

Immersion plan - learning sequence 1

2	3	4	5	6	7	8	9	10
<p>count in multiples of 6, 7, 9, 25 and 10, 100 and 1000 4N1</p> <p>order and compare numbers beyond 1000 4N2a</p> <p>order 10, 100 and 1000 more or less than a given number 4N2b</p> <p>recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) 4N3a</p> <p>read Roman numerals to 100 (I to C) 4N3b</p> <p>show that over time, the numeral system changed to include the concept of zero and place value 4N3b</p> <p>compare number systems from other cultures with ours</p> <p>identify, represent and estimate numbers using different representations and concrete resources including measures and when comparing number systems 4N4a</p> <p>round any number to the nearest 10, 100 or 1000 and connect to estimation when calculating or when using measuring instruments 4N4b</p> <p>solve number and practical problems that involve all of the operations and with increasingly large positive numbers 4N6</p>	<ul style="list-style-type: none"> count backwards through zero to include negative numbers and relate to their use in real life 4N5 order and compare numbers including negative numbers 	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 10, 100 and 1000 - relate counting in 6s to counting in 60s ready for 4N6 						
<p>become fluent when recalling multiplication and division facts for multiplication tables up to 12×12 (exploring multiplication tables up to the $3 \times$ table) 4C6a</p> <p>represent the multiplication tables using concrete resources and pictorial representations</p> <p>identify patterns and relationships within times tables (including rules for divisibility)</p> <p>use known facts to derive new facts and inverse facts</p>								
	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate using concrete resources to represent and understanding of place value 4C2 estimate and use inverse operations to check answers to a calculation 4C3 add and subtract mentally using concrete resources and pictorial representations to support understanding and to include: <ul style="list-style-type: none"> know when and how to use jottings to support conservation of number calculate what must be added to any three digit number to make the next multiple of 100 add and subtract a pair of 2 digit numbers e.g. $38 + 86$ add and subtract 3 digit multiples of 10 e.g. $620 - 380$ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why (within known number competency) 4C4 							
								<ul style="list-style-type: none"> draw 2-d shapes with increasing accuracy compare, identify and classify geometric shapes, including quadrilaterals (<i>rhombus, parallelogram, trapezium and rectangle</i>) and triangles (<i>isosceles, scalene and equilateral</i>), based on their properties and sizes 4G2a identify lines of symmetry in 2-D shapes presented in different orientations (and in a variety of contexts) 4G2b

Immersion plan - learning sequence 2

1	2	3	4	5	6	7	8	9	10
<p>count up and down in hundredths and tenths including bridging through tenths and ones 4F1</p> <ul style="list-style-type: none"> - continue to relate counting in tenths to counting in known multiples e.g. relate counting in multiples of 6 to counting in multiples of 10 <p>recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten and relate to pounds and pence and measurement 4F1</p> <ul style="list-style-type: none"> - link to place value - relate decimal notation to division of a whole number by ten and later 100 <p>compare and order unit fractions and fractions with the same denominators 3F3 (continued from Y3)</p> <p>recognise the place value of each digit to two decimal places</p> <p>add and subtract fractions with the same denominator i.e. where the denominator is 10 or 100 4F4</p> <p>recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ and relate to money and decimal measures 4F6a</p> <p>recognise and write decimal equivalents of any number of tenths or hundredths 4F6b</p> <p>compare numbers with the same number of decimal places up to two decimal places 4F8</p> <ul style="list-style-type: none"> - order decimals with up to 2 decimal places - represent numbers with up to two decimal places in several ways including on a number line <p>round decimals with one decimal place to the nearest whole number and relate to rounding whole numbers, money and decimal measures</p> <p>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 ones, tenths and hundredths</p> <p>solve simple measure and money problems involving fractions and decimals to two decimal places 4F10b</p>									
<p>become increasingly fluent when recalling multiplication and division facts for multiplication tables (6 x, 11x and 12x) 4C</p> <ul style="list-style-type: none"> - relate 12x, 6x, 3x and 4x tables identifying common multiples and making links to doubling - relate 12x and 6x tables to chronology e.g. count in multiples of 60 <p>use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying numbers 4C6b</p> <ul style="list-style-type: none"> - understand that multiplication can be done in any order when multiplying three numbers e.g. $2 \times 3 \times 4 = 3 \times 4 \times 2 = 4 \times 3 \times 2$ <p>recognise and use factor pairs and commutativity in mental calculations 4C6c</p> <ul style="list-style-type: none"> - understand that multiplication is commutative but that division is not <p>solve problems involving multiplying and adding, including using integer scaling problems and harder correspondence problems involving money and objects 4C8</p>									
			<ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits (including decimal tenths and hundredths) using the formal written methods of columnar addition and subtraction where appropriate 4C2 <ul style="list-style-type: none"> - relate this to money and measures using decimal notation - using concrete resources and pictorial representations to support understanding and communication • estimate and use inverse operations to check answers to a calculation 4C3 • add and subtract numbers mentally using concrete resources and pictorial representations to support understanding and to include; <ul style="list-style-type: none"> - know when and how to use jottings to support conservation of number - calculate what must be added to any three digit number to make the next multiple of 100 and then any 4 digit number to make the next multiple of 1000 e.g. $4087 + \square\square\square = 5000$ - add and subtract a pair of 2 digit numbers e.g. $38 + 86$ - add and subtract 3 digit multiples of 10 e.g. $620 - 380$ - calculate what must be added to a decimal with units and tenths and then a unit with tenths and hundredths to make the next whole number e.g. $7.2 + \square\square = 8$ and relate to money, decimal measures and knowledge of place value • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 4C4 						<ul style="list-style-type: none"> • add and subtract numbers mentally using concrete resources and pictorial representations to support understanding and to include; <ul style="list-style-type: none"> - partitioning, counting back in minutes, and counting through 60 when calculating time
			<ul style="list-style-type: none"> • convert between different units of measure [e.g. kilometre to metre; hour to minute] 4M5 <ul style="list-style-type: none"> - relate to understanding of place value - use decimal notation when recording money and understand how money looks on a calculator display - record metric measures using decimal notation - recognise decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ and relate to measure 						<ul style="list-style-type: none"> • read, write and convert between analogue and digital 24-hour clocks and with increasing fluency • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days

draw 2-D shapes with increasing accuracy
begin to identify simple nets 3-D shapes e.g. unfold packets which are cubes or cuboids
compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and measures **4G2a**
describe movements between positions as translations of a given unit to the left/right and up/down **4P2**
describe positions on a 2-D grid as coordinates in the first quadrant **4P3a**
plot specified points and draw sides to complete a given polygon **4P3b**
identify lines of symmetry in 2-D shapes presented in different orientations (and in a variety of contexts) **4G2b**
complete a simple symmetric figure with respect to a specific line of symmetry (including where the line of symmetry does not dissect the original shape) **4G2c**

- recall multiplication and division facts for multiplication tables up to 12×12 **4C6a**
 - reason and generalise through investigation rules for divisibility for multiplication tables
- use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and multiplying together three numbers **4C6b**
 - derive new facts from known facts with increasing fluency e.g. if $6 \times 3 = 18$ then $60 \times 3 = 180$ etc.
 - understand when it is and isn't possible to use the inverse operation to solve missing number questions
 - use known strategies e.g. partitioning before multiplying (distributive law) e.g. $36 \times 4 = (30 \times 4) + (6 \times 4) =$ the correct use of brackets
- recognise and use factor pairs and commutativity in mental calculations **4C6c**
 - use understanding that multiplication can be done in any order e.g. $20 \times 3 \times 4 = 3 \times 4 \times 20 = 4 \times 3 \times 20$ (law)
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout using concrete and pictorial representation to support understanding and communication **4C7**
 - TO x O no exchange
 - TO x O extra digit in the answer
 - TO x O with exchange of ones into tens
 - HTO x O with no exchange
 - HTO x O with exchange of ones to tens
 - HTO x O with exchange of tens into hundreds
 - HTO x O with exchange of ones into tens and tens into hundreds
- divide two-digit and three-digit numbers by a one-digit number where the answer is exact i.e. no remainder **4C8**
 - TO \div O no exchange no remainder
 - TO \div O with exchange no remainder
 - HTO \div O no exchange and no remainder
 - HTO \div O with exchange of hundreds into tens
 - HTO \div O with exchange of tens into ones
 - HTO \div O with exchange of hundreds into tens and tens into ones
 - Where there are zeros in the quotient e.g. $816 \div 4 = 204$
- solve problems involving multiplying and adding, including using the distributive law to multiply two digit integer scaling problems e.g. making measurements 4 times longer or if one pack of sweets is £1.20 how many packs can I buy? and harder correspondence problems such as n objects are connected to m objects e.g. n people at a meal on a menu or three cakes shared equally between 10 children **4C8**

- order and compare fractions of quantities and shape in practical contexts
- recognise and show, using diagrams, families of common equivalent fractions
 - use concrete resources and pictorial representation to explore relationships
 - use factors and multiples to recognise equivalent fractions and simplify where possible e.g. $\frac{2}{3}$ or $\frac{1}{4} = \frac{2}{8}$
- add and subtract fractions with the same denominator **4F4** including;
 - recall pairs of fractions with the same denominator that total 1
 - add and subtract pairs of fractions with the same denominator bridging through 1
 - in a variety of contexts
- round decimals with one decimal place to the nearest whole number and round to one decimal place, money and decimal measures **4F7**
- find the effect of dividing a one- or two-digit number by 10 and 100, identify