

PROGRESSIONS OF SKILLS FOR MATHS

Place Value

0-3	NURSERY	RECEPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
COUNTING								
develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence	develop fast recognition of up to 3 objects, without having to count them individually (subitizing)	count objects, actions and sounds beyond ten	count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			count backwards through zero to include negative numbers	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	use negative numbers in context, and calculate intervals across zero
count in everyday context, sometimes skipping numbers – ‘1-2-3-5’	recite numbers past 5		count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	count from 0 in multiples of 4, 8, 50 and 100;	count in multiples of 6, 7, 9, 25 and 1000	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	
take part in finger rhymes with numbers	say one number for each item in order: 1,2,3,4,5		given a number, identify one more and one less		find 10 or 100 more or less than a given number	find 1000 more or less than a given number		
	know that the last number reached when counting a small set of objects tells you how							

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	many there are in total (cardinal principle)							
COMPARING NUMBERS								
Compare amounts, saying 'lots', 'more' or 'same'	compare quantities using language of 'more than', 'fewer than'	compare numbers using 'more than', 'less than', 'fewer', 'the same as', 'equal'	use the language of: equal to, more than, less than (fewer), most, least	compare and order numbers from 0 up to 100; use <, > and = signs	compare and order numbers up to 1000	order and compare numbers beyond 1000	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
react to changes of amount in a group of up to 3 items						<i>compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)</i>		
IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS								
	show 'finger numbers' up to 5	subitise – identify small numbers through looking at them rather than counting	identify and represent numbers using objects and pictorial representations	identify, represent and estimate numbers using different representation	identify, represent and estimate numbers using different representations	identify, represent and estimate numbers using different representations		

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		individuals	including the number line	s, including the number line				
	link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5							
READING AND WRITING NUMBERS (INC ROMAN NUMERALS)								
	experiment with their own symbols and marks as well as numerals	link the number symbol (numeral) with its cardinal number value	read and write numbers from 1 to 20 in numerals and words.	read and write numbers to at least 100 in numerals and in words	read and write numbers up to 1000 in numerals and in words		read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Comparing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Understanding Place Value)
				<i>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (copied from Measurement)</i>		read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.		
UNDERSTANDING PLACE VALUE								

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				recognise the place value of each digit in a two-digit number (tens, ones)	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
						<i>find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths (copied from Fractions)</i>		<i>identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places (copied from Fractions)</i>
ROUNDING								
						round any number to the nearest 10, 100 or 1 000	round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000	round any whole number to a required degree of accuracy

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							and 100 000	
						<i>round decimals with one decimal place to the nearest whole number (copied from Fractions)</i>	<i>round decimals with two decimal places to the nearest whole number and to one decimal place (copied from Fractions)</i>	<i>Solve problems which require answers to be rounded to specified degrees of accuracy (copied from Fractions)</i>

PROBLEM SOLVING

	solve real world mathematical problems with numbers up to 5			use place value and number facts to solve problems	solve number problems and practical problems involving these ideas.	solve number and practical problems that involve all of the above and with increasingly large positive numbers	solve number problems and practical problems that involve all of the above	Solve number and practical problems that involve all of the above
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CORE VOCABULARY

0-3	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
zero, one, two, three, four, five, lots, more, same	zero, one, two, three, four, five, more than, fewer than, total	zero to ten, more than, fewer than, equal, fewer, same, total	Zero, one, two, three to twenty and beyond, none, count on/up/to/down	Numbers to 100, hundreds, partition, recombine, hundred more,	Numbers to 100, hundreds, partition, recombine, hundred more,	Tenths, hundredths, decimal places, round (to nearest),	Zero, one, two, three to twenty and beyond, none, count on/up/to/down	Zero, one, two, three to twenty and beyond, none, count on/up/to/down

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			<p>/from, before, less, many, fewer, least, smallest, greatest, equal to, same as, odd, even, units, ones, tens, compare, value</p>	<p>less, equal to, same as, odd, even, units, ones, tens, compare, value</p>	<p>less, equal to, same as, odd, even, units, ones, tens, compare, value, numbers to 1000</p>	<p>thousand more, thousand less, negative integers, count through zero, Roman Numerals (I to C)</p>	<p>/from, before, less, many, fewer, least, smallest, greatest, equal to, same as, odd, even, units, ones, tens, compare, value, Numbers to 100, hundreds, partition, recombine, hundred more, less, equal to, tenths, hundredths, decimal places, round (to nearest), thousand more, thousand less, negative integers, count through zero, Roman Numerals (I to C), powers of ten</p>	<p>/from, before, less, many, fewer, least, smallest, greatest, equal to, same as, odd, even, units, ones, tens, compare, value, Numbers to 100, hundreds, partition, recombine, hundred more, less, equal to, tenths, hundredths, decimal places, round (to nearest), thousand more, thousand less, negative integers, count through zero, Roman Numerals (I to C), powers of ten, numbers to 10 million</p>
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