St Paul's CE Primary School

Article 28 – The right to an education.

Article 29 – Education must develop every child's talents and encourage the respect for human rights

Caring about learning, Learning about caring

Maths St Paul's CE Primary – Progression themes – Place value

For Nursery and reception progress see link LTP overview for maths

+COUNTING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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, 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 1000 000	
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		
Spot the mistake: 5,6,8,9 What is wrong with this sequence of numbers? **True or False?**	**Spot the mistake**: 45,40,35,25 What is wrong with this sequence of numbers? **True or False?**	**Spot the mistake**: 50,100,115,200 What is wrong with this sequence of numbers? **True or False?** 38 is a multiple of 8?	**Spot the mistake**: 950, 975,1000,1250 What is wrong with this sequence of numbers? **True or False?** 324 is a multiple of 9?	**Spot the mistake**: 177000,187000,197000,217000 What is wrong with this sequence of numbers? **True or False?** When I count in 10's I will say the number 10100?	**Spot the mistake**: -80,-40,10,50 What is wrong with this sequence of numbers? **True or False?**

I start at 2 and count in twos. I will say 9 **What comes next?** 10+1 = 11 11+1= 12 12+1 = 13 ……..	I start at 3 and count in threes. I will say 13? **What comes next?** 41+5=46 46+5=51 51+5=56 ……	**What comes next?** 936-10= 926 926 -10 = 916 916- 10= 906 …….	**What comes next?** 6706+ 1000= 7706 7706 + 1000 = 8706 8706 + 1000 = 9706 ……	**What comes next?** 646000-10000= 636000 636000 –10000 = 626000 626000- 10000 = 616000 …….	When I count backwards in 50s from 10 I will say -200 **True or False?** The temperature is -3. It gets 2 degrees warmer. The new temperature is -5?
COMPARING NUMBERS					
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 *compare numbers with the same number of decimal places up to two decimal places* (copied from Fractions)	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)
Do, then explain Look at the objects. (in a collection). Are there more of one type than another? How can you find out?	**Do, then explain** 37 13 73 33 3 If you wrote these numbers in order starting with the smallest, which number would be third?	**Do, then explain** 835 535 538 388 508 If you wrote these numbers in order starting with the smallest, which	**Do, then explain** 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third?	**Do, then explain** 747014 774014 747017 774077 744444 If you wrote these numbers in order starting with the smallest, which number would be third?	**Do, then explain** Find out the populations in five countries. Order the populations starting with the largest. Explain how you

	Explain how you ordered the numbers.	number would be third? Explain how you ordered the numbers.	Explain how you ordered the numbers.	Explain how you ordered the numbers.	ordered the countries and their populations.
IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS					
identify and represent numbers using objects and pictorial representations including the number line	identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations	identify, represent and estimate numbers using different representations		
READING AND WRITING NUMBERS (including Roman Numerals					
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)
		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)	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.	read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	
UNDERSTANDING PLACE VALUE					
	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	read, write, order and compare numbers up to 10 000 000 and determine the value of

				(appears also in Reading and Writing Numbers) *recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents* (copied from Fractions)	each digit (appears also in Reading and Writing Numbers) *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)
			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)		
	Do, then explain Show the value of the digit 2 in these numbers? 32 27 92 Explain how you know. **Make up an example** Create numbers where the units digit is one less than the tens digit. What is the largest/smallest number?	**Do, then explain** Show the3 value of the digit 3 in these numbers? 341 503 937 Explain how you know. **Make up an example** Create numbers where the digit sum is three. Eg 120, 300, 210 What is the largest/smallest number?	**Do, then explain** Show the value of the digit 4 in these numbers? 3041 4321 5497 Explain how you know. **Make up an example** Create four digit numbers where the digit sum is four and the tens digit is one. Eg 1210, 2110, 3010 What is the largest/smallest number?	**Do, then explain** Show the value of the digit 5 in these numbers? 350114 567432 985376 Explain how you know. **Make up an example** **Give further examples** Create six digit numbers where the digit sum is five and the thousands digit is two. Eg 3002000 2102000 What is the largest/smallest number?	**Do, then explain** Show the value of the digit 6 in these numbers? 6787555 95467754 Expalin how you know. **Make up an example** Create seven digit numbers where the digit sum is six and the tens of thousands digit is two. Eg 4020000 What is the largest/smallest number?
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 and 100 000	round any whole number to a required degree of accuracy
			round decimals with one decimal place to the nearest whole number (copied from Fractions)	*round decimals with two decimal places to the nearest whole number and to one decimal place* (copied from Fractions)	*solve problems which require answers to be rounded to specified degrees of accuracy* (copied from Fractions)
			Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be? **What do you notice?** Round 296 to the nearest 10. Round it to the nearest 100. What do you notice? Can you suggest other numbers like this?	**Possible answers** A number rounded to the nearest thousand is 76000 What is the largest possible number it could be? **What do you notice?** Round 343997 to the nearest 1000. Round it to the nearest 10000. What do you notice? Can you suggest other numbers like this?	**Possible answers** Two numbers each with two decimal places round to 23.1 to one decimal place. The total of the numbers is 46.2. What could the numbers be? **What do you notice?** Give an example of a six digit number which rounds to the same number when rounded to the nearest 10000 and 100000
PROBLEM SOLVING					
	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