

Unit 1

Place value within 1,000



In this unit we will ...

- ⚡ Count in 100s
- ⚡ Partition a number in 100s, 10s and 1s
- ⚡ Find 100, 10 and 1 more or less
- ⚡ Compare and order numbers up to 1,000
- ⚡ Count in 50s

In Year 2 we used place value grids to organise our work. What number does this show?

T	O



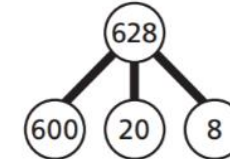
KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

- ➔ hundreds (100s), tens (10s), ones (1s)
- ➔ place value
- ➔ more, less
- ➔ greater than (>), less than (<), equal to (=)
- ➔ order, compare
- ➔ digit, one thousand
- ➔ part-whole model, place value grid, number line
- ➔ estimate, halfway, exchange
- ➔ taller, tallest, longest, shortest, greatest, smallest, most, least, fewest

STRUCTURES AND REPRESENTATIONS

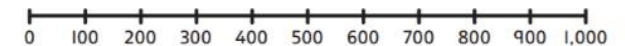
Part-whole: This model will help children to see how numbers can be partitioned into 100s, 10s and 1s.



Place value grid, including using base 10 equipment and place value counters: This model will help children organise 3-digit numbers into 100s, 10s and 1s, with both concrete representations and abstract numbers.

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Number line to 1,000: This model will help children to visualise the order of numbers, and can help them to compare numbers.



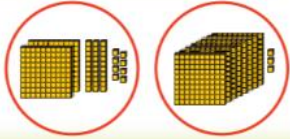
Unit 2 Addition and subtraction 1



In this unit we will ...

- ⚡ Add 1s and 10s to 3-digit numbers
- ⚡ Subtract 1s and 10s from 3-digit numbers
- ⚡ Add and subtract 3-digit and 2-digit numbers
- ⚡ Learn when to exchange 1s, 10s and 100s
- ⚡ Add and subtract using mental and written methods

Do you remember how to use place value? What numbers do these represent?



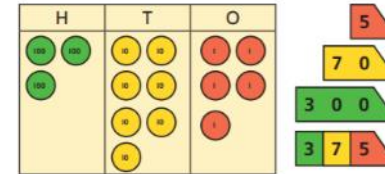
KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

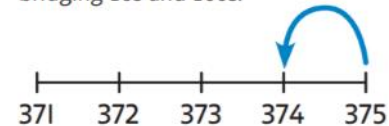
- ➔ add, addition
- ➔ subtract, subtraction, take away, difference
- ➔ exchange, pattern, variation, column method, mental method, part-whole model, number line
- ➔ total, altogether, calculations, regroup, partition, solutions
- ➔ place value, number bonds, fact family, related facts, number statements, method, order
- ➔ hundreds (100s), tens (10s), ones (1s), digits, zero (0)
- ➔ multiple of 10, multiples of 100, 3-digit number, 2-digit number, 10 ones, 10 tens
- ➔ left, greater than (>), less than (<), fewer, more, metres (m), miles, centimetres (cm), symbol

STRUCTURES AND REPRESENTATIONS

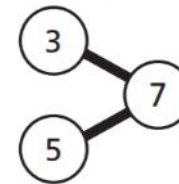
Place value equipment: Can be manipulated by children to model the differences between addition and subtraction.



Number lines: This is a very useful model which in this unit enables children to understand how exchange is related to bridging 10s and 100s.



Part-whole models: This model is vital for children to be able to visualise how number bonds are related to the calculations involving 100s, 10s and 1s, and also for representing the flexible partitioning of numbers as it relates to exchange.



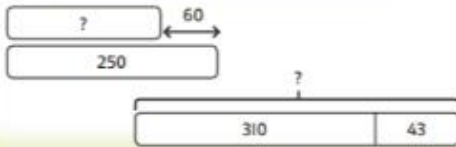
Unit 3

Addition and subtraction 2



- In this unit we will ...
- ⚡ Add and subtract 3-digit numbers
 - ⚡ Decide if we need to exchange
 - ⚡ Exchange across more than one column
 - ⚡ Learn how to check our answers in different ways
 - ⚡ Use bar models to solve 1- and 2-step problems

Do you remember how to find the missing information on these bar models?



KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

- add, addition
- subtract, subtraction
- total, altogether
- exchange
- part-whole, whole, part
- place value
- hundreds (100s), tens (10s), ones (1s)
- column method
- mental method, mentally
- estimate, estimation
- approximate, approx., approximation, approximately, about
- fact family
- bar model
- digits
- multiple
- logically
- function machine

STRUCTURES AND REPRESENTATIONS

Place value grid: Use this to help children to represent the partitions and exchanges required when adding and subtracting. It should support the understanding of column methods.

H	T	O

Base 10 equipment: These can be manipulated by children to model the differences between addition and subtraction (by taking away or by comparing). Base 10 equipment can be used in conjunction with place value grids to give structure.

H	T	O

Column methods: Column methods will be used to present efficient and accurate addition and subtraction. Children should practise by using the scaffolded examples provided in the book, but should also experience writing their own calculations in columns.

$$\begin{array}{r}
 \text{H T O} \\
 \hline
 + \quad \quad \quad \\
 \hline
 \hline
 \end{array}$$

Unit 4 Multiplication and division 1



In this unit we will ...

- ⚡ Recognise when groups are equal and when they are not
- ⚡ Learn the 3, 4 and 8 times-tables
- ⚡ Find a simple remainder when a number is divided
- ⚡ Use a bar model to solve multiplication and division problems

In Year 2, we recognised when groups were equal and unequal.



Equal groups



Unequal groups



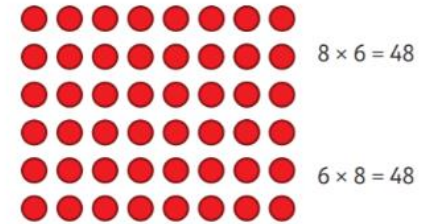
KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

- ➔ equal groups, unequal groups, shared equally
- ➔ multiply (\times), multiplication statement, multiplication fact, multiplication sentence, divide (\div), division statement, division fact
- ➔ times-table
- ➔ group, share
- ➔ whole, left over, remainder
- ➔ one-step, two-step, multi-step
- ➔ array, bar model, number line
- ➔ pattern
- ➔ count up, total, double, method
- ➔ repeated addition

STRUCTURES AND REPRESENTATIONS

Arrays: This model shows the total of a multiplication and reinforces commutativity. It can also be used to demonstrate sharing and grouping.



Bar model: This model represents the situation in multiplication and division word problems and shows the link between multiplication and repeated addition.

