Year 6 End of Year Expectations – Reading, Writing and Maths

Year 6 Reading	
Word reading	**Comprehension continued**

Word reading

Apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in Appendix 1 of the National Curriculum, both to read aloud and to understand the meaning of new words that they meet.

Use the combined knowledge of phonemes and word derivations to pronounce words correctly, e.g. arachnophobia.

Attempt the pronunciation of unfamiliar words drawing on prior knowledge of similar looking words.

Read fluently, using punctuation to inform meaning.

Comprehension (measured/judged against increasingly challenging material)

Maintain positive attitudes to reading and understanding of what they read by:

o   continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks

o   reading books that are structured in different ways and reading for a range of purposes

o   **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**

o   recommending books that they have read to their peers, giving reasons for their choices

o   identifying and discussing themes and conventions in and across a wide range of writing o making comparisons within and across books

o   learning a wider range of poetry by heart
o   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 throughout the performance - Shakespeare.

Comprehension continued

Understand what they read by:

o   **checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context**

o   asking questions to improve their understanding

o   drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence

o   predicting what might happen from details stated and implied

o   **summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas**

o   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 for increasing ease and flair.

KS3 Reading

Develop an appreciation and love of reading, and read increasingly challenging material independently through:

- Reading a wide range of fiction and non-fiction, in particular whole books, short stories, poems, plays with a wide coverage of genres, historical periods, forms and authors. The range will include high quality works from:

  o English Literature, both pre-1914 and contemporary, including prose, poetry and drama

  o Shakespeare (two plays)

  o Seminal world literature

- Choosing and reading books independently for challenge, interest and enjoyment.

- Re-reading books encountered earlier to increase familiarity with them and provide a basis for making comparisons.

Understand increasingly challenging texts through:

- Learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries.

- Making inferences and referring to evidence in the text

- Knowing the purpose, audience for and context of the writing and drawing on this knowledge to support comprehension

- Checking their understanding to make sure that what they have read makes sense

Read critically through:

- Knowing how language, including figurative language, vocabulary choice, grammar, text structure and organisational features, presents meaning

- Recognising a range of poetic conventions and understanding how these have been used

- Studying setting, plot, and characterisation and the effects of these

- Understanding how the work of dramatists is communicated effectively through performance and how alternative staging allows for different interpretations of a play

- Making critical comparisons across texts

- Studying a range of authors, including at least two authors in depth each year

Year 6 Writing

Spelling	Composition	Vocabulary, grammar and punctuation

Spelling

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 National Curriculum 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:
- 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.

Composition

Plan their writing by:

o **identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own**
o noting and developing initial ideas, drawing on reading and research where necessary
o 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:

o selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
o in narratives, **describing settings, characters and atmosphere and integrating dialogue** to convey character and advance the action
o précising longer passages
o using a wide range of devices to build cohesion within and across paragraphs
o **using further organisational and presentational devices to structure text and to guide the reader** [for example, headings, bullet points, underlining]

Evaluate and edit by:

o assessing the effectiveness of their own and others' writing
o proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning
o ensuring the consistent and correct use of tense throughout a piece of writing
o ensuring correct subject and verb agreement when using singular and plural,

Vocabulary, grammar and punctuation

Word

Recognise the difference between vocabulary of informal speech and that appropriate for formal speech; and use this appropriately.

Explore how words are related by meaning as synonyms and antonyms.

Sentence

Use passive voice to affect presentation in a sentence, [e.g. I broke the window in the greenhouse vs The window in the green house was broken (by me).

Recognise and use structures typical of informal speech and structures appropriate for formal speech and writing, [e.g. use of question tags: *He's your friend, isn't he?*, or use of subjunctive forms such as *If I were* or *Were they*].

Use expanded noun phrases to convey complicated information concisely.

Use the perfect form of verbs to mark relationships of time and cause.

Text

Link ideas across paragraphs using a wider range of cohesive devices, including repetition of a word or phrase, grammatical connections [e.g. adverbials such as on the other hand, in contrast, or as a consequence], and ellipsis.

Use layout devices to structure texts [e.g. headings, sub-headings, columns, bullets, or tables].

Punctuation

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.

Use semi-colon, colon and dash to mark the boundary between independent clauses [e.g. *It's raining; I'm fed up*].

Use colon to introduce a list and semi-colon within lists.

Punctuate bullet points correctly.

Use hyphens to avoid ambiguity [e.g. *man eating shark* vs man-eating shark].

<u>Terminology for pupils</u>
Subject, object, active, passive, synonym, passive, synonym, antonym, ellipsis, hyphen, colon, semi-colon, bullet points.

KS3 Writing

Write accurately, fluently, effectively and at length for pleasure and information through:

- Writing for a wide range of purposes and audiences, including:

o well-structured formal expository and narrative essays

o stories, scripts, poetry and other imaginative writing

o notes and polished scripts for talks and presentations

o a range of other narrative and non-narrative texts, including arguments, and personal and formal letters

Summarising and organising material, and supporting ideas and arguments with any necessary factual detail

Applying their growing knowledge of vocabulary, grammar and text structure to their writing and selecting the appropriate form

Drawing on knowledge of literary and rhetorical devices from their reading and listening to enhance the impact of their writing

Plan, draft, edit and proof-read through:

• considering how their writing reflects the audiences and purposes for which it was intended

• amending the vocabulary, grammar and structure of their writing to improve its coherence and overall effectiveness

• paying attention to accurate grammar, punctuation and spelling; applying the spelling patterns and rules set out in English Appendix 1 to the key stage 1 and 2 programmes of study for English.

Grammar and vocabulary

Consolidate and build on their knowledge of grammar and vocabulary through:

• extending and applying the grammatical knowledge set out in English Appendix 2 to the key stage 1 and 2 programmes of study to analyse more challenging texts.

• studying the effectiveness and impact of the grammatical features of the texts they read

• drawing on new vocabulary and grammatical constructions from their reading and listening,and using these consciously in their writing and speech to achieve particular effects knowing and understanding the differences between spoken and written language, including differences associated with formal and informal registers, and between Standard English and other varieties of English

• using Standard English confidently in their own writing and speech

Year 6 Maths

Number and place value

Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.

Round any whole number to a required degree of accuracy.

Use negative numbers in context, and calculate intervals across zero.

Solve number and practical problems that involve all of the above.

Number – addition, subtraction, multiplication and division

Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.

Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.

Perform mental calculations, including with mixed operations and large numbers.

Identify common factors, common multiples and prime numbers.

Use their knowledge of the order of operations to carry out calculations involving the four operations.

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Solve problems involving addition, subtraction, multiplication and division.

Fractions, including decimals and percentages continued

Divide proper fractions by whole numbers.

Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.

Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.

Multiply one-digit numbers with up to two decimal places by whole numbers.

Use written division methods in cases where the answer has up to two decimal places.

Solve problems which require answers to be rounded to specified degrees of accuracy.

Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Ratio and proportion

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] **and the use of percentages for comparison**.

Solve problems involving similar shapes where the scale factor is known or can be found.

Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra
Use simple formulae.

Measurement

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.

Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.

Convert between miles and kilometres.

Recognise that shapes with the same areas can 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. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].

Geometry – properties of shapes
Draw 2-D shapes using given dimensions and angles.

Recognise, describe and build simple 3-D shapes, including making nets.

Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Geometry – position and direction
Describe positions on the full coordinate grid (all four quadrants).

Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. **Fractions, including decimals and percentages** Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form.	Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. **Statistics** Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average.

KS3 Maths

Number

Understand and use place value for decimals, measures and integers of any size

Order positive and negative integers, decimals and fractions; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, <, >, ≤, ≥

Use the concepts and vocabulary of prime numbers, factors (or divisors), multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation, including using product notation and the unique factorisation property

Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative

Use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals

Recognise and use relationships between operations including inverse operations

Use integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 and distinguish between exact representations of roots and their decimal approximations

Interpret and compare numbers in standard form A x 10n 1≤A<10, where n is a positive or negative integer or zero

Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and or 0.375 and) 27

Define percentage as 'number of parts per hundred', interpret percentages and percentage changes as a fraction or a decimal, interpret these multiplicatively, express one quantity as a percentage of another, compare two quantities using percentages, and work with percentages greater than 100%

Interpret fractions and percentages as operators

Use standard units of mass, length, time, money and other measures, including with decimal quantities

S**implify and manipulate algebraic expressions to maintain equivalence by**:

☐   collecting like terms

☐   multiplying a single term over a bracket

☐   taking out common factors

☐   expanding products of two or more binomials

Understand and use standard mathematical formulae; rearrange formulae to change the subject

Model situations or procedures by translating them into algebraic expressions or formulae and by using graphs

Use algebraic methods to solve linear equations in one variable (including all forms that require rearrangement)

Work with coordinates in all four quadrants

Recognise, sketch and produce graphs of linear and quadratic functions of one variable with appropriate scaling, using equations in x and y and the Cartesian plane

Interpret mathematical relationships both algebraically and graphically

Reduce a given linear equation in two variables to the standard form $y = mx + c$; calculate and interpret gradients and intercepts of graphs of such linear equations numerically, graphically and algebraically

Use linear and quadratic graphs to estimate values of y for given values of x and vice versa and to find approximate solutions of simultaneous linear equations

Find approximate solutions to contextual problems from given graphs of a variety of functions, including piece-wise linear, exponential and reciprocal graphs

Generate terms of a sequence from either a term-to-term or a position-to-term rule

Recognise arithmetic sequences and find the nth term

Recognise geometric sequences and appreciate other sequences that arise.

Calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes

Draw and measure line segments and angles in geometric figures, including interpreting scale drawings

Derive and use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle); recognise and use the perpendicular distance from a point to a line as the shortest distance to the line

Describe, sketch and draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric

Use the standard conventions for labelling the sides and angles of triangle ABC, and know and use the criteria for congruence of triangles

Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures [for example, equal lengths and angles] using appropriate language and technologies

Identify properties of, and describe the results of, translations, rotations and reflections applied to given figures

Identify and construct congruent triangles, and construct similar shapes by enlargement, with and without coordinate grids

Apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles

Understand and use the relationship between parallel lines and alternate and corresponding angles

Derive and use the sum of angles in a triangle and use it to deduce the angle sum in any polygon, and to derive properties of regular polygons

Round numbers and measures to an appropriate degree of accuracy [for example, to a number of decimal places or significant figures]

Use approximation through rounding to estimate answers and calculate possible resulting errors expressed using inequality notation $a<x\leq b$

Use a calculator and other technologies to calculate results accurately and then interpret them appropriately

Appreciate the infinite nature of the sets of integers, real and rational numbers.

Algebra
Use and interpret algebraic notation, including:
- *ab* in place of $a \times b$
- 3*y* in place of $y + y + y$ and $3 \times y$
- *a*2 in place of $a \times a$, *a*3 in place of $a \times a \times a$; *a*2*b* in place of $a \times a \times b$
- in place of $a \div b$ *ba*
- coefficients written as fractions rather than as decimals
- Brackets

Substitute numerical values into formulae and expressions, including scientific formulae

Understand and use the concepts and vocabulary of expressions, equations, inequalities, terms and factors

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Ratio, proportion and rates of change
Change freely between related standard units [for example time, length, area, volume/capacity, mass]

Use scale factors, scale diagrams and maps

Express one quantity as a fraction of another, where the fraction is less than 1 and greater than 1

Use ratio notation, including reduction to simplest form
divide a given quantity into two parts in a given part:part or part:whole ratio; express the division of a quantity into two parts as a ratio

Understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction

Relate the language of ratios and the associated calculations to the arithmetic of fractions and to linear functions

Solve problems involving percentage change, including: percentage increase, decrease and original value problems and simple interest in financial mathematics

Solve problems involving direct and inverse proportion, including graphical and algebraic representations

Use compound units such as speed, unit pricing and density to solve problems.

Geometry and measures
Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms, trapezia, volume of cuboids (including cubes) and other prisms (including cylinders)

Apply angle facts, triangle congruence, similarity and properties of quadrilaterals to derive results about angles and sides, including Pythagoras' Theorem, and use known results to obtain simple proofs

Use Pythagoras' Theorem and trigonometric ratios in similar triangles to solve problems involving right-angled triangles

Use the properties of faces, surfaces, edges and vertices of cubes, cuboids, prisms, cylinders, pyramids, cones and spheres to solve problems in 3-D

Interpret mathematical relationships both algebraically and geometrically.

Probability

Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale

Understand that the probabilities of all possible outcomes sum to 1

Enumerate sets and unions/intersections of sets systematically, using tables, grids and Venn diagrams

Generate theoretical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities.

Statistics

Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers)

Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical

| | | line (or bar) charts for ungrouped and grouped numerical data

Describe simple mathematical relationships between two variables (bivariate data) in observational and experimental contexts and illustrate using scatter graphs |
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