Edward Peake Church of England Middle School		
Topic: Place Value	**Year: 5**	**NC Strand: Number**

What should I already know?
• How to count in multiples of 25 and 1000 • How to find 1000 more or less than a given number • How to recognise the place value of each digit in a four-digit number • How to order and compare numbers beyond 1000 • How to identify, represent and estimate numbers using different representations • How to round any number to the nearest 10, 100 and 1,000 • How to solve number and practical problems that involve all of the above and with increasingly large positive numbers • How to count backwards through zero to include negative numbers

What will I know by the end of the unit?
• How to read, write, order and compare numbers to 10,000 • How to read Roman numerals to a 1000 • How to round any number to the nearest 10, 100 and 1000 up to 10,000 • How to read and write numbers to 100,000 • How to compare and order numbers to 100,000 • How to round numbers to the nearest 10, 100, 1000 and 10,000 up to 100,000 • How to read write and represent numbers up to 1,000,000 • How to count forwards and backwards in 10s, 100s, 1000s, 10,000s, and 100,000s • How to compare and order numbers up to 1,000,000 using the correct vocabulary and symbols • How to round numbers to the nearest 10, 100, 1000, 10000, 100,000 up to 1,000,000 • How to solve number and practical problems that involve all of the above

Vocabulary			
million	1,000,000	**Round (rounded)**	to change a number to a more convenient value.
ten thousand	10,000	**less than**	not as many as.
thousand	1,000	**order**	arrangement according to size, amount or value.
hundreds	100	**negative number**	any number less than zero
tens	10	**partition**	a strategy that splits (partitions) numbers into smaller addends,
ones	1	**digit**	symbol used to show a number.
zero	0	**interval**	between two points or values.
place value	the value of a digit depending on its place in a number.	**sequence**	ordered sets of numbers, shapes or other mathematical objects, arranged according to a rule.
greater than	is more than	**linear sequence**	A sequence that that increases or decreases from term to term by a constant amount

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Key Information and diagrams

Roman Numerals

	I = 1	II = 2	III = 3	
IV = 4	V = 5	VI = 6	VII = 7	VIII = 8
IX = 9	X = 10	XI = 11	XX = 20	XXX = 30
XL = 40	L = 50	LX = 60	LXX = 70	LXXX = 80
XC = 90	C = 100	CL = 150	CC = 200	CCC = 300
CD = 400	D = 500	DC = 600	DCC = 700	DCCC = 800
CM = 900	M = 1000	MC = 1100	MD = 1500	MM = 2000

Compare and Order

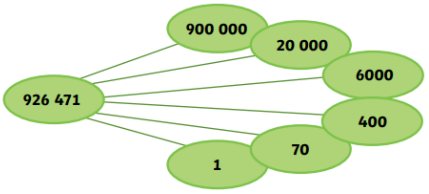
equals	greater than	less than
26 + 38 = 8 × 8	23 873 > 8256	901 198 < 1 091 098
Both calculations have the value 64.	The number on the left has 2 ten thousands and the number on the right has 0 ten thousands.	The number on the right has 1 million and the number on the left has 0 millions.

smallest | 898 | 6735 | 6835 | 7019 | 9002 | 11 235 | greatest

926 471

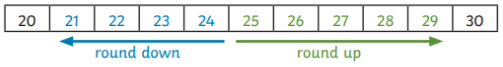
Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
9	2	6	4	7	1

nine hundred and twenty-six thousand, four hundred and seventy-one

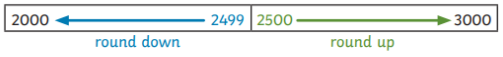


Rounding

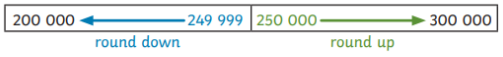
Rounding to the nearest 10



Rounding to the nearest 1000



Rounding to the nearest 100 000



Counting in Powers of 10

Counting in 10s

365	375	385	395	405	415

The tens increase until 9 tens becomes one more hundred and 0 tens.

Counting in 100s

2841	2941	3041	3141	3241	3341

The hundreds increase until 9 hundreds becomes one more thousand and 0 hundreds.

Counting in 10 000s

276 109	286 109	296 109	306 109

The ten thousands increase until 9 ten thousands become one more hundred thousand and 0 ten thousands.

Counting in 100 000s

2 972 151	3 072 151	3 172 151	3 272 151

The hundred thousands increase until 9 hundred thousands becomes one more million and 0 hundred thousands.

Negative Numbers

Investigate/Homework tasks

- Homework will be set from the booklet issued by your teacher
- You should complete at least 30 minutes of maths tasks on Maths Whizz (not games). Please attend help sessions if you do not have access to the internet at home
- Additional work you could complete:
  - Find out more about the meaning of the vocabulary list using http://www.amathsdictionaryforkids.com/
- To challenge yourself: Answer the key questions to deepen your knowledge
  - Investigate the key questions typed in red text
  - Explain the key questions typed in purple text
  - Challenge yourself by answering the questions typed in green text

Key Questions to deepen your knowledge

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- Can you show me 8,045 in three different ways?
- Which columns change when adding 10, 100 1000 to 2056?
- When rounding to the nearest 100 or 1000. Will the answer always, sometimes or never be the same?
- Why is there no zero in roman numerals?
- Do you notice any patterns in the Roman number system?
- Make up a sequence with negative numbers in.
- What number does MMXV11 represent?

- What do we need to know to be able to compare and order large numbers?
- Why can't we just look at the thousands column when we are ordering four digit numbers?
- Do we include zero when counting backwards?
- Which digits do you look at when rounding to the nearest 10, 100, 1000, 10,000?
- How does the place value grid help you to represent large numbers?
- What is the value of each digit in 63,320?