

# Unit overview: Place value – Year Reception

## National Curriculum requirements

Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Verbally count beyond 20, recognising the pattern of the counting system;
- Explore and represent patterns within numbers up to 10.

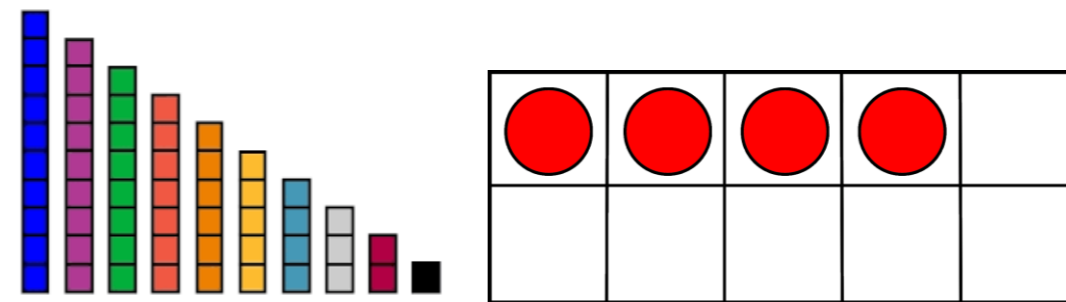
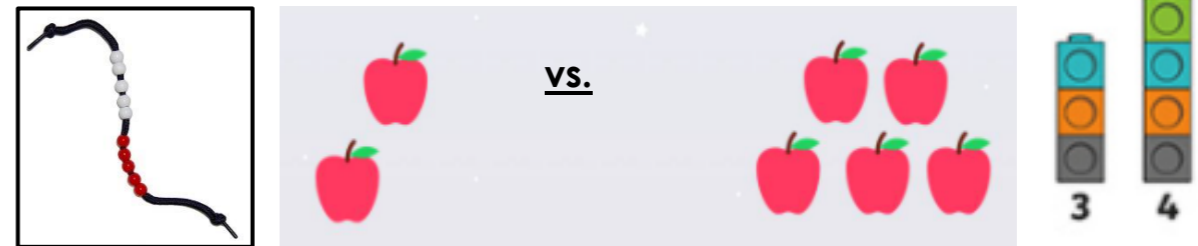
## Vocabulary

- number names (0 – 20 and beyond)
- numeral/ digit
- more than / greater than
- less than / fewer than
- equal to
- number bonds
- check – strategy: count to check
- equation

## Manipulatives

- number cards
- counters
- counting tools (i.e. counting bears)
- interlocking cubes
- ten frames
- number lines
- bead strings

## Visual representations



## Sentence stems

One, two, three, \_\_\_\_\_, \_\_\_\_\_.

Ten, eleven, twelve, thirteen, \_\_\_\_\_.

This number is \_\_\_\_\_.

The next number in my pattern is \_\_\_\_\_ because \_\_\_\_\_.

One more than \_\_\_\_\_ is \_\_\_\_\_.

One less than \_\_\_\_\_ is \_\_\_\_\_.

\_\_\_\_\_ is greater than \_\_\_\_\_.

\_\_\_\_\_ is less than \_\_\_\_\_.

\_\_\_\_\_ is equal to \_\_\_\_\_.

## Learning sequence

- Solve real-world mathematical problems with number up to 5.
- Counts objects, actions and sounds.
- Explore the composition of numbers up to 5.
- Subitise within numbers up to 5.
- Explore the composition of numbers up to 10.
- Automatically recall number bonds for numbers 0-5 and some to 10.
- Explore the composition of numbers to 20.
- numbers to 5
  - count sets of objects within 5\*
  - represent numbers within 5: concrete and pictorial\*
  - recognise number bonds up to 5\*
  - count to 5 forwards and backwards\*
  - given a number, identify one more and one less\*
- numbers within 20 (repeat steps marked with a \* replacing 5 with 10 and 20)

# Unit overview: Place value – Year 1

## National Curriculum requirements

By the end of the year, the children will be able to:

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s
- given a number, identify 1 more and 1 less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words

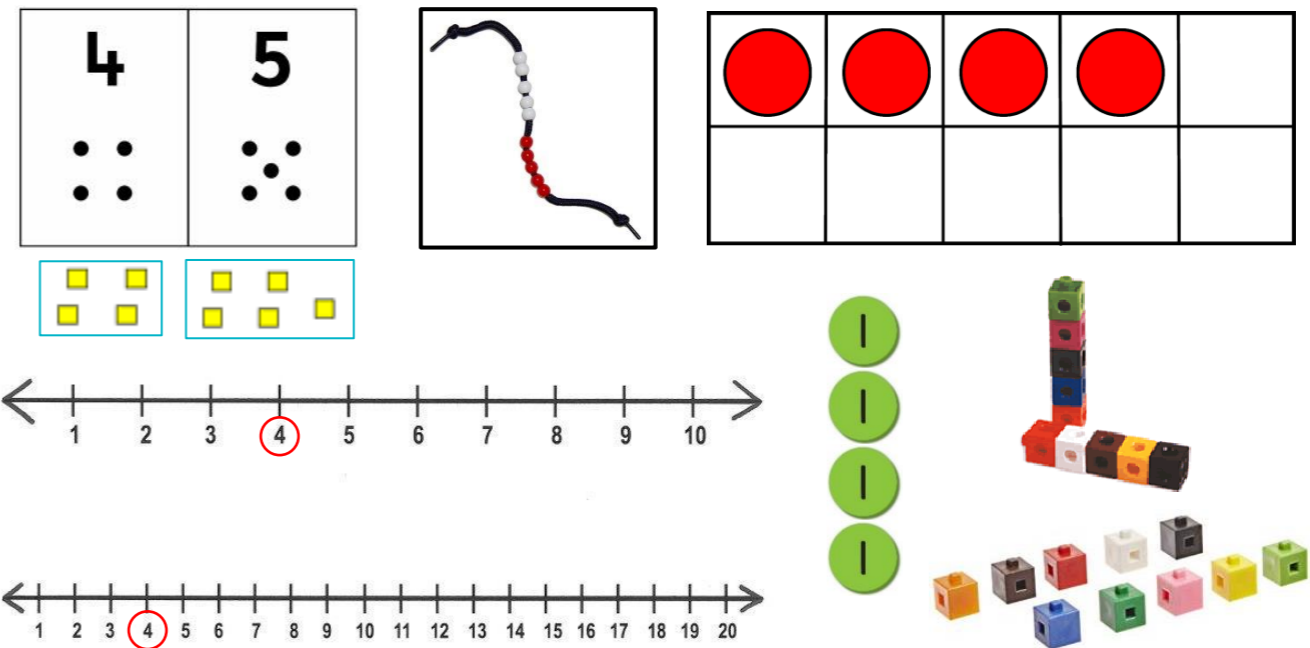
## Vocabulary

- number names (0 – 100)
- digit
- more than / greater / most
- less than / fewer / least
- equal to
- number bonds
- estimate

## Manipulatives

- number cards
- counters/counting props, e.g. toys
- dienes
- place value counters
- interlocking cubes
- ten frames
- number lines
- bead strings

## Visual representations



## Sentence stems

One, two, three, \_\_\_\_, \_\_\_\_.

Twenty, twenty one, \_\_\_\_, twenty three.

This number is \_\_\_\_. I know this because \_\_\_\_.

There are \_\_\_\_ more than \_\_\_\_.  
\_\_\_\_ is greater than \_\_\_\_.

One more than \_\_\_\_ is \_\_\_\_.  
\_\_\_\_ has the most \_\_\_\_.

There are \_\_\_\_ less than \_\_\_\_.  
There are \_\_\_\_ fewer \_\_\_\_.

One less than \_\_\_\_ is \_\_\_\_.  
\_\_\_\_ has the least \_\_\_\_.

\_\_\_\_ is equal to \_\_\_\_.

I estimate there are \_\_\_\_ because \_\_\_\_.

## Learning sequence

- numbers to 10
  - count sets of objects within 10
  - represent numbers within 10: concrete and pictorial
  - recognise number bonds up to 10
  - count to 10 forwards and backwards, beginning with 0 or 1, or from any given number\*
  - count, read and write numbers to 10 in numerals and words\*
  - identify and represent numbers using objects and pictorial representations\*
  - given a number, identify one more and one less\*
  - compare and order numbers to 10 using  $<$ ,  $>$  or  $=$  symbols\*
  - count in multiples of two
  - estimate numbers within 10
- numbers to 20 (repeat steps marked with a \* replacing 10 with 20)
  - count in multiples of two and five
- number to 50 (repeat steps marked with a \* replacing 10 with 50)
  - recognise the place value of each digit in a two-digit number
- number to 100 (repeat steps marked with a \* replacing 10 with 100)
  - read and write numbers to at least 100 in numerals

# Unit overview: Place value – Year 2

## National Curriculum requirements

By the end of the year, the children will be able to:

- count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward
- recognise the place value of each digit in a two-digit number (10s, 1s)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems

## Vocabulary

- number names (0 – 100)
- digit
- partition / tens / ones
- number bonds
- more than / greater / most
- less than / fewer / least
- equal to
- estimate

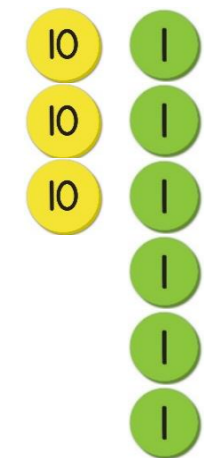
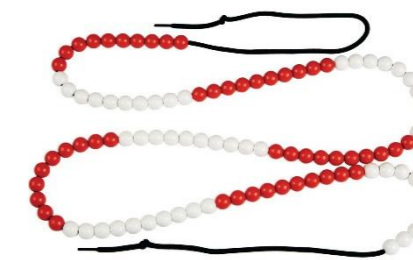
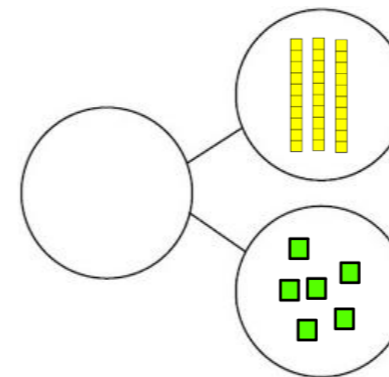
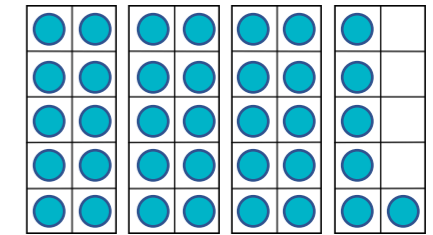
## Manipulatives

- counters
- dienes
- place value counters
- interlocking cubes
- hundred squares
- ten frames
- number lines
- bead strings

## Visual representations

Tens (10s)	Ones (1s)
3	6

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



## Sentence stems

One, two, three, \_\_\_\_, \_\_\_\_.

Twenty, twenty one, \_\_\_\_, twenty three.

There are \_\_\_\_ tens and \_\_\_\_ ones.

The digit \_\_\_\_ is in the tens/one column.

This number can be partitioned into \_\_\_\_ tens and \_\_\_\_ ones.

There are \_\_\_\_ more than \_\_\_\_.

One more than \_\_\_\_ is \_\_\_\_.

\_\_\_\_ is greater than \_\_\_\_ because \_\_\_\_.

\_\_\_\_ has the most \_\_\_\_.

There are \_\_\_\_ less than \_\_\_\_.

One less than \_\_\_\_ is \_\_\_\_.

There are \_\_\_\_ fewer \_\_\_\_.

\_\_\_\_ has the least/fewest \_\_\_\_.

\_\_\_\_ is equal to \_\_\_\_.

I estimate there are \_\_\_\_ because \_\_\_\_.

## Learning sequence

- numbers to 100
  - use place value and number facts to solve problems
  - recognise the place value of each digit in a two-digit number (tens, ones)
  - identify, represent and estimate numbers to 100 using different representations, including the number line
  - compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs
  - read and write numbers to at least 100 in numerals and in words
  - count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward
- numbers to 1,000
  - use place value and number facts to solve problems
  - identify, represent and estimate numbers to 1000 using different representations
  - recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
  - compare and order numbers up to 1000
  - read and write numbers up to 1000 in numerals and in words
  - count from 0 in multiples of 100; find 10 or 100 more or less than a given number

# Unit overview: Place value – Year 3

## National Curriculum requirements

By the end of the year, the children will be able to:

- count from 0 in multiples of 4, 8, 50 and 100
- find 10 or 100 more or less than a given number
- recognise the place value of each digit in a 3-digit number (100s, 10s, 1s)
- compare and order numbers up to 1,000
- identify, represent and estimate numbers using different representations
- read and write numbers up to 1,000 in numerals and in words
- solve number problems and practical problems involving these ideas

## Vocabulary

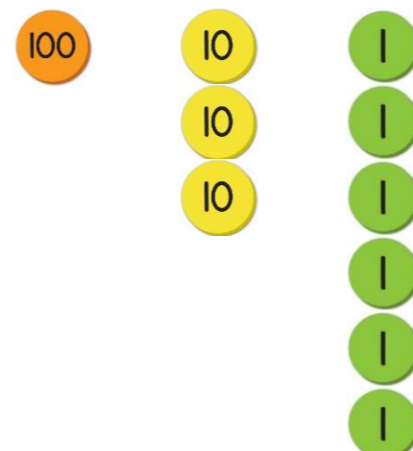
- number names (0 – 1,000)
- digit
- partition / hundreds / tens / ones
- more than / greater / most
- less than / fewer / least
- equal to
- estimate

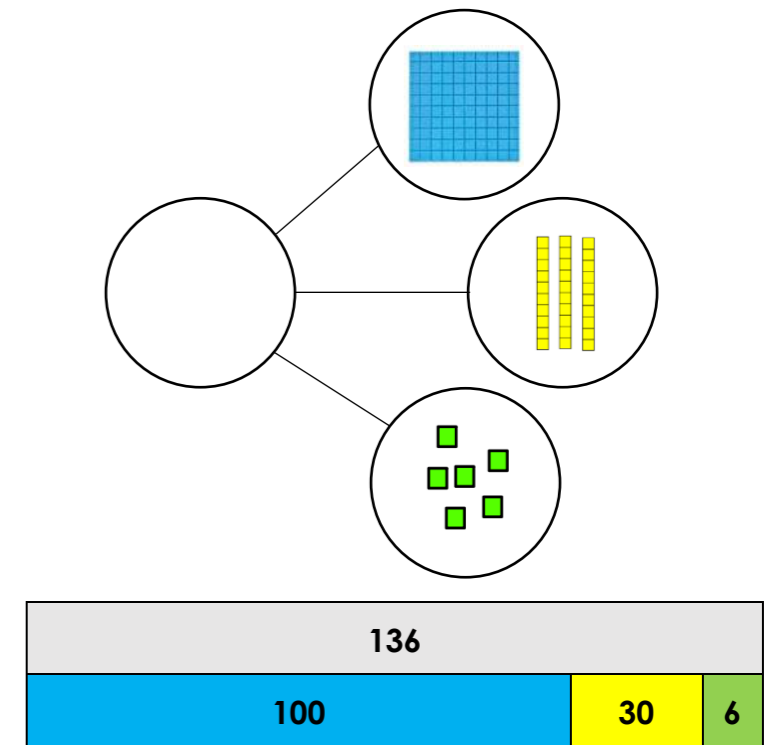
## Manipulatives

- counters
- dienes
- place value counters
- interlocking cubes
- hundred squares
- number lines
- bead strings

## Visual representations

Hundreds (100s)	Tens (10s)	Ones (1s)
1	3	6





## Sentence stems

There are \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones in the number \_\_\_\_.

The digit \_\_\_\_ is in the hundreds/tens/one column. It's value is \_\_\_\_.

This number can be partitioned into \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones.

There are \_\_\_\_ more than \_\_\_\_.

One more than \_\_\_\_ is \_\_\_\_.

\_\_\_\_ is greater than \_\_\_\_ because \_\_\_\_.

\_\_\_\_ has the most \_\_\_\_.

There are \_\_\_\_ less than \_\_\_\_.

One less than \_\_\_\_ is \_\_\_\_.

There are \_\_\_\_ fewer \_\_\_\_.

\_\_\_\_ has the least/fewest \_\_\_\_.

\_\_\_\_ is equal to \_\_\_\_.

I estimate there are \_\_\_\_ because \_\_\_\_.

## Learning sequence

- identify, represent and estimate numbers using different representations, including the number line
- find 1, 10 or 100 more or less than a given number
- recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- compare and order numbers up to 1,000
- read and write numbers up to 1,000 in numerals and in words
- solve number problems and practical problems involving these ideas
- count from 0 in multiples of 50 and 100
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction



# Unit overview: Place value – Year 4

## National Curriculum requirements

By the end of the year, the children will be able to:

- count in multiples of 6, 7, 9, 25 and 1,000
- find 1,000 more or less than a given number
- count backwards through 0 to include negative numbers
- recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)
- order and compare numbers beyond 1,000
- identify, represent and estimate numbers using different representations
- round any number to the nearest 10, 100 or 1,000
- solve number and practical problems that involve all of the above and with increasingly large positive numbers
- read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value

## Vocabulary

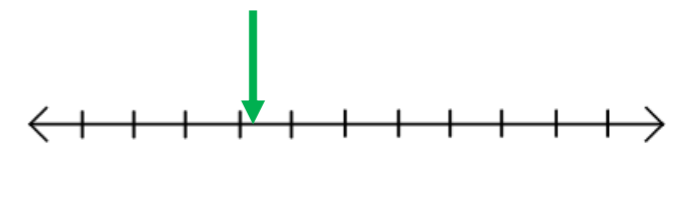
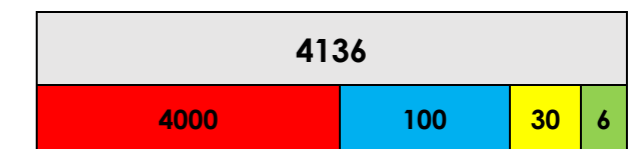
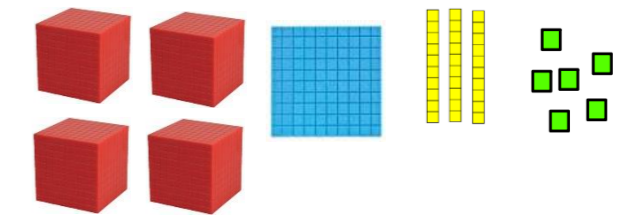
- number names (0 – 10,000)
- digit
- partition / thousands / hundreds / tens / ones
- more than / greater / most
- less than / fewer / least
- equal to
- estimate

## Manipulatives

- counters
- dienes
- place value counters
- interlocking cubes
- hundred squares
- number lines
- bead strings
- place value white boards

## Visual representations

Thousands (1,000s)	Hundreds (100s)	Tens (10s)	Ones (1s)
4	1	3	6



## Sentence stems

There are \_\_\_\_ thousands, \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones in the number \_\_\_\_.

The digit \_\_\_\_ is in the thousands/hundreds/tens/one column. It's value is \_\_\_\_\_.

This number can be partitioned into \_\_\_\_ thousands, \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones.

There are \_\_\_\_ more than \_\_\_\_.

\_\_\_\_ more than \_\_\_\_ is \_\_\_\_.

\_\_\_\_ is greater than \_\_\_\_ because \_\_\_\_.

\_\_\_\_ has the most \_\_\_\_.

There are \_\_\_\_ less than \_\_\_\_.

One less than \_\_\_\_ is \_\_\_\_.

There are \_\_\_\_ fewer \_\_\_\_.

\_\_\_\_ has the least/fewest \_\_\_\_.

\_\_\_\_ is equal to \_\_\_\_.

I estimate there are \_\_\_\_ because \_\_\_\_.

## Learning sequence

- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- identify, represent and estimate numbers using different representations
- find 1, 10, 100 or 1,000 more or less than a given number
- order and compare numbers beyond 1,000
- round any number to the nearest 10, 100 or 1000
- count in multiples of 6, 7, 9, 25 and 1000
- count backwards through zero to include negative numbers
- identify, represent and estimate numbers using different representations
- solve number and practical problems that involve using the four operations and place value, rounding, ordering, comparing and estimating with increasingly large positive numbers

# Unit overview: Place value – Year 5

## National Curriculum requirements

- By the end of the year, the children will be able to:
- 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 0
  - round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
  - solve number problems and practical problems that involve all of the above
  - read Roman numerals to 1,000 (M) and recognise years written in Roman numerals

## Vocabulary

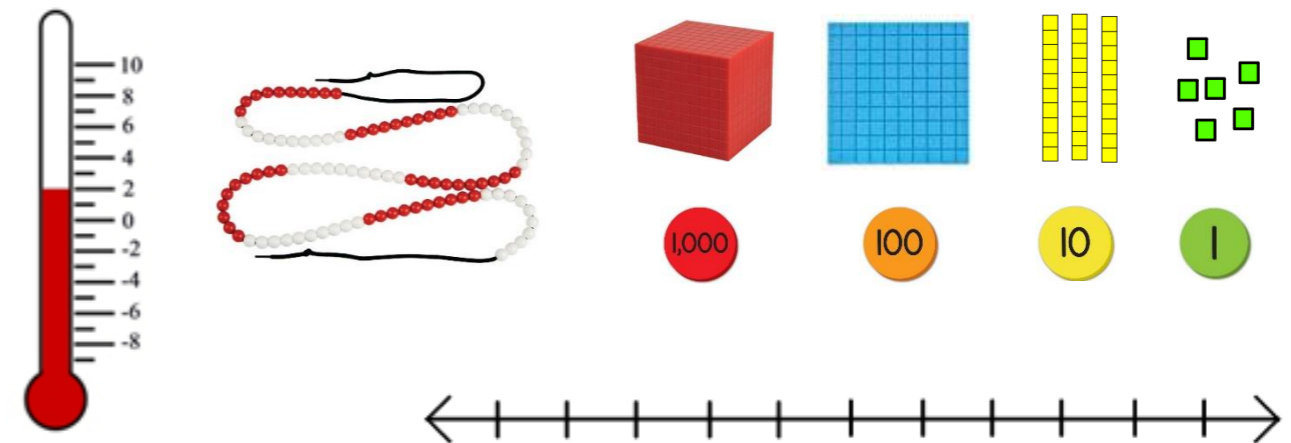
- number names (0 – 1,000,000)
- digit
- place value labels
- decimal
- negative
- more than / greater / most
- less than / fewer / least
- equal to

## Manipulatives

- counters
- dienes
- place value counters
- interlocking cubes
- hundred squares
- number lines
- bead strings
- place value white boards

## Visual representations

M	HTh	TTh	Th	H	T	O	.	t	h	th
2	0	9	4	1	3	6	.	7	5	8



## Sentence stems

There are \_\_\_\_ millions, \_\_\_\_ hundred thousands, \_\_\_\_ ten thousands, \_\_\_\_ thousands, \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones.

The digit \_\_\_\_ is in the millions/hundred thousands/ten thousands/thousands/hundreds/tens/ones/tenths column.

The digit \_\_\_\_ has a place value of \_\_\_\_\_. This number can be partitioned into \_\_\_\_ thousands, \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones.

There are \_\_\_\_ more than \_\_\_\_.

\_\_\_\_\_ is greater than \_\_\_\_\_ because \_\_\_\_\_. \_\_\_\_\_ has the most \_\_\_\_\_.

There are \_\_\_\_ less than \_\_\_\_.

There are \_\_\_\_ fewer \_\_\_\_.

\_\_\_\_\_ is equal to \_\_\_\_\_. I estimate there are \_\_\_\_\_ because \_\_\_\_\_.

## Learning sequence

- read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit
- identify the value of each digit in numbers given to one decimal place and multiply and divide numbers by 10, up to one decimal place
- count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
- round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
- interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
- solve number problems and practical problems that involve numbers up to 1,000,000, powers of ten, decimal numbers, and negative numbers

# Unit overview: Place value – Year 6

## National Curriculum requirements

By the end of the year, the children will be able to:

- 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 0
- solve number and practical problems that involve all of the above

## Vocabulary

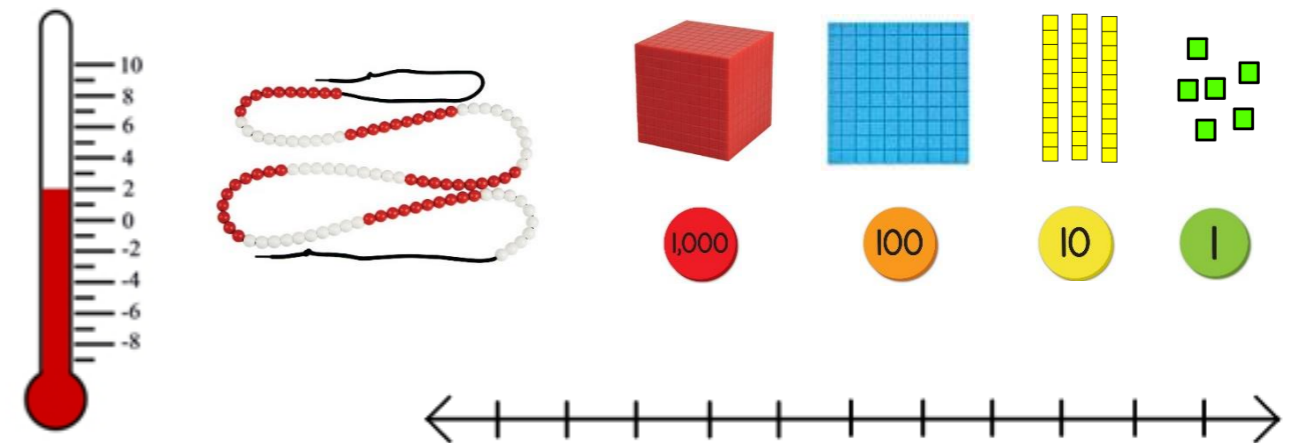
- number names (0 – 1,000,000)
- digit
- place value labels
- decimal
- negative
- more than / greater / most
- less than / fewer / least
- equal to

## Manipulatives

- counters
- dienes
- place value counters
- interlocking cubes
- hundred squares
- number lines
- bead strings
- place value white boards

## Visual representations

M	HTh	TTh	Th	H	T	O	.	t	h	th
2	0	9	4	1	3	6	.	7	5	8



## Sentence stems

There are \_\_\_\_ millions, \_\_\_\_ hundred thousands, \_\_\_\_ ten thousands, \_\_\_\_ thousands, \_\_\_\_ hundreds, \_\_\_\_ tens, \_\_\_\_ ones, \_\_\_\_ tenths, \_\_\_\_ hundredths, and \_\_\_\_ thousandths.

The digit \_\_\_\_ is in the millions/hundred thousands/ten thousands/thousands/hundreds/tens/ones/tenths/hundredths/thousandths column.

The digit \_\_\_\_ has a place value of \_\_\_\_.

This number can be partitioned into \_\_\_\_ thousands, \_\_\_\_ hundreds, \_\_\_\_ tens and \_\_\_\_ ones.

There are \_\_\_\_ more than \_\_\_\_.

\_\_\_\_ more than \_\_\_\_ is \_\_\_\_.

\_\_\_\_ is greater than \_\_\_\_ because \_\_\_\_.

\_\_\_\_ has the most \_\_\_\_.

There are \_\_\_\_ less than \_\_\_\_.

One less than \_\_\_\_ is \_\_\_\_.

There are \_\_\_\_ fewer \_\_\_\_.

\_\_\_\_ has the least/fewest \_\_\_\_.

\_\_\_\_ is equal to \_\_\_\_.

I estimate there are \_\_\_\_ because \_\_\_\_.

## Learning sequence

- read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
- 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
- round any whole number to a required degree of accuracy
- use negative numbers in context, and calculate intervals across zero