St Anne's C of E Primary School Curriculum Plan

Subject: Maths | Year: 4 | Term: Autumn

Unit: Number and place value

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
Tenths, hundredths **Decimal (places)** **Round (to nearest)** **Thousand more/less than** **Integers** - a number which is not a fraction; a whole number *From the Latin meaning intact, whole* **Negative** – a number which is less than zero **Positive** – a number which is greater than zero **Negative integers** – When referring to negative numbers always use this language not	• the Roman numerals from 1 to 100. • that in the Roman system there is no symbol for zero so no placeholders • that over time, the number system changed to include the concept of zero and place value • to look at the ones column when rounding to the nearest 10 • to look at the tens column when rounding to the nearest 100 • to look at the hundreds column when rounding to the nearest 1000 • that 1000 is made up of ten hundreds • there are 2 25s in 50 and 4 25s in 100	• what is the same and what is different between the number systems • the position of 2 and 3-digit numbers on a number line in order to round up or down • that although 5 is in the middle of 0 and 10, the convention is that any number ending in 5 is rounded up • which two multiples of 100 a three-digit number sits between. • which multiples of 1000 and four-digit number sits between. • that a four-digit number is made up of thousands, hundreds, tens and ones • that numbers can be partitioned in various ways, e.g. 5000 +	• Count in multiples of 6,7,9,25 and 1000 • Find 1000 more or less than a given number • Count back through zero to include negative numbers • Order and compare numbers beyond 1000 • Round numbers to the nearest 10, 100 or 1000 • Identify and represent numbers using concrete materials, pictures and numerals • Read Roman numerals to 100 (I to C)

minus, e.g. negative 4 rather than minus 4 **Count through zero** **Consecutive numbers**- numbers that follow each other in an unbroken sequence. **Roman numerals (I to C)**	**Stem Sentences** 'The whole is divided into ten equal parts; each part is one tenth of the whole.' One tenth can be written as 0.1 so ____tenths can be written as 0.___ One is equal to ten tenths. _____ tenths plus _____ tenths is equal to ten tenths, which is equal to one. 'The whole is divided into one hundred equal parts; each part is one hundredth of the whole.' To compare two numbers, we compare digits with the same place value, starting with the largest place-value digit.	300 + 20 + 9 is equal to 4000 + 1300 + 10 + 19 • that there are numbers below zero • the real life context of negative numbers, e.g. temperature or water depth	

St Anne's C of E Primary School Curriculum Plan

Subject: Maths | Year: 4 | Term: Autumn

Unit: Addition and subtraction

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
Addition **Add, more, and, make, sum, total, altogether** **Double** **Near double** **Half, halve** **One more, two more… ten more** **Addends** – the numbers added together to make the sum **Subtraction**	• when multiples of 100 are added or subtracted, the sum or difference is always a multiple of 100. • how to record exchanges • when it is appropriate to use mental strategies and when to use written strategies • numbers can be rounded to simplify calculations or to indicate approximate sizes. • understand that they can use the same calculation methods learnt for three-	• why exchanges are needed • multiple exchanges within an addition • when to exchange in different place value columns • subtractions where there is more than one exchange	• use concrete objects and pictorial representations to add and subtract • use formal written methods of columnar addition and subtraction of up to 4-digit numbers • use knowledge of rounding to estimate the answer to a calculation • use inverse operations to check answers • solve two-step problems in contexts

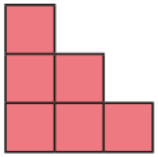
Take away, minus, fewer, less, difference between **One less, two less… ten less** **Minuend** – a quantity or number from which another is to be subtracted **Subtrahend** - a quantity or number to be subtracted from another. **Equals** **Is equal to, is the same as** **Number bonds** **Number pair** **Number facts** **Part, part, whole** **Partition** **Recombine** **Missing number** **Tens boundary / Hundreds boundary** **Commutative** - involving the condition that a group of quantities connected by operators gives the	digit numbers when calculating four-digit numbers.		• use bar modelling to solve problems • recognise patterns between calculations to enable them to predict answers • Pupils can compare different methods of addition and subtraction

same result whatever the order of the quantities involved, e.g. $a \times b = b \times a$.			

St Anne's C of E Primary School Curriculum Plan

Subject: Maths | Year: 4 | Term: Autumn

Unit: Area

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
Area **Square millimetres** **Square centimetres** **Square metres** **Rectilinear** **Right angles** **Length** **Width** **Covers** **surface**	• Area is the amount of space within a 2d shape • A rectilinear shape is a 2d shape whose sides all meet at right angles (90 degrees) • Area of a rectilinear shape can be found by counting the number of squares inside a shape • Area is measured in square units eg square centimetres cm^2	• **Practically counting squares is a first step to working out the area of a 2d shape eg this shape is 6cm^2**  • **You need to be accurate- using counters to measure area would not be accurate as they do not tessellate**	• Recognise a right angle • Keep an accurate record of which squares they have counted eg by placing a dot inside the square • Distinguish between perimeter and area (see perimeter unit) • Use the phrase 'square centimetre' (not cm squared)

St Anne's C of E Primary School Curriculum Plan

Subject: Maths | Year: 4 | Term: Autumn and Spring

Unit: Multiplication and division

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
Multiplication **Multiply** **Multiplied by** **Groups of** **Times** **Repeated addition** **Multiple** - The result of multiplying a number by an integer (not by a fraction).	• the multiplication and division facts up to 12 x 12. • any number multiplied by zero will have a product of zero. • when a number is multiplied or divided by 1, the productor quotient remains the same. • products in the 12 times table are double the products in the 6 times table. • multiplying by 100 is equivalent to multiplying by 10 and then multiplying by 10 again. • dividing by 100 is equivalent to dividing by 10 and then dividing by 10 again.	• multiplication is commutative but division is not. • making a number ten times bigger is the same as 'multiply by 10.' • making a number a hundred times bigger is the same as 'multiply by 100.' • what is happening to the place value of each digit when multiplying or dividing by 10 or 100. • multiplication facts can be derived from related known facts by partitioning one factor (distributive law) e.g. 6x3 can be found by (2x3) + (4x3).	• use concrete resources and pictorial representations to show multiplication and division, including multiplying and dividing by 10 and 100. • count in equal groups of 6, 7 and 9. • be able to use mental methods, e.g. partitioning to multiply two-digit numbers by one-digit numbers. • be able to partition three-digit numbers into hundreds, tens and ones to multiply by a single digit number. • be able to use formal written methods to multiply two-digit

Factor - Numbers we can multiply together to get another number. **Multiplicand** – The number to be multiplied **Multiplier** – The number by which the multiplicand is multiplied by **Product** – The result of a multiplication  **Division** **Dividing** **Divide** **Divided by** **Divided into** **Grouping** **Sharing** **Shared equally**	• when using the 'short multiplication' algorithm, you start from the least significant digit (on the reight) to the most significant digit (on the left). • if the product in any column is ten or greater, we must 'regroup'. • objects can be divided into equal groups and sometimes this leads to a remainder. **Stem Sentences** "The product of _____ and _____ is equal to the product of _____ and _____." "When zero is a factor, the product is always zero." "When the dividend is zero, the quotient is zero." "_____ is equal to _____ plus _____ so _____ times _____ plus _____ time _____ is equal to _____ times _____."	• they can use the distributive law to derive multiplication facts beyond the known times tables.	numbers and three-digit numbers by one-digit numbers.

Left over **Remainder** **Equal groups of** **Dividend** – The amount that you want to divide up. **Divisor** – The number we divide by. **Quotient** - The answer after we divide one number by another. **dividend ÷ divisor = quotient.** **Commutative law** - The Law that says you can swap numbers around and still get the same answer when you add or when you multiply. **Ditributive law** - multiplying a number by a group of numbers added together is the same as doing each multiplication separately.	"Multiplying by one hundred is equivalent to multiplying by ten and then multiplying by ten again." "If one factor is made ten times the size, the product will be ten times the size." "If one factthe dividend is made ten times the size, the quotient will be ten times the size." "If the dividend is a multiple of the divisor there is no remainder." "If the dividend is not a multiple of the divisor, there is a remainder." "The remainder is always less than the divisor."		

Doubling **Halving** **Array** **Multiplication table** **Multiplication fact** **Division fact**			