

Dr Walker's C of E Primary School



**An Exceptional
Place to Flourish**

Though your beginning was small,
your future will flourish indeed.
Job 8:7

**Year 5
National Curriculum
Objectives**

Maths National Age Related Expectation – YEAR 5

Number – number and place value
read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
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, including through zero
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
read Roman numerals to 1000 (M) and recognise years written in Roman numerals
Number – addition and subtraction
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
use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Number – multiplication and division
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, prime factors and composite (non-prime) numbers
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 for two-digit numbers
multiply and divide numbers mentally drawing upon known facts
divide numbers up to 4 digits by a one-digit number using 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)
solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.
Number – fractions (including decimals and percentages)
compare and order fractions whose denominators are all multiples of the same number
identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
recognise mixed numbers and improper fractions and convert from one form to the other & write mathematical statements > 1 as a mixed number [e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$]
add and subtract fractions with the same denominator and denominators that are multiples of the same number
multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]
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
read, write, order and compare numbers with up to three decimal places
solve problems involving number up to three decimal places
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 100, and as a decimal
solve problems which require knowing percentage & decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ & those fractions with a denominator of a multiple of 10 or 25
Measurement
convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and ml)

	understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
	calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes
	estimate volume [for example, using 1 cm ³ blocks to build cuboids (including cubes)] and capacity [for example, using water]
	solve problems involving converting between units of time
	use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling
	Geometry – properties of shapes
	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
	draw given angles, and measure them in degrees (°)
	identify: <ul style="list-style-type: none"> • angles at a point and one whole turn (total 360°) • angles at a point on a straight line and ½ a turn (total 180°) • other multiples of 90°
	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.
	Geometry – position and direction
	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
	Statistics
	solve comparison, sum and difference problems using information presented in a line graph
	complete, read and interpret information in tables, including timetables

Mathematics Appendix 1: Examples of formal written methods for addition, subtraction, multiplication and division

This appendix sets out some examples of formal written methods for all four operations to illustrate the range of methods that could be taught. It is not intended to be an exhaustive list, nor is it intended to show progression in formal written methods. For example, the exact position of intermediate calculations (superscript and subscript digits) will vary depending on the method and format used.

For multiplication, some pupils may include an addition symbol when adding partial products. For division, some pupils may include a subtraction symbol when subtracting multiples of the divisor.

Addition and subtraction

789 + 642 becomes

$$\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ \small{1 \quad 1} \end{array}$$

Answer: 1431

874 – 523 becomes

$$\begin{array}{r} 874 \\ - 523 \\ \hline 351 \end{array}$$

Answer: 351

932 – 457 becomes

$$\begin{array}{r} 8 12 1 \\ 932 \\ - 457 \\ \hline 475 \end{array}$$

Answer: 475

932 – 457 becomes

$$\begin{array}{r} 1 1 \\ 932 \\ - 457 \\ \hline 475 \\ \small{5 \quad 6} \end{array}$$

Answer: 475

Short multiplication

24 × 6 becomes

$$\begin{array}{r} 24 \\ \times 6 \\ \hline 144 \\ \small{2} \end{array}$$

Answer: 144

342 × 7 becomes

$$\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \\ \small{2 \quad 1} \end{array}$$

Answer: 2394

2741 × 6 becomes

$$\begin{array}{r} 2741 \\ \times 6 \\ \hline 16446 \\ \small{4 \quad 2} \end{array}$$

Answer: 16 446

Long multiplication

24 × 16 becomes

$$\begin{array}{r} ^2 \\ 24 \\ \times 16 \\ \hline 240 \\ 144 \\ \hline 384 \end{array}$$

Answer: 384

124 × 26 becomes

$$\begin{array}{r} ^1 ^2 \\ 124 \\ \times 26 \\ \hline 2480 \\ 744 \\ \hline 3224 \\ \hline 1 \end{array}$$

Answer: 3224

124 × 26 becomes

$$\begin{array}{r} ^1 ^2 \\ 124 \\ \times 26 \\ \hline 744 \\ 2480 \\ \hline 3224 \\ \hline 1 \end{array}$$

Answer: 3224

Short division

98 ÷ 7 becomes

$$\begin{array}{r} ^1 ^4 \\ 7 \overline{) 98} \\ \underline{7} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

Answer: 14

432 ÷ 5 becomes

$$\begin{array}{r} ^8 ^6 \text{ r } 2 \\ 5 \overline{) 432} \\ \underline{4} \\ 32 \\ \underline{30} \\ 2 \end{array}$$

Answer: 86 remainder 2

496 ÷ 11 becomes

$$\begin{array}{r} ^4 ^5 \text{ r } 1 \\ 11 \overline{) 496} \\ \underline{44} \\ 56 \\ \underline{55} \\ 1 \end{array}$$

Answer: $45\frac{1}{11}$

Long division

432 ÷ 15 becomes

$$\begin{array}{r} ^2 ^8 \text{ r } 12 \\ 15 \overline{) 432} \\ \underline{30} \\ 132 \\ \underline{150} \\ 12 \end{array}$$

Answer: 28 remainder 12

432 ÷ 15 becomes

$$\begin{array}{r} ^2 ^8 \\ 15 \overline{) 432} \\ \underline{30} \quad 15 \times 20 \\ 32 \\ \underline{150} \quad 15 \times 8 \\ 2 \end{array}$$

$$\frac{12}{15} = \frac{4}{5}$$

Answer: $28\frac{4}{5}$

432 ÷ 15 becomes

$$\begin{array}{r} ^2 ^8 \cdot 8 \\ 15 \overline{) 432.0} \\ \underline{30} \\ 32 \\ \underline{150} \\ 20 \\ \underline{150} \\ 20 \\ \underline{150} \\ 0 \end{array}$$

Answer: 28.8

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English National Age Related Expectation – YEAR 5

READING

Reading – word reading
apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet.
Reading – comprehension
maintain positive attitudes to reading and understanding of what they read by: <ul style="list-style-type: none">• continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks• reading books that are structured in different ways and reading for a range of purposes• increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions• recommending books that they have read to their peers, giving reasons for their choices• identifying and discussing themes and conventions in and across a wide range of writing• making comparisons within and across books• learning a wider range of poetry by heart• preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience
understand what they read by: <ul style="list-style-type: none">• checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context• asking questions to improve their understanding• drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence• predicting what might happen from details stated and implied• summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas• identifying how language, structure and presentation contribute to meaning
discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
distinguish between statements of fact and opinion
retrieve, record and present information from non-fiction
participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously
explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary
provide reasoned justifications for their views

English National Age Related Expectation – YEAR 5

WRITING

Writing – transcription
Spelling (see English Appendix 1)
use further prefixes and suffixes and understand the guidance for adding them
spell some words with ‘silent’ letters [for example, knight, psalm, solemn]
continue to distinguish between homophones and other words which are often confused
use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in English Appendix 1
use dictionaries to check the spelling and meaning of words
use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary
use a thesaurus
Handwriting
write legibly, fluently and with increasing speed by: <ul style="list-style-type: none">• choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters• choosing the writing implement that is best suited for a task
Writing – composition
plan their writing by: <ul style="list-style-type: none">• identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own• noting and developing initial ideas, drawing on reading and research where necessary• in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed
draft and write by: <ul style="list-style-type: none">• selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning• in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action• précising longer passages• using a wide range of devices to build cohesion within and across paragraphs• using further organisational and presentational devices to structure text and to guide the reader [for example, headings, bullet points, underlining]
evaluate and edit by: <ul style="list-style-type: none">• assessing the effectiveness of their own and others’ writing• proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning• ensuring the consistent and correct use of tense throughout a piece of writing• ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register
proof-read for spelling and punctuation errors
perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear
Writing – vocabulary, grammar and punctuation
develop their understanding of the concepts set out in English Appendix 2 by: <ul style="list-style-type: none">• recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms• using passive verbs to affect the presentation of information in a sentence• using the perfect form of verbs to mark relationships of time and cause• using expanded noun phrases to convey complicated information concisely• using modal verbs or adverbs to indicate degrees of possibility• using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun• learning the grammar for years 5 and 6 in English Appendix 2
indicate grammatical and other features by: <ul style="list-style-type: none">• using commas to clarify meaning or avoid ambiguity in writing• using hyphens to avoid ambiguity• using brackets, dashes or commas to indicate parenthesis

- | | |
|--|---|
| | <ul style="list-style-type: none">• using semi-colons, colons or dashes to mark boundaries between independent clauses• using a colon to introduce a list• punctuating bullet points consistently |
| | use and understand the grammatical terminology in English Appendix 2 accurately and appropriately in discussing their writing and reading |

English National Age Related Expectation – YEAR 5

SPELLING (Years 5 and 6)

- | |
|---|
| <ul style="list-style-type: none">• Revise work done in previous years. |
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WORD LIST

accommodate	curiosity	language	secretary
accompany	definite	leisure	shoulder
according	desperate	lightning	signature
achieve	determined	marvellous	sincere(ly)
aggressive	develop	mischievous	soldier
amateur	dictionary	muscle	stomach
ancient	disastrous	necessary	sufficient
apparent	embarrass	neighbour	suggest
appreciate	environment	nuisance	symbol
attached	equip (-ped, -ment)	occupy	system
available	especially	occur	temperature
average	exaggerate	opportunity	thorough
awkward	excellent	parliament	twelfth
bargain	existence	persuade	variety
bruise	explanation	physical	vegetable
category	familiar	prejudice	vehicle
cemetery	foreign	privilege	yacht
committee	forty	profession	
communicate	frequently	programme	
community	government	pronunciation	
competition	guarantee	queue	
conscience*	harass	recognise	
conscious*	hindrance	recommend	
controversy	identity	relevant	
convenience	immediate(ly)	restaurant	
correspond	individual	rhyme	
criticise (critic + ise)	interfere	rhythm	
	interrupt	sacrifice	

English National Age Related Expectation – YEAR 5

VOCABULARY, GRAMMAR AND PUNCTUATION

Word	<ul style="list-style-type: none">• Converting nouns or adjectives into verbs using suffixes [for example, <i>-ate; -ise; -ify</i>].• Verb prefixes [for example, <i>dis-, de-, mis-, over- and re-</i>].
Sentence	<ul style="list-style-type: none">• Relative clauses beginning with <i>who, which, where, when, whose, that</i>, or an omitted relative pronoun.• Indicating degrees of possibility using adverbs [for example, <i>perhaps, surely</i>] or modal verbs [for example, <i>might, should, will, must</i>].
Text	<ul style="list-style-type: none">• Devices to build cohesion within a paragraph [for example, <i>then, after that, this, firstly</i>] Linking ideas across paragraphs using adverbials of time [for example, <i>later</i>], place [for example, <i>nearby</i>] and number [for example, <i>secondly</i>] or tense choices [for example, <i>he had seen her before</i>].
Punctuation	<ul style="list-style-type: none">• Brackets, dashes or commas to indicate parenthesis.• Use of commas to clarify meaning or avoid ambiguity.
Terminology for pupils	<ul style="list-style-type: none">• modal verb, relative pronoun• relative clause• parenthesis, bracket, dash• cohesion, ambiguity

Oxford Owl Writing Assessment

STANDARD 6		Year 5		
	Can produce well-structured and organized writing using a range of conventions in layout.			
	Can use appropriate informal and formal styles with confidence (e.g. conversational, colloquial, dialect, Standard English).			
	Can select the correct genre for audience and purpose, and use it accurately.			
	Can select from a wide range of known imaginative and ambitious vocabulary (they should be words that are not usually used by a child of that age) and use them precisely. (All spelling, including that of complex words, is almost always correct.)			
	Can use paragraphs consistently and appropriately.			
	Can group things appropriately before or after a main verb (e.g. 'The books, the pens and the pencils were all ready on the table').			
	Can use all grammar accurately except when consciously using dialect or colloquialism for purpose and audience.			
	Can use different techniques to open or conclude work appropriately (e.g. opinion, summary, justification, comment, suspense or prediction).			
	Can use complex sentence structures appropriately.			
	Can use a wider range of punctuation, almost always accurately, to include three or more of the following (as appropriate to the text): comma, apostrophe, bullets, inverted commas, hyphen, brackets, colon or semi-colon.			
	Can use punctuation appropriately to create effect (e.g. exclamation mark, dash, question mark, ellipsis).			
	Can write neatly, legibly and accurately in a flowing, joined style.			
	Can adapt handwriting for a range of tasks and purposes, including for effect.			
	Can spell accurately in all but the most complex words (e.g. paraphernalia, quintessential etc.) and most or all of the Year 5 High Frequency Words and the Year 5 words in the National Curriculum Appendix 1.			
	Can use the passive voice for variety and to shift focus (e.g. 'The cake was eaten by the child').			
	Can use a range of narrative techniques with confidence, interweaving elements when appropriate (e.g. action, dialogue, quotation, formal or informal style, aside, observation, suspense).			
	Can vary sentence length and word order confidently to sustain interest (e.g. 'Having achieved your goals at such an early age, what motivates you to continue? Why fight on?').			
	Can use a range of devices to adapt writing to the needs of the reader (e.g. headings, sub-headings, bullets, underlining, parenthesis, introduction providing context, footnote, contents, bibliography).			
	Can use literary features to create effect (e.g. alliteration, onomatopoeia, figurative language, dialect, metaphor, simile etc.).			
	Can interweave implicit and explicit links between sections.			
	Can use punctuation to show division between clauses, to indicate, to vary pace, to create atmosphere or to sub-divide (e.g. commas, colons, semicolons, dashes, ellipses).			
	Can show confident and established 'voice.'			
ASSESSMENT SCORE				
0-7	Not yet working at this Standard (review against Standard 5)	Working BELOW ARE		
8-11	Developing	Working TOWARDS ARE		
12-18	Secure	Working AT ARE		
19-22	Advanced	Greater Depth		
Children with 20 or more ticks may be assessed against Standard 7.				

Essential Standard 5 skills

The following skills must be secured as a priority in Year 5/P6:

- Produce more than a side of A4 writing that is clear and coherent with strong features and accurate interpretation of the stimulus and purpose.
- Spell most common words on the Year 3 and 4 word lists correctly, plus all compound words and many complex words.
- Show variety in sentence type and structure, including more sophisticated openings, adding detail and/or description and using a wider range of sophisticated connectives.
- Use interesting language with a wide range of words that are ambitious for their age (occasional misuse is acceptable).
- Use a wide range of punctuation accurately.
- Use a wider range of connectives (conjunctions, adverbs and prepositions) to show time, place and cause.
- Produce handwriting that is neat and joined.
- Organize writing appropriately for the purpose, including using paragraphs.
- Initiate edits and improvements to their work by proof reading what they have written.

Standard 6: Year 5/P6 – end of year expectation

By the end of Year 5/P6, children should be able to:

- Show variety in sentence type and structure, including the confident use of a range of sentence openings, punctuation for effect and the inclusion of additional detail and/or description.
- Use very interesting language with a wide range of words that are ambitious for their age and some literary features (e.g. alliteration, onomatopoeia, figurative language, etc.).
- Use the full range of punctuation accurately (as and when appropriate).
- Use a range of formal and informal styles or 'voice' when appropriate.
- Use a wide range of connectives for the full range of purposes and begin to use more sophisticated connectives. Produce handwriting that is fluent, neat and joined.
- Organize writing appropriately, including the use of paragraphs and a range of organizational devices. Initiate edits and improvements to their work by proof reading what they have written.

Children are expected to be a 'Secure Standard 6' by the end of Year 5 in order to be on track to meet national expectations at the end of KS2