

Assessment tasks								
<p>KEY CONCEPTS</p>	<p>Has acquired concept of number conservation Can count 1-1 reliably to 20 objects Can order numerals / Numicon by value Can match numerals / Numicon to sets Can say which set has most / least (e.g. set of 5 bananas is more than set of 3 apples)</p> <p>Using objects can add two single digit numbers - counting on to find the answer</p> <p>Using objects can subtract a single digit number from a number to 10 - counting back to find the answer</p>	<p>Has acquired the concept of addition as the process of bringing two sets together (can add 1 digit numbers to 2 digit numbers using a number track, numicon, 100 square etc)</p> <p>Has acquired the concept of subtraction as the process of taking a smaller set away from a larger set (can subtract 1 digit numbers from 2 digit numbers using a number track, 100 square etc.)</p>	<p>Has acquired the concept of place value;</p> <ul style="list-style-type: none"> can identify the value of digits in 3 digit numbers including the place holder 0 partitions numbers for calculations (applies this to own work) <p>Has acquired the concept of multiplication as repeated addition;</p> <ul style="list-style-type: none"> solves calculations using a number line & equal jumps solves calculations using equipment (e.g. using arrays, drawing groups of equal size, Numicon etc.) <p>Has acquired concept of division as sharing</p> <ul style="list-style-type: none"> Solves calculations using equipment (e.g. using arrays, drawing groups of equal size, Numicon etc.) 	<p>Has acquired the concept of place value;</p> <ul style="list-style-type: none"> can identify the value of digits in 4 digit numbers including the place holder 0 partitions numbers for calculations (applies this to own work) <p>Has acquired concept of division as repeated subtraction</p> <ul style="list-style-type: none"> Use ÷ and × facts to calculate fractions of numbers (unit fractions and non-unit fractions) <p>Fractions - acquired the concept of fractions as the following:</p> <ul style="list-style-type: none"> involving division equal parts of a shape equal quantities of a number <p>Has acquired the concept of difference as the gap between two amounts</p> <p>Adds or subtract to find the difference - knows which method to select</p>	<p>Has acquired the concept of place value;</p> <ul style="list-style-type: none"> can identify the value of digits to one decimal place partitions numbers for calculations (applies this to own work) <p>Has acquired the concept of fractions as the following:</p> <ul style="list-style-type: none"> a larger denominator indicating a smaller fraction a larger numerator indicating a larger amount equivalence of fractions (including when presented as decimals) addition of fractions with same denominator fractions as numbers - e.g. position on number lines 	<p>Has acquired the concept of four number operations at the structural level</p> <ul style="list-style-type: none"> Awareness of the internal structure of the operation and the relationships between the operations (includes understanding of commutative, distributive and associative laws) Would be shown in ability to use place value to partition numbers for + - × & ÷ mentally or with jottings Would be shown in ability to derive number facts from known ones <p>Has acquired the concept of fractions as the following:</p> <ul style="list-style-type: none"> Simplify fractions Add and subtract fractions with different denominators Can multiply numbers with $\frac{1}{2}$ and $\frac{1}{4}$ e.g. $10 \frac{1}{2} \times 2 = (10.5 \times 2 =) 5 \frac{1}{4} \times 4 = (5.25 \times 4 =)$ <p>Has acquired the concept of percentage:</p> <ul style="list-style-type: none"> Understands % as fraction 100th Knows common fractions as %s (1% 10% 20% 50% 75% etc.) Knows common decimal fractions as %s (.01 .1 .2 .5 .75 etc.) 	<p>Understands algebra as a method of solving mathematical problems</p> <p>Can apply a number to a variable to solve an algebraic equation</p> <p>Use knowledge of the order of operations (BODMAS) to carry out calculations</p> <p>Knows the relationship between fractions, decimals, percentages, ratio and proportion</p> <ul style="list-style-type: none"> Can convert one form into another Can compare and order 	<p>Understands algebra as a method of solving mathematical problems</p> <ul style="list-style-type: none"> Can write own algebraic formulae to express simple equations Can represent ÷ × and brackets in algebra <p>Understands a range of simple formulae and can use to solve problems e.g.</p> <ul style="list-style-type: none"> Circumference of a circle $2\pi r$ Triangle = $\frac{1}{2}$ base x height

Weekly 4 operations assessments								
ADDITION	Combine objects for adding	Counting all Counting on Counting on using a number line	Using partitioning strategies to add TU to TU Counting on a number line or 100 square in T and U	Expanded column method HTU (step towards formal written method)	Column addition - formal method Th H T U	Column method - whole numbers more than 4 digits including up to 2 decimal places	As blue using multi-digit numbers and decimals As blue using multi-digit numbers and decimals	Look at Old NC Level 6 objectives
SUBTRACTION	Take objects away for subtraction	Counting objects then take away to separate group Count backwards on a number line	Using partitioning to subtract 10s then ones using a number line or 100 square	Expanded column subtraction HTU (step towards formal written method) Addition of "chunks" using tables facts on a number line Repeated subtraction using tables facts and chunks on a number line	Column subtraction - formal method Th H T U	Column method - whole numbers more than 4 digits(2dp)		
MULTIPLICATION		Pictorial representations Arrays	Arrays Repeated addition (counting on) and repeated subtraction using a number line	Partitioning TU x U	Short multiplication for multiplication of H T U x U	Formal method - short multiplication Th H T U x U Long multiplication Th H T U	4 digits numbers x T1s - long multiplication As Y5 + 1s.th X 1s	
DIVISION		Sharing into groups using objects Arrays	Arrays Repeated addition (counting on) and repeated subtraction using a number line	Repeated subtraction using tables facts and chunks on a number line	Chunking using tables facts (step towards formal method)	Divide Th H T U by U using bus stop method with remainders interpreted as appropriate to context	4 digit numbers by 2 digit numbers using long and short division as appropriate	
½ termly written assessments								
NUMBER COUNTING	Count objects to 20 accurately	Count to and across 100 forwards and backwards from any given point Count in multiples of 2,5 & 10 up to 100	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number Count up and down in tenths.	Count in multiples of 6, 7, 9, 25 and 1000 Count backwards through zero to include negative number	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero		
MAGNITUDE & PLACE VALUE			Read and write numbers to at least 100 in numerals and in words	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Read and write numbers up to 1000 in numerals and in words Compare and order numbers up to 1000	Order and compare numbers beyond 1000 and also numbers with up to 2 decimal places Round any number (including decimals) to the nearest unit, 10, 100 or 1000	Read, write, order and compare numbers to at least 1 000 000 and with up to 3 decimal places and determine the value of each digit Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Round decimals with up to 2 decimal places to the nearest integer or 1dp	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit Round any whole number to a required degree of accuracy	
ADDITION & SUBTRACTION	Say 1 more than any number between 0-20 Say 1 less than any number between 0-20	Use number bonds and related subtraction facts to 20 Add and subtract one digit and two digit numbers to 20	Recall and use addition and subtraction facts to 20 fluently, and derive and use up to 100	Add and subtract numbers with up to three digits, using formal written methods	Add and subtract numbers with up to 4 digits using the formal written methods	Add and subtract whole numbers with more than 4 digits, including using formal written methods		
MULTIPLICATION & DIVISION			Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Recall multiplication and division facts for multiplication tables up to 12 x 12 Use place value to multiply and divide numbers by 10 and 100 (including where the result is a decimal answer)	Multiply and divide numbers mentally drawing upon known facts including 3 mathematical laws (CAD) Identify prime, square and cube numbers and multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Use place value to multiply and	Identify common factors, common multiples and prime numbers Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method Divide numbers up to 4 digits by a two-digit whole number using the formal written Method	

						divide numbers by 1000		
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Ongoing passport Tests								
PASSPORT	<p>Asia</p> <p>Say the numbers 1 to 20 accurately</p> <p>Say 1 more than any number between 0-20</p> <p>Say one less than any number between 0-20</p> <p>Know by heart number bonds to 3, 4 and 5</p>	<p>Western Europe</p> <p>One more or less than any number between 1-100</p> <p>Count in twos</p> <p>Count in tens</p> <p>Know by heart number bonds to ten</p>	<p>North Africa</p> <p>Know by heart all number bonds to 6, 7, 8 and 9</p> <p>Order any 2 numbers between 0 and 100 using <></p> <p>Know by heart doubles of all numbers to twenty</p> <p>Know by heart all multiplication facts for 2 to 2 x 12</p> <p>Know by heart all multiplication facts for 5 to 5 x 12</p> <p>Know by heart all multiplication facts for 10 to 10 x 12</p> <p>Add or subtract any single digit numbers</p>	<p>Antarctica</p> <p>Know by heart all sums and differences of multiples of 10 up to 100</p> <p>Know by heart all multiplication facts for 3 to 3 x 12</p> <p>Know by heart all division facts for 3 up to 36</p> <p>Know by heart all multiplication facts for 4 to 4 x 12</p> <p>Know by heart all division facts for 4 up to 48</p>	<p>Australasia</p> <p>Know by heart all multiplication facts for 6 to 6 x 12</p> <p>Know by heart all division facts for 6 up to 72</p> <p>Know by heart all multiplication facts for 9 to 9 x 12</p> <p>Know by heart all division facts for 9 up to 108</p> <p>Know by heart all multiplication facts for 7 to 7 x 12</p> <p>Know by heart all division facts for 7 up to 84</p>	<p>South America</p> <p>Double any 2 digit number</p> <p>Half any 2 digit number</p> <p>Know the factors of all times table answers up to 12 x 12</p> <p>Multiply or divide a number by 10, 100, 1000 including decimals</p>	<p>Globe trotter</p> <p>Double any number with up to 1 decimal place</p> <p>Half any number with up to 1 decimal place</p> <p>Find a unit fraction of a number</p> <p>Identify equivalence between fractions</p>	
		<p>Eastern Europe</p> <p>Count in fives</p> <p>Recall doubles of all numbers to at least ten</p> <p>Know by heart number bonds to twenty</p>	<p>South Africa</p> <p>Know by heart all bonds of multiples of 10 to 100</p> <p>Know by heart halves of all numbers to twenty</p> <p>Know by heart all division facts for 2 up to 24</p> <p>Know by heart all division facts for 5 up to 60</p> <p>Know by heart all division facts for 10 up to 120</p> <p>Add or subtract any numbers up to 20.</p>	<p>Arctic Circle</p> <p>Know by heart all multiplication facts for 8 to 8 x 12</p> <p>Know by heart all division facts for 8 up to 96</p> <p>Add or subtract any single unit number to any 3 digit HTU number</p> <p>Add or subtract any multiple of 10 to any 3 digit HTU number</p> <p>Add or subtract any multiple of 100 to any 3 digit HTU number</p>	<p>North America</p> <p>Know by heart all multiplication facts for 11 to 11 x 12</p> <p>Know by heart all division facts for 11 up to 132 Y4</p> <p>Know by heart all multiplication facts for 12 to 12 x 12</p> <p>Know by heart all division facts for 12 up to 144</p> <p>Round a number to the nearest 10, 100, 1000</p> <p>Know number bonds to 100</p>	<p>Central America</p> <p>Know by heart the squares of numbers between 1 and 12 and squares of multiples of 10.</p> <p>Know number bonds to 100 for numbers with one decimal place</p> <p>Recall prime numbers up to 30</p> <p>Multiply pairs of multiples of 10 and 100 eg. 30 x 70</p>	<p>Solar System Explorers - Mars</p> <p>Find non-unit fractions of a number</p> <p>Find a percentage of a number</p> <p>Convert between decimals fractions and percentages</p> <p>Convert improper fractions to mixed number</p>	