questions that can be investigated scientifically and decide how to find answers	"asking relevant questions and using different types of scientific enquiries to answer them"
consider what sources of information, including first-hand experience and a range of other sources, they will use to answer questions	"using straightforward scientific evidence to answer questions or to support their findings"
think about what might happen or try things out when deciding what to do, what kind of evidence to collect, and what equipment and materials to use	"setting up simple practical enquiries, comparative and fair tests"
make a fair test or comparison by changing one factor and observing or measuring the effect while keeping other factors the same	"setting up simple practical enquiries, comparative and fair tests"
use simple equipment and materials appropriately and take action to control risks	"making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers"
make systematic observations and measurements, including the use of ICT for datalogging	
check observations and measurements by repeating them where appropriate	Not explicitly mentioned
use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner	"recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables"
make comparisons and identify simple patterns or associations in their own observations and measurements or other data	" identifying differences, similarities or changes related to simple scientific ideas and processes"
use observations, measurements or other data to draw conclusions	"gathering, recording, classifying and presenting data in a variety of ways to help in answering questions"
decide whether these conclusions agree with any prediction made and/or whether they enable further predictions to be made	"using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions"
use their scientific knowledge and understanding to explain observations, measurements or other data or conclusions	"reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions"
review their work and the work of others and describe its significance and limitations	Not explicitly mentioned

Biology 1: Interdependence & Adaptation	
to make links between life processes in familiar animals and plants and the environments in which they are found	identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
the effect of light, air, water and temperature on plant growth	Moved to Year 3
about ways in which living things and the environment need protection	No longer required in PoS
to use food chains to show feeding relationships in a habitat	Moved to Year 4
	give reasons for classifying plants and animals based on specific characteristics.
	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 offspring vary and are not identical to their parents

Biology 2: Micro-organisms	
that micro-organisms are living organisms that are often too small to be seen, and that they may be beneficial or harmful	describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals

Additional Content	
Moved from Year 5	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
Moved from Year 5	recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
Moved from Year 5	describe the ways in which nutrients and water are transported within animals, including humans.

Chemistry 1: More about dissolving	
to describe changes that occur when materials are mixed	Moved to Year 5
about reversible changes, including dissolving, melting, boiling, condensing, freezing and evaporating	Moved to Year 5
how to recover dissolved solids by evaporating the liquid from the solution	Moved to Year 5

Chemistry 2: Reversible & Irreversible changes	
that non-reversible changes result in the formation of new materials that may be useful	Moved to Year 5
that burning materials results in the formation of new materials and that this change is not usually reversible	Moved to Year 5

Physics 1: Forces in Action	
that objects are pulled downwards because of the gravitational attraction between them and the Earth	Moved to Year 5
about friction, including air resistance, as a force that slows moving objects and may prevent objects from starting to move	Moved to Year 5
that when objects [for example, a spring, a table] are pushed or pulled, an opposing pull or push can be felt	Moved to Year 5
how to measure forces and identify the direction in which they act	Moved to Year 5

Physics 2: How we see things	
that light travels from a source	"recognise that light appears to travel in straight lines"
that light is reflected from surfaces	"use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye"
that light cannot pass through some materials, and how this leads to the formation of shadows	"use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them"
that we see things only when light from them enters our eyes	"use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye" "explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes""

Physics 2: Changing Circuits	
how changing the number or type of components in a series circuit can make bulbs brighter or dimmer	"associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit" "compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches"
how to represent series circuits by drawings and conventional symbols, and how to construct series circuits on the basis of drawings and diagrams using conventional symbols	"use recognised symbols when representing a simple circuit in a diagram"