

Whitehouse Primary School



National Curriculum Objectives

Year 5



English



Reading Objectives - Year 5

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 **5.00**

Comprehension

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 **5.01**

recommending books that they have read to their peers, giving reasons for their choices **5.02**

making comparisons within and across books **5.03**

learning a wider range of poetry by heart **5.04**

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 **5.05**

checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context **5.06**

asking questions to improve their understanding **5.07**

summarising the main ideas drawn from more than 1 paragraph, identifying key details that support the main ideas **5.08**

distinguish between statements of fact and opinion **5.09**

retrieve, record and present information from non-fiction **5.10**

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 **5.11**

Writing Objective - Year 5

use further prefixes and suffixes and understand the guidance for adding them **5.01**

spell some words with 'silent' letters [for example, knight, psalm, solemn] **5.02**

continue to distinguish between homophones and other words which are often confused **5.03**

use dictionaries to check the spelling and meaning of words **5.04**

use a thesaurus **5.05**

choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters **5.06**

Composition

in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed **5.07**

precising longer passages **5.08**

Using pronouns and time adverbials to build cohesion within and across paragraphs **5.09**

Using further organisational and presentational devices to structure text and to guide the reader for example headings, bullet points and underlining **5.10**

Assessing the effectiveness of their own and others writing **5.11**

ensuring the consistent and correct use of tense throughout a piece of writing **5.12**

proofread for spelling and punctuation errors **5.13**

perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear **5.14**

Punctuation / Grammar (Spag)

using expanded noun phrases to convey complicated information concisely **5.15**

using modal verbs or adverbs to indicate degrees of possibility **5.16**

using relative clauses beginning with who, which, where, when, whose, that or with an implied (ie omitted) relative pronoun **5.17**

learning the grammar for years 5 and 6 in English appendix 2 **5.18**



Maths

Maths Objectives - Year 5

Measurement

convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) **5.01**

understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints **5.02**

measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres **5.03**

calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes **5.04**

estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] **5.05**

solve problems involving converting between units of time **5.06**

use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling **5.07**

Fractions

compare and order fractions whose denominators are all multiples of the same number **5.08**

identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths **5.09**

recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $2\frac{2}{5} + 4\frac{1}{5} = 6\frac{3}{5} = 11\frac{1}{5}$] **5.10**

add and subtract fractions with the same denominator and denominators that are multiples of the same number **5.11**

multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams **5.12**

read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] **5.13**

recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents **5.14**

round decimals with two decimal places to the nearest whole number and to one decimal place **5.18**

read, write, order and compare numbers with up to three decimal places **5.19**

solve problems involving number up to three decimal places **5.20**

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 **5.21**

solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$ and those fractions with a denominator of a multiple of 10 or 25 **5.22**



Maths

Addition & Subtraction

add whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) **5.23**

subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) **5.24**

add and subtract numbers mentally with increasingly large numbers **5.25**

use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy **5.26**

solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why **5.27**

Multiplication & Division

identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers **5.28**

know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers **5.29**

establish whether a number up to 100 is prime and recall prime numbers up to 19 **5.30**

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 **5.31**

multiply and divide numbers mentally, drawing upon known facts **5.32**

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 **5.33**

multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 **5.34**

recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) **5.35**

solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes **5.36**

solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign **5.37**

solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates **5.38**

Number & Place Value

read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit **5.39**

count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 **5.39**

interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero **5.40**

Maths

Maths Objectives Year 5

Number & Place Value ctd.

round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100000 **5.41**

solve number problems and practical problems that involve all of the above **5.42**

read Roman numerals to 1000 (M) and recognise years written in Roman numerals **5.43**

Statistics

solve comparison, sum and difference problems using information presented in a line graph **5.44**

complete, read and interpret information in tables, including timetables. **5.45**

Geometry

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 **5.46**

identify 3-D shapes, including cubes and other cuboids, from 2-D representations **5.47**

know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles **5.48**

draw given angles, and measure them in degrees ($^{\circ}$) **5.49**

identify angles at a point and one whole turn (total 360°) **5.50**

identify angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) **5.51**

identify other multiples of 90° **5.52**

use the properties of rectangles to deduce related facts and find missing lengths and angles **5.53**

distinguish between regular and irregular polygons based on reasoning about equal sides and angles **5.54**

Science ctd.

Chemistry ctd.

Know that some materials will dissolve in liquid to form a solution **5.18**

Describe how to recover a substance from a solution **5.19**

Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating **5.20**

Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic **5.21**

Demonstrate that dissolving, mixing and changes of state are reversible changes **5.22**

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. **5.23**

Science

Science Objectives - Year 5

Working Scientifically

Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **5.01**

Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **5.02**

Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **5.03**

Use test results to make predictions to set up further comparative and fair tests **5.04**

Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **5.05**

Identify scientific evidence that has been used to support or refute ideas or arguments. **5.06**

Biology

Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird **5.07**

Describe the life process of reproduction in some plants and animals. **5.08**

Describe the changes as humans develop to old age. **5.09**

Physics

Describe the movement of the Earth, and other planets, relative to the Sun in the solar system **5.10**

Describe the movement of the Moon relative to the Earth **5.11**

Describe the Sun, Earth and Moon as approximately spherical bodies **5.12**

Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. **5.13**

Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object **5.14**

Identify the effects of air resistance, water resistance and friction, that act between moving surfaces **5.15**

Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. **5.16**

Chemistry

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 **5.17**