Year 5 - Maths

Year 5	Number and place value	Addition and subtraction	Multiplication and division	Fractions	Measurement	Geometry	
						Properties of shape	Position and direction
Autumn	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit round any number up to 1 000 000 to the nearest 10, 100, 1000, 10,000 and 100,000 solve number problems and practical problems that involve all of the above	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Statistics: complete, read and interpret information in tables, including timetables.	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. know and use the vocabulary of prime numbers multiply and divide numbers mentally drawing upon known facts multiply and divide whole numbers and those involving decimals by 10, 100 solve problems involving addition, subtraction, multiplication and division	compare and order fractions whose denominators are all multiples of the same number recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. 2 /5 + 4 /5 = 6 /5 = 1 1 /5) add and subtract fractions with the same denominator round decimals	convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangle (including squares) and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes solve problems involving converting between units of time Statistics: complete, read and interpret information in tables, including timetables.	identify 3-D shapes, including cubes and other cuboids, from 2-D representations know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles identify: angles at a point and one whole turn (total 360^o)	
Spring	count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers Statistics: solve comparison, sum and difference problems using information presented in a line graph	know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers multiply numbers up to 4 digits by a one- or two-digit number using written methods recognise and use square numbers, and the notation for squared (^{2}) multiplication and division and a combination of these, including understanding the meaning of the equals sign	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths add and subtract fractions with the same denominator and multiples of the same number read and write decimal numbers as fractions (e.g. 0.71 = 71 /100) recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place 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 solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.	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) and other multiples of 90^o	

		Summer	read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication. 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 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places 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.	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints estimate volume (e.g. using 1 cm 3 blocks to build cubes and cuboids) and capacity (e.g. using water) Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.	use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Year 5 – Reading

Year 5	READING							
	Word Reading	**Comprehension** Clarify	**Comprehension** Monitor and Summarise	**Comprehension** Select and Retrieve	**Comprehension** Respond and Explain	**Inference**	**Language for Effect**	**Themes and Conventions**
Autumn	Apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet	Ask questions to improve their understanding of a text	Check the book makes sense to them by discussing their understanding and exploring the meaning of words in context Distinguish between statements of fact and opinion and understand why this is important to interpreting the text	Retrieve, record and present information from non-fiction Skim and scan efficiently for vocabulary, key ideas and facts on both the printed page and screen	Recommend books that they have read, giving reasons for their choices 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 Provide reasoned justifications for their views	Predict what might happen from details stated and implied Draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence	Identify how language, structure and presentation contribute to meaning Show understanding through intonation, tone and volume so that meaning is clear to an audience	Identify and discuss themes and conventions in a wide range of writing e.g. 'heroism' or 'loss' Read books that are structured in different ways and read for a range of purposes
Spring		Explain and discuss their understanding of what they have read, through formal presentations and debates, maintaining a focus on the topic	Identify main ideas drawn from more than one paragraph identifying the key details that support the main ideas	Extract information and make notes using quotations and reference to the text	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 Identify and explain the author's point of view with reference to the text	Make links between the authors' use of language and the inferences drawn	Discuss and evaluate the intended impact of the language used with reference to the text	Discuss and evaluate how authors use language, including figurative language, considering the impact on the reader Identify how presentational and organisational choices vary according to the form and purpose of the writing
Summer					Make comparisons within and across books		Perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear	Make simple links between texts, their audience, purpose, time and culture, drawing on a good knowledge of authors

Year 5 – Writing

Year 5	WRITING					
	Transcription	**Handwriting**	**Composition** Composition and Effect	**Composition** Text Structure and Organisation	**Composition** Sentence Structure	**Vocabulary, grammar and punctuation**
Autumn	Use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in English Appendix 1 Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary Use a thesaurus	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	Note and develop initial ideas, drawing on reading and research where necessary Identify the audience for, and purpose of, the writing Select the appropriate form and use other similar writing as models for their own Select appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning Evaluate and edit by assessing the effectiveness of their own and others' writing Propose changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning Use expanded noun phrases to convey complicated information concisely	Use further organisational and presentational devices to structure text and to guide the reader e.g. headings, bullet points, underlining Produce internally coherent paragraphs in logical sequence e.g. posing rhetorical questions which are answered in the main paragraph with main ideas elaborated by subsequent sentences	Make deliberate choices of sentence length and structure for impact on the reader Use fronted prepositional phrases for greater effect	Proof-read for spelling and punctuation errors Use relative clauses beginning with who, which, where, when, whose, that Use commas to clarify meaning or avoid ambiguity in writing Convert nouns or adjectives into verbs using '-ate', '-ise' or '-ify' Ensure correct subject and verb agreement when using singular and plural Use brackets, dashes or commas to indicate parenthesis
Spring	Use further prefixes and suffixes and understand the guidance for adding them e.g. - dis-', 'de-', 'mis-', 'over-' and 're-'	Write legibly, fluently and with increasing speed, choosing the writing implement that is best suited for a task	In narratives, describe settings, characters and atmosphere Choose the appropriate register for the audience and purpose (formal or informal) Viewpoint is established and generally maintained Use figurative language such as similes, alliteration, metaphors and personification in poetry	Linking ideas across paragraphs using adverbials of time (later), place (nearby) number (secondly) Linking ideas across paragraphs through tense choice (he had seen her before)	Choose the appropriate register for the language of speech within writing e.g. colloquial language within dialogue, quotes in reports Use a wide range of clause structures, sometimes varying their position within the sentence	Use the perfect form of verbs to mark relationships of time and cause Use modal verbs or adverbs to indicate degrees of possibility Ensure the consistent and correct use of tense throughout a piece of writing Use a colon to introduce a list
Summer	Continue to distinguish between homophones and other words which are often confused		Editing sentences by either expanding or reducing for meaning and effect Content is balanced e.g. between action and description; between dialogue, fact and comment	Use a wide range of devices to build cohesion within paragraphs		Use semi colons, colons or dashes to mark boundaries between independent clauses Use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading: modal verb, relative pronoun, relative clause, parenthesis, bracket, dash, cohesion, ambiguity