

Year 3 Autumn 1

Reading

Reading includes a focus on key reading comprehension skills: vocabulary, inference, predicting, explaining, retrieval and summarising.

Children will learn strategies and recognise when to apply these to corresponding skills whilst also improving their reading fluency with exposure to an engaging, vocabulary-rich text.

A reading teaching and learning cycle will include:

- the text as a whole (where context and understanding as whole is applied to achieve higher order thinking)
- exploring and analysing extracts of a text (with a skill focus primarily being word meaning, retrieval and inference)
- understanding the themes and conventions of a text and understanding its purpose
- applying learnt strategies to multi-skills lessons

Writing

Text Structure, Sentence, Useful Vocabulary, Word Classes, Punctuation

Story

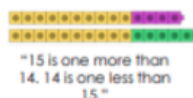
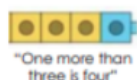
Year 3

Text Structure	Sentence	Useful Vocabulary	Word Classes	Punctuation
Time and place are referenced to guide the reader through the text, e.g. in the morning. Organised into paragraphs, e.g. When she arrived at the bear's house. Cohesion is strengthened through relationships between characters, e.g. Jack, his, his mother, her.	Simple sentences with extra description. Some complex sentences using because, which, where etc. Tense consistent, e.g. typically past tense for narration, present tense in dialogue. Dialogue is realistic and conversational in style, e.g. Well, I suppose... Verbs used are specific for action, e.g. rushed, shoved, pushed. Adverbials, e.g. When she reached home... Expanded noun phrases, e.g. two horrible hours.	Year 3 ambitious vocabulary used Connectives: also, however, therefore, after the, just then, furthermore, nevertheless, on the other hand, consequently, immediately, as soon as Adverbs: very, rather, slightly	<u>Noun</u> Form nouns using prefixes. Nouns and pronouns used to avoid repetition. <u>Verbs</u> Present perfect forms of verbs instead of 'the'. <u>Adjectives</u> Choose appropriate adjectives. <u>Connectives/conjunctions</u> Express time and cause (when, so, before, after, while, because). <u>Tense</u> Correct and consistent use of past and present tense. <u>Adverbs</u> Introduce/revise adverbs. Express time and cause: then, next, soon.	Introduce possessive apostrophes for plural nouns. Introduce inverted commas.

Word list – years 3 and 4

accident(ally)	early	knowledge	purpose
actual(ly)	earth	learn	quarter
address	eight/eighth	length	question
answer	enough	library	recent
appear	exercise	material	regular
arrive	experience	medicine	reign
believe	experiment	mention	remember
bicycle	extreme	minute	sentence
breath	famous	natural	separate
breathe	favourite	naughty	special
build	February	notice	straight
busy/business	forward(s)	occasion(ally)	strange
calendar	fruit	often	strength
caught	grammar	opposite	suppose
centre	group	ordinary	surprise
century	guard	particular	therefore
certain	guide	peculiar	though/although
circle	heard	perhaps	thought
complete	heart	popular	through
consider	height	position	various
continue	history	possess(ion)	weight
decide	imagine	possible	woman/women
describe	increase	potatoes	
different	important	pressure	
difficult	interest	probably	
disappear	island	promise	

Place value: Overview



"Sixty two is greater than twenty six."

$$62 > 26$$



Concepts: Representing, Counting, Comparing, Problem solving and rounding



"Ten greater than 146 is 156. The tens digit increases by one which makes 5 tens." $146 < 156$

Year 2

- Read and write in numerals and words; recognise the place value of each digit: 0-100 (0-1000)
- Identify, represent and estimate numbers: 0-100 (progressing to 1000)
- Count in twos, threes, fives and tens; forward and backward: 0-100
- Compare and order number; use $<$, $>$ and $=$ signs: 0-100 (0-1000)
- Use place value and number facts to solve problems

Year 3

- Read and write in numerals and words; recognise the place value of each digit: 0-1000 (10,000)
- Identify, represent and estimate numbers using different representations: 0-1000 (progressing to 10,000)
- Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 (1000) more or less than a given number
- Compare and order numbers: 0-1000 (10,000)
- Round numbers to the nearest 10 and 100 (1000)
- Solve number problems and practical problems involving these ideas

3 125 496 3 126 954

"My number is less than your number because..."



Year 6

- Read, write, order and compare numbers; recognise the place value of each digit: 0-10,000,000
- Use negative numbers in context, and calculate intervals across zero
- Round any whole number to a required degree of accuracy
- Solve number and practical problems that involve all of the above

Year 5

- Read, write, order and compare numbers; recognise the place value of each digit: 0-1,000,000 and beyond
- Read Roman numerals: 0-1,000
- Count forwards or backwards in steps of powers of 10: 0-1,000,000
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero (calculate intervals across zero)
- Round any number to the nearest 10, 100, 1,000, 10,000 and 100,000: 0-1,000,000
- Solve number problems and practical problems that involve all of the above

Year 4

- Recognise the place value of each digit: 0-10,000
- Identify, represent and estimate numbers using different representations: 0-10,000
- Read Roman numerals: 0-100
- Count in multiples of 6, 7, 9, 25 and 1000; find 1000 more or less than a given number
- Count backwards through zero: negative numbers
- Compare and order numbers: beyond 1000
- Round any number to the nearest 10, 100 or 1000
- Solve number and practical problems involving these ideas, with increasingly large positive numbers

Key vocabulary:



Mathematics
Mastery



Place value vocabulary list

Year 3 - Place value	Definition	Example
Digit	One of the ten Arabic numerals 0 to 9, from which we compose numbers	The number 54 has the digit five in the tens column and the digit four in the ones. The digit five has a value of fifty.
Column	A vertical arrangement of numbers or objects	23 has two tens - I will place them into the tens column .
Numeral	A numeral is a symbol (or group of symbols) used to represent a number.	Whole numbers can all be represented as numerals consisting of the digits 0 to 9.
Placeholder	A place holder is a zero used in any place value column (that contains a value of zero) to clarify the relative positions of the digits in other places.	I need to use a placeholder in the ones column to make it clear that my number is 320 and not 32.

Strategies and representations:

Year 3 Key Representations

Dienes equipment

An important resource for demonstrating the relative size of place value columns. Supports the process of **regrouping** – one ten is equal to ten ones, one hundred is equal to ten tens and so on. Can also be used to represent addition and subtraction with 2- and 3-digit integers.

One ten is regrouped for ten ones. Ten ones is regrouped for one ten.



234 is two hundreds, three tens and four ones. I can represent subtracting 20 by removing two ten sticks.

Number lines

Number lines can be used to represent and compare numbers and can be used alongside a bead string. They demonstrate the continuous nature of the number system. When calculating, number lines may act as a jotting of the steps of a mental calculation and may begin 'empty' i.e. not have numbered divisions. Pupils will have experienced this most through adding tens then ones as shown. The use of number lines is extended during Year 3.



Equations

The phrase 'is equal to' is used consistently to refer to the = symbol. Equations should be presented with symbols and missing numbers in different positions:

$$38 = 25 + 13$$

$$\square = 37 + 44$$

$$12 \div \square = 4$$

Number bond knowledge

Pupils should be increasingly fluent in number bond recall for all numbers to 20. Make use of transitions and Maths Meetings to develop this.

$$17 = 12 + 5$$

$$17 = 11 + 6$$

$$17 = 10 + 7$$

Deriving facts

Pupils use known facts such as number bonds and understanding of place value and magnitude to derive further facts.

If I know $12 + 5 = 17$ then $22 + 5 = 27$.
 If I know $12 + 5 = 17$ then $17 - 12 = 5$.
 If I know $17 - 12 = 5$ then $37 - 12 = 25$.

Bead strings

Bead strings help support the ordinality of number. They are repurposed e.g. beads have the value 101-200 for representation when rounding.



The 'make 10' strategy

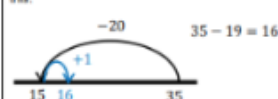
Pupils apply number bonds to 10 to calculate how many more/less to the next multiple of ten. They partition the part into two parts to calculate mentally. Using concrete or pictorial representations can scaffold thinking.

$36 + 27 = ?$ I can partition 27 into 4 and 23. 36 plus 4 is equal to 40. 40 plus 23 is equal to 63.



Round and adjust

Pupils apply understanding of ordinality of number, recognising when a part or whole is close to a multiple of 10 e.g. 29, 32. They round before calculating, then adjust their answer accordingly. Concrete or pictorial models are used to represent this.



Place value charts

Place value charts have been used to represent two-digit numbers and can be used alongside concrete, pictorial and abstract representations of number to secure understanding of the positional aspect of the number system. Pupils have made use of place value charts when adding two 2-digit numbers and their use is extended in Year 3.



Representing fractions

A range of concrete and pictorial representations are used for fractions including fractions of a whole, as part of a set of objects and as part of a quantity such as a length or volume. Pupils should be familiar with a range of representations.



One of four equal parts.

numerator → 1
vinculum → —
denominator → 4



One quarter of 12 is three.

One quarter of a metre is 25 cm.

Arrays

Concrete and pictorial arrays demonstrate the **commutativity** of multiplication and **inverse relationship** of multiplication and division. Pupils should be familiar with considering rows and columns. **Part-whole language** may be used alongside.



There are four parts/groups each with a value of three. The whole is 12. Four multiplied by three is equal to 12.

The whole is 12. There are three parts/groups each with a value of 4. 12 divided by three is equal to four. One third of 12 is equal to four.

Part-whole language and representations

A part-whole model is used to represent the relationship between numbers in all four operations. The model is made of a whole and two or more parts.

The whole is ten. One part is six and one part is four. Six plus four is equal to ten.



By moving the manipulatives the model represents subtraction.

The whole is ten. I subtract one part of six. The missing part is four. Ten subtract six is equal to four.



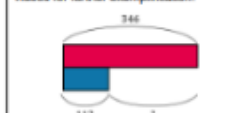
Multiplication, division and fractions of quantities can be represented using multiple equal parts.

There are three equal parts with a value of four. The whole is 12. Three multiplied by four is equal to 12. 12 divided into three equal parts is equal to four. One third of 12 is four.

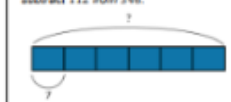


Bar models

Pictorial bar models and concrete Cuisenaire as bar models are used throughout the year and represent **part-whole relationships** and **knowns and unknowns** within problems. See PD videos for further exemplification.



I know the whole is 346, and one of the parts is 112. I do not know the value of the missing part. I can subtract 112 from 346.



The value of each part is 7 and there are 6 equal parts. The whole is unknown. $7 \times 6 = 42$

Timetables:

This term Year 3 are learning the **1&2 times table**

	Year 3	Year 4	Year 5	Year 6
Autumn 1	1 & 2	9	Mixed times and divide	Primes
Autumn 2	5 & 10	7		Square
Spring 1	3	(9) 12		Cubes
Spring 2	6	11		Mixed
Summer 1	4	Mixed		
Summer 2	8			