

Roche CP School Maths Policy

Area of Maths = Addition

Definition: Addition is to join two or more numbers (addends) or quantities to get one number called the sum or total. Jenny Eather AMDFK

KEY STAGE 2 ONLY TO INCLUDE ADDENDS.


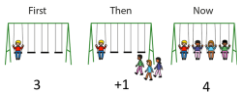


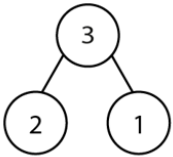

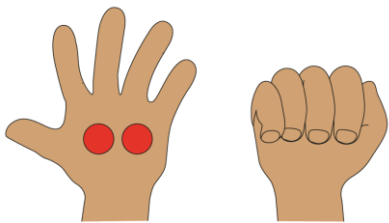


$$\begin{array}{ccccc} \text{addend} & & \text{addend} & & \text{total} \\ 3 & + & 7 & = & 10 \end{array}$$

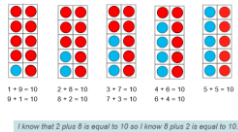
Vocabulary: add, plus, combine, total, sum, join, increase, addend, more than, greater than

Basic structure: addend + addend = sum / total

Sum / total = addend + addend

Declarative knowledge	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Addition + Subtraction</p> <p>Automatically recall...</p> <p>Blue highlight = Roche's Specific Expectations</p> <p>Red font = Roche's Priorities for Revisiting</p>	<p>Number bonds to 5 + some to 10.</p> <p>Double facts (within 10).</p> <p>Odd and even numbers up to 10.</p>	<p>Number bonds to 20.</p> <p>Odd and even numbers up to 20.</p> <p>Know that addition is commutative and subtraction is not.</p>	<p>Addition and subtraction facts within 20.</p> <p>Know that addition is commutative and subtraction is not.</p>	<p>Number bonds to 100 in multiples of 10 and 5.</p>	<p>Number bonds to 100 in ones.</p> <p>Number bonds to 1000 in multiples of 100s and 50s.</p>	<p>Add numbers mentally with increasingly large numbers.</p> <p>(100s, 1000s + 10,000s)</p> <p>Number bonds to 1000 in multiples of 25s + 10s.</p>	<p>Know the order of calculations. (BODMAS)</p>

Year 1						
Year group	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
1	<p>Non-stat guidance</p> <p>1AS-1 Compose numbers to 10 from 2 parts.</p> <p>Additive structures, including part-wholes and first, then, now statements and models.</p> <p>Read, write and interpret mathematical statements involving addition (+) and equals (=) signs.</p> <p>Demonstrate an understanding of the</p>	<p>Place 2 different sets of objects on the desk and ask pupils to describe what is on the table as "there are X red objects and X blue objects. There are X objects altogether.</p>	 <p>Complete the sentences.</p> <p>There are ____ blue backpacks, there are ____ yellow backpacks, there are ____ backpacks overall.</p>  <p>Bar models</p> <p>Part-whole models</p>	 <p>Write a number sentence to describe the birds above.</p>  <p>Write a number sentence to describe the blocks above.</p>  	 <p>There are 5 counters altogether. Can you guess how many counters are hiding?</p> <p>Collect five objects and hide some from your friend. Can they say how many are hiding?</p>	  <p>Look at the two pictures above. What is the same? What is different?</p>

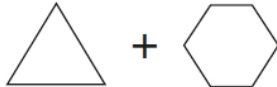
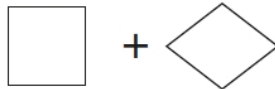
	commutative law (e.g. $3 + 2 = 5$, therefore $2 + 3 = 5$).					
1	2020 Guidance	<p>1NF-1 Develop fluency in addition and subtraction facts within 10. Year 1 document - Pages 17 - 23</p> <p>1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</p> <p>Year 1 document – Pages 23 – 28</p> <p>1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</p> <p>Year 1 document - Pages 29 – 35</p> <p>These units will run through all of the Y1 addition and subtraction objectives and will also be part of morning maths.</p>				
1	<p>Recall at least four of the six number bonds for 10 and reason about associated facts (e.g. $6 + 4 = 10$, therefore $4 + 6 = 10$ and $10 - 6 = 4$)</p> <p>A few discrete lessons and then drip through the year.</p> <p>Solve one-step problems that involve addition using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.</p>	<p>Tens frames</p> <p>Double-sided counters</p> <p>Dienes</p> <p>Numicon to 10</p> <p>Coins (1p to make 10p)</p>	<p>Pictorial representations of tens frames, numicon, coins, dienes</p> 	<p>$0 + ? = 10$</p> <p>$1 + ? = 10$</p> <p>$2 + ? = 10$</p>	<p>Here's a set of Numicon from 1 to 10, how many Numicon pairs can you put together to make 10? (Number bond sandwich) – look for odd and even patterns.</p>	<p>Mrs Gardner thinks there is only 2 ways to record this number sentence:</p> <p>$8 + 2 = 10$</p> <p>$2 + 8 = 10$</p> <p>True or False? Prove it! (False $10 = 2 + 8$ and $10 = 8 + 2$)</p>

1	2020 Guidance	1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. Year 1 document – Pages 23 – 28 This will run through all of the Y1 addition and subtraction objectives and will also be part of morning maths.				
1	Represent and use number bonds within 20. Recap bonds withing / to 10 and then progress up to 20 Solve one-step problems that involve addition using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.	Objects Fingers (for 10s, partners for 20s) Coins (1p and 10p) Numicon Dienes Unifix cubes Bar model with cubes / dienes Hoops and Bean bags for Part Part Whole Remember to Move the equals sign	Number line with numbers on 20 rectangle (a hundred square cut) Images Ruler/Counting stick Chn draw Add facts table Remember to Move the equals sign	Counting on (to get to 10 or 20) Abstract bar models, just numbers. Part, Part, Whole Diagrams Missing number problems Remember to Move the equals sign Fluency - Patterns Number fans	How many different ways can you make 15? Spot patterns in Add facts table e.g., colour all then numbers that make 9, can you see a pattern? Record them in a sequence. Can you record that with objects (Bar model)?	I think there are 8 different ways of making the number 14 using addition, am I correct? Do some of your calculations look similar? Recap commutative law during reasoning.
1	2020 Guidance	1AS–2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. Year 1 document - Pages 29 - 35				

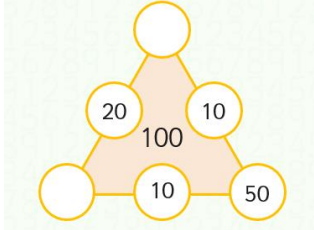

1	<p>Add one-digit and two-digit numbers to 20, including zero.</p> <p><i>This should mainly be single digit + single digit that bridge 10, such as 6 + 8, 5 + 7</i></p> <p><i>Solve one-step problems that involve addition using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.</i></p>	<p>Fingers (for 10s, partners for 20s)</p> <p>Coins (1p, 10p, 20p)</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to Move the equals sign</p>	<p>Number line with numbers on</p> <p><i>20 rectangle (a hundred square cut)</i></p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Add facts table</p> <p>Remember to Move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Part Part Whole model</p> <p>Recording of addition</p> <p>Remember to Move the equals sign</p>	<p>Adding calculations and ordering groups of calculations.</p> <p>Mark my work</p> <p>Contextual problems e.g. I have 8 eggs, how many more do I need to fill an egg box with twelve spaces.</p> <p>Missing digit problems e.g. $1\square + 4 = 17$ with resources to help.</p> <p>Use these 3 number cards to make an addition number sentence. How many ways are there?</p>	<p>I have some number cards: 3, 5, 2, 0, 7 Which two number cards sum to a number greater than 10?</p> <p>James says: If I add any of the two cards together I will get a number larger than the number on either card. Is he correct? Why?</p> <p>I can't make a number greater than 18 by adding two single-digit numbers. True or false? Prove it!</p> <p>Could I make a number greater than 18 if I had three digits to add together? Give three examples.</p>
1	Solve one-step problems that involve addition and missing numbers using concrete objects and pictorial representations.					

Year 2

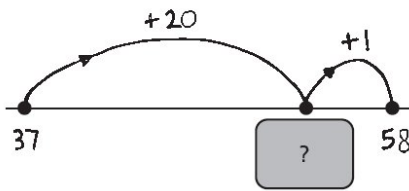
Year group	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		<p>Make it!</p> <p>SAY IT</p>	<p>Show it/Draw it!</p> <p>SAY IT</p>	<p>Read/Write it!</p> <p>SAY IT</p>		

2	<p>[EXS] [KEY] Recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7+3=10$, then $17+3=20$; if $7-3=4$, then $17-3=14$; leading to if $14+3=17$, then $3=14-17$, $17-14=3$ and $17-3=14$.)</p> <p>↳ GD objective: Solve problems with addition and subtraction rapidly recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.</p> <p>Recap addition facts to 20 and then start to derive and use related facts to 100.</p>	<p>Fingers (for 10s, partners for 20s)</p> <p>Coins (1p, 10p, 20p)</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to Move the equals sign</p>	<p>Number line with numbers on</p> <p>20 rectangle (a hundred square cut)</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Add facts table</p> <p>Remember to Move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of addition</p> <p>Part Part Whole model</p> <p>Remember to Move the equals sign</p>	<p>Write four different numbers to make these correct:</p> <div>$+ = 17$</div> <div>$+ = 17$</div> <div><p>Can you fill in the missing numbers so that each row and column make a total of 100?</p><table border="1"><tr><td></td><td>10</td><td>50</td></tr><tr><td>10</td><td></td><td>30</td></tr><tr><td>50</td><td>30</td><td></td></tr></table></div> <div><p>Use the cards to make as many addition and subtraction number sentences as you can. How many can you make?</p><div><div>13</div><div>18</div><div>6</div><div>7</div><div>24</div><div>20</div></div></div>		10	50	10		30	50	30		<p>True or False? If you add two even numbers together it will always make an even number. True or false? Show me how you know!</p> <p>If you add three odd numbers together it will always make an odd number. True or false? Show me how you know!</p>
	10	50													
10		30													
50	30														

	(Mainly covered in Fluency work.)					
2	2020 Guidance	2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice. Year 2 document – Pages 16 - 17				
2	<p>Add numbers using concrete objects, pictorial representations and mentally, including a two-digit number and ones.</p> <p>Solve problems with addition using concrete objects and pictorial representations including those involving numbers, quantities and measures.</p> <p>Solve problems with addition applying their increasing knowledge of mental and written methods.</p> <p>Show that addition of two numbers can be done in any order (commutative)</p>	<p>Fingers</p> <p>Coins up to £1</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Blank Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Arrow cards</p> <p>Remember to move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Part Part Whole model</p> <p>Recording of addition no. sentences</p> <p>Remember to move the equals sign</p> <p>Column method for layout only!</p>	<p>Word and contextual problems</p> <p>Missing number in different forms, bar, objects, column</p> <p>Calculations that include greater than and less than symbols</p> <p>Money questions, cost of multiple items</p>	<p>I think, prove it.</p> <p>Odd / Even reasoning e.g. and odd plus an odd will sum to an odd; always, sometimes, never true?</p> <p>Adding two consecutive numbers will always give me an odd number; always, sometimes, never true?</p>

2	2020 Guidance	2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. Year 2 document - Pages 23 - 26				
2	<p>Add numbers using concrete objects, pictorial representations and mentally, including a two-digit number and tens</p> <p>Solve problems with addition using concrete objects and pictorial representations including those involving numbers, quantities and measures.</p> <p>Solve problems with addition and applying their increasing knowledge of mental and written methods.</p> <p>Show that addition of two numbers can be done in any order (commutative)</p>	<p>Fingers</p> <p>Coins up to £1 (Particularly 10ps)</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Blank Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Arrow cards</p> <p>Remember to move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of addition no. sentences</p> <p>Part Part Whole model</p> <p>Remember to move the equals sign</p> <p>Column method for layout only!</p>	<p>Word and contextual problems</p> <p>Can you complete these triangles so that each side totals 100?</p>  <p>Missing number in different forms, bar, objects, column, on a hundred square.</p> <p>Calculations that include greater than and less than symbols</p> <p>Money questions, multiples of 10 more than a number e.g. an apple cost 45p, a banana costs 20p more, how much does a banana cost?</p> <p>Write numbers in the shapes to make this correct.</p>  <p>Mr Moore says we can have 10 more minutes for golden time. We usually have 15 minutes, how long will we get today?</p>	<p>Caitlyn says:</p> <p>If you add 10 to a two-digit number you'll always get a two-digit total.</p> <p>Is Caitlyn always, sometimes or never correct? Explain your answer.</p> <p>Miss Tonkin thinks when you add multiples of 10 the ones always stay the same. Is she correct? How do you know?</p>
2	2020 Guidance	2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. Year 2 document - Pages 23 - 26				

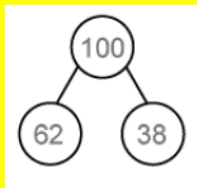
2	<p>Add numbers using concrete objects, pictorial representations and mentally, including two two-digit numbers.</p> <p>Solve problems with addition using concrete objects and pictorial representations including those involving numbers, quantities and measures.</p> <p>Solve problems with addition and applying their increasing knowledge of mental and written methods.</p> <p>Show that addition of two numbers can be done in any order (commutative)</p>	<p>Fingers</p> <p>Coins up to £1</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Blank Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Arrow cards</p> <p>Remember to move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Part Part Whole model</p> <p>Recording of addition no. sentences</p> <p>Remember to move the equals sign</p> <p>Column method for layout only!</p>	<p>Spot the odd one out from different representations</p> <p>Missing digit calculations with different representations</p> <p>Contextual problems e.g. lengths of objects,</p> <p>Calculations that include greater than and less than symbols</p> <p>Money questions e.g. an apple cost 45p and a banana costs 28p. How much do the cost together?</p> <p>Here are 4 number cards</p> <p>4, 6, 7, 3</p> <p>Using the following boxes find the combination that will give you</p> <p>a. The largest total</p> <p>b. The smallest total</p> <p>$\square\square + \square\square$</p> <p>You can only use each card once</p>	<p>If I add two two-digit numbers together they will always sum to a two-digit number. Always/Sometimes/Never</p> <p>What's the same? What's different?</p> <p>$20 + 20 = 40$ $40 = 20 + 20$</p> <p>$20 + 21 = 41$ $41 = 21 + 20$</p> <p>$20 + 22 = 42$ $42 = 22 + 20$</p> <p>$20 + 23 = 43$ $43 = 23 + 20$</p> <p>$20 + 24 = 44$ $44 = 24 + 20$</p> <p>$20 + 25 = 45$ $45 = 25 + 20$</p> <p>Look at each number sentence.</p> <p>Put a tick (✓) if it is correct.</p> <p>Put a cross (X) if it is not correct.</p> <p>$8 \times 2 = 8 + 8$ <input type="checkbox"/></p> <p>$3 \times 10 = 3 + 3 + 3$ <input type="checkbox"/></p> <p>$5 \times 4 = 5 + 5 + 5 + 5$ <input type="checkbox"/></p>
2	2020 Guidance	2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. Year 2 document - Pages 27 - 29				

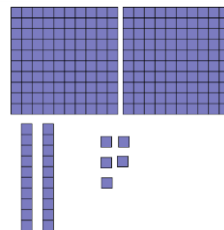
2	<p>[EXS] [KEY] Add any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. $48+35$).</p> <p>Solve problems with addition using concrete objects and pictorial representations including those involving numbers, quantities and measures.</p> <p>Solve problems with addition and applying their increasing knowledge of mental and written methods.</p> <p>Show that addition of two numbers can be done in any order (commutative).</p>	<p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Number lines</p> <p>Hundred square</p>	<p>Missing number problems</p> <p>Part Part Whole model</p> <p>Recording of addition no. sentences</p> <p>Bar model</p>	<p>Katie drew a number line to help her find the answer to $37 + 21$</p>  <p>What number is hidden under the card?</p>	<p>Use these signs: $-$ $+$ $=$</p> <p>You can use each sign more than once.</p> <p>Write signs in the boxes to make these correct.</p> <p>25 <input type="text"/> 19 <input type="text"/> 6</p> <p>15 <input type="text"/> 15 <input type="text"/> 0</p>
2	2020 Guidance	2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. Year 2 document - Pages 27 - 29				

2	<p>Add numbers using concrete objects, pictorial representations and mentally, including adding three one-digit numbers</p> <p>Solve problems with addition using concrete objects and pictorial representations including those involving numbers, quantities and measures.</p> <p>Solve problems with addition and applying their increasing knowledge of mental and written methods.</p> <p>Show that addition of two numbers can be done in any order (commutative)</p>	<p>Fingers</p> <p>Coins up to £1</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Blank Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Arrow cards</p> <p>Remember to move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of addition no. sentences</p> <p>Remember to move the equals sign</p> <p>Column method for layout only!</p>	<p>Adding value of coins (1p 2p 5p)</p> <p>Find out how many different ways of making 10 using 3 digits. You may/may not use the same digit more than once.</p> <p>Context questions e.g. Sarah had 2 cats, 3 dogs and 9 fish. How many pets did she have altogether?</p> <p>Write two numbers to make this calculation correct.</p> $\square + \square = 19$ <p>Now write three numbers to make this calculation correct.</p> $\square + \square + \square = 19$	<p>Adding 3 consecutive numbers will always give you an even number; always, sometimes, never true?</p> <p>Adding 3 odd numbers together will always give you an even number; always, sometimes, never true?</p>
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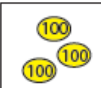


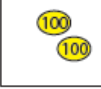


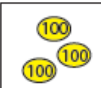


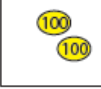


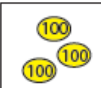


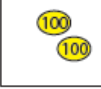


Year 3

Year group	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
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		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT											
3	2020 Guidance 3AS-1 Calculate complements to 100, for example: 46 + ? = 100	Dienes Coins (For change) PV counters	Hundred square Pictorial hundred diene Bar models Part-whole models 	Missing number questions Bonds sheets for pattern-spotting (Already prepared)	A dressmaker had 1m of ribbon. Then she used 22cm of it. How many centimetres of ribbon does she have left? A toy shop sells ping-pong balls for 65p each. If I use a £1 coin to pay for a ping-pong ball, how much change will I get, in pence? Mr Jones has 100 stickers. 47 of them are gold and the rest are silver. How many are silver?	Mr Moore says: "Finding bonds to 100 is easy, you make the ones digits add up to ten and the tens digits add up to 10. For example 43 + 67 = 100 because 3 + 7 = 10 and 4 + 6 = 10." Explain why Mr Moore is wrong .									
3	[Key] Add numbers mentally, including three-digit number and hundreds.	Fingers Numicon Dienes Coins – particularly £1 Multi-link cubes Bar model with cubes / dienes Remember to move the equals sign PV Chart for placing objects	Blank number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Remember to move the equals sign Arrow cards	Counting on Abstract bar models, just numbers. Missing number problems Part Part Whole model Remember to move the equals sign	Word and contextual problems Missing number in different forms, bar, objects, on a hundred square. Missing number squares e.g. Make 1000: <table border="1"><tr><td></td><td></td><td></td></tr><tr><td></td><td>600</td><td>300</td></tr><tr><td>500</td><td></td><td>20</td></tr></table>					600	300	500		20	If I count up in hundreds from 125 will I get to 725? Explain your reasoning. James completed the question below and his teacher marked it as incorrect: 345 + 100 = 355 Can you explain the mistake James has made?
	600	300													
500		20													

					<p>Mr Moore adds a hundred diene to the number below:</p> <div></div> <p>What is Mr Moore's new number?</p> <p>Write the four number facts that this bar model shows.</p> <table border="1"><tr><td colspan="2">540</td></tr><tr><td>300</td><td>240</td></tr></table> <div><div><input type="text"/> + <input type="text"/> = <input type="text"/></div><div><input type="text"/> + <input type="text"/> = <input type="text"/></div><div><input type="text"/> - <input type="text"/> = <input type="text"/></div><div><input type="text"/> - <input type="text"/> = <input type="text"/></div></div>	540		300	240	
540										
300	240									
Shape space and measure opportunities: Adding pounds to an amount of money. Adding metres to a number of centimetres.										
3	2020 Guidance	3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: 80 + 60 = 140; 140 - 60 = 80. 30 x 4 =120; 120 ÷ 4 = 30. Year 3 document – pages 30 - 32								
3	[Key] Add numbers mentally, including three-digit number and tens. (Recap 2 digit and tens)	Fingers Numicon Dienes Coins – particularly 10ps Multi-link cubes Bar model with cubes / dienes	Blank number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick	Counting on Abstract bar models, just numbers. Missing number problems Part Part Whole model	Word and contextual problems Missing number in different forms, bar, objects, on a hundred square. Calculations that include greater than and less than symbols Money questions, multiples of 10 more than a number e.g. a laptop cost £555, A TV costs £20 more, how much does a TV cost?	Sarah says: "If I have a tens Diene and then keeps placing more tens Dienes next to it eventually I'll make 100." Do you agree with Sarah? Why? Why not? Mrs Campbell says: If I have the number 276 and I keep adding tens to it the tens column will change but the ones column and hundreds column will always stay the same .				

		Remember to move the equals sign PV Chart for placing objects	Chn draw Remember to move the equals sign Arrow cards	Remember to move the equals sign	Mr Moore says we can have 10 more minutes for Science. We usually have 115 minutes, how long will we get today?	Is Mrs Campbell correct? Explain why / why not. Thomas says "I have a money jar just for £10 notes and I have £145 saved in side it." If Thomas' jar does only have £10 notes in it is it possible for him to have £145? Explain your answer.
Shape space and measure opportunities: Adding multiples of 10p to an amount of money.						
3	2020 Guidance	3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: $80 + 60 = 140$; $140 - 60 = 80$. $30 \times 4 = 120$; $120 \div 4 = 30$. Year 3 document – pages 30 - 32				
3	[Key] Add numbers mentally, including three-digit number and ones. (Recap 2 digit and ones)	Fingers Numicon Dienes Coins for 2digit and 1 digit. Multi-link cubes Bar model with cubes / dienes Remember to move the equals sign PV Chart for placing objects	Blank number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Remember to move the equals sign Arrow cards	Counting on Abstract bar models, just numbers. Missing number problems Part Part Whole model Remember to move the equals sign	Word and contextual problems e.g. I have 123 pencils. James gives me 8 more. How many do I have now? Missing number in different forms, bar, objects, column Calculations that include greater than and less than symbols Money questions, cost of multiple items	I think.... Odd / Even reasoning e.g. an odd plus an odd will sum to an odd; always, sometimes, never true? Prove it! Mrs Welch thinks when you add a one digit number to any 3 digit number, only the ones change. True or False? How do you know?

3	2020 Guidance	3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27													
3	Add numbers with up to three digits, using formal written methods of columnar addition. (Recap 2 + 2 digits)	Coins Numicon Dienes Multi-link cubes Bar model with cubes / dienes Counters with PV charts Remember to move the equals sign	Number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Arrow cards Remember to move the equals sign	Counting on Abstract bar models, just numbers. Missing number problems Part Part Whole model Recording of addition (See Written Method Calculation Policy) Remember to move the equals sign	I earnt £150 pocket money last year and £22 this month. How much money have I earnt in total? Show the children six partition addition calculations. Which one have no carry digits? I want to build a Lego model that needs 400 pieces. I have 137 bricks in one tub and 357 bricks in another tub. Do I have enough?	Sam is adding two numbers in a counters place value chart: <table><tr><td>Hundreds place</td><td>Tens place</td><td>Ones place</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table> Show children a partitioned calculation for the above diagram with an error in, is it correct? Can you explain the error?	Hundreds place	Tens place	Ones place						
Hundreds place	Tens place	Ones place													
															
															
Shape space and measure opportunities: Solve simple problems in a practical context involving addition of money of the same unit, including giving change.															
3	2020 Guidance	3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27. 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: 80 + 60 = 140; 140 - 60 = 80. 30 x 4 =120; 120 ÷ 4 = 30. Year 3 document – pages 30-32. 3AS-2 Add and subtract up to three-digit numbers using columnar methods. Year 3 document – pages 36 – 39.													

Year 4

Year group	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
4	Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate [KEY] Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Coins Dienes Move the equals sign Measuring jug /scale Counters with PV charts Numicon Remember to move the equals sign	Blank number line 100 square Abacus PV chart Arrow cards Bar Model Metre ruler Images Ruler/Counting stick Measuring jug / scale Chn draw	Abstract bar models, just numbers. Missing number problems Recording of addition/columnar methods (See Written Method Calculation Policy) Part Part Whole model Moving the equals sign	Fill in the empty boxes to make the equations correct. $\boxed{7} \boxed{} \boxed{1} + \boxed{} \boxed{3} \boxed{} = 999$ $\boxed{7} \boxed{} \boxed{1} + \boxed{} \boxed{3} \boxed{} = 1000$ <ul style="list-style-type: none"> Desani adds three numbers together that total 7,170  <p>They all have 4 digits. They are all multiples of 5</p> <p>What could the numbers be? Prove it.</p>	James says "If I add two four-digit whole numbers together my total will always have four digits" Do you agree? Explain your answer. Gillian says "If I add two four-digit whole numbers together it is not possible for the total to have 6 digits" Is Gillian correct? Can you prove her to be right or wrong? Ali and Sarah calculate $420 + 221 + 280$ using different strategies. <div> <div> <p>This is Sarah's strategy:</p> $420 + 221 + 280$ $420 + 221 = 641$ $641 + 280 = 921$ <p>Answer = 921</p> </div> <div> <p>This is Ali's strategy:</p> $420 + 221 + 280$ $420 + 280 = 700$ $700 + 221 = 921$ <p>Answer = 921</p> </div> </div> Which do you prefer? Explain your reasoning. Now calculate $370 + 242 + 130$ using your preferred strategy.

				<p>Write down the four relationships you can see in the bar model.</p> <table><tr><td>2300</td><td>1240</td></tr><tr><td colspan="2">3540</td></tr></table> <p><input type="text"/> + <input type="text"/> = <input type="text"/> <input type="text"/> + <input type="text"/> = <input type="text"/> <input type="text"/> - <input type="text"/> = <input type="text"/> <input type="text"/> - <input type="text"/> = <input type="text"/></p>	2300	1240	3540		<ul style="list-style-type: none">A game to play for two people. The aim of the game is to get a number as close to 5,000 as possible. Each child rolls a 1-6 die and chooses where to put the number on their. Once they have each filled their grid, they add up their totals to see who is the closest. <table><tr><td></td><td>?</td><td>?</td><td>?</td><td>?</td></tr><tr><td>+</td><td>?</td><td>?</td><td>?</td><td>?</td></tr></table> <ul style="list-style-type: none">All of the digits below are either a 3 or a 9. Can you work out each digit? <p>7,338 = ???? + ???? </p>		?	?	?	?	+	?	?	?	?
2300	1240																		
3540																			
	?	?	?	?															
+	?	?	?	?															
Shape space and measure opportunities: Add amounts of money to give change, using both £ and p in practical contexts Calculate the perimeter of simple 2-D shapes																			
4	2020 Guidance	4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), for example: 8 + 6 = 14 and 14 - 6 = 8 so 800 + 600 = 1400 and 1400 - 600 = 800. 3 x 4 = 12 and 12 / 4 = 3 so 300 x 4 = 1200 and 1200 / 4 = 300. Year 4 document – Pages 32 - 35																	

Year group	NC L.O.	Practical	Pictorial	Abstract	Problem Solving		Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT			
5	[KEY] Add whole numbers with more than 4 digits, including using formal written methods (columnar addition). [KEY] Add numbers mentally with increasingly large numbers. Solve addition multi-step problems in contexts, deciding which operations and methods to use and why.	Coins Dienes Move the equals sign Measuring jug /scale Counters with PV charts Numicon Remember to move the equals sign	Blank number line 100 square Abacus PV chart Arrow cards Bar Model Metre ruler Images Ruler/Counting stick Measuring jug / scale Chn draw	Abstract bar models, just numbers. Missing number problems Recording of addition/columnar methods (See Written Method Calculation Policy) Part Part Whole model Moving the equals sign			There is a mistake in the following calculation. 2451 +562 8071 Explain the mistake and then make a correction to find the correct answer. My answer is 5,398 What's the question? Create 3 addition calculations. Did you use a strategy? Explain it.
					65,000	35,000	
					Two car salesmen are in a competition to sell £25, 000 worth of cars in a week. James sells £14,567 worth of cars and Mark sells £9,976 worth of cars. How much did they sell in total? Did they hit their £25,000 target? A five digit number and a four digit number have a total of 25,365 Give me three possible pairs of numbers that could make this total.		
Shape space and measure opportunities: Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Calculate different measures, including money in pounds and pence							

	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	
5	2020 Guidance	5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth), for example: $8 + 6 = 14$, $0.8 + 0.6 = 1.4$, $0.08 + 0.06 = 0.14$; $3 \times 4 = 12$, $0.3 \times 4 = 1.2$; $0.03 \times 4 = 0.12$. Year 5 document – Pages 37 - 40

Year 6

6	2020 Guidance	6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.
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Area of Maths = Subtraction

Definition: Subtraction is to take one quantity away from another.

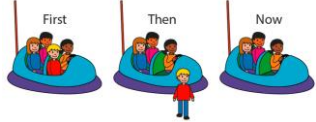
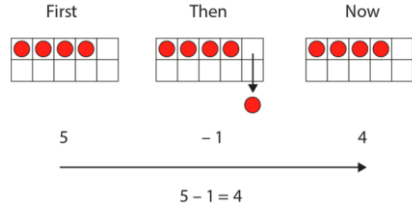
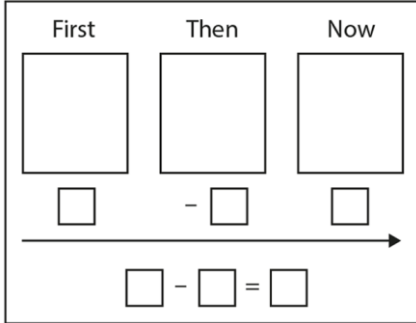

Jenny Eather AMDFK


Vocabulary: subtract, take away, decrease, remove, find the difference.

Basic structure: minuend – subtrahend = difference (KS2 only)

Declarative knowledge	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Subtraction</p> <p>Automatically recall...</p> <p>Blue highlight = Roche's Specific Expectations</p> <p>Red font = Roche's Priorities for Revisiting</p>	<p>Number bonds to 5 + some to 10.</p> <p>Subtraction facts within 5 + some to 10.</p>	<p>Subtraction facts within 20.</p> <p>Odd and even numbers up to 20.</p> <p>Know that addition is commutative and subtraction is not.</p>	<p>Subtraction facts within 20.</p> <p>Know that addition is commutative and subtraction is not.</p>	<p>Number bonds to 100 in multiples of 10 and 5.</p>	<p>Number bonds to 100 in ones.</p> <p>Number bonds to 1000 in multiples of 100s and 50s.</p>	<p>Subtract numbers mentally with increasingly large numbers.</p> <p>(100s, 1000s + 10,000s)</p> <p>Number bonds to 1000 in multiples of 25s + 10s.</p>	<p>Know the order of calculations. (BODMAS)</p>


Year 1


Year group :	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
1	<p>Non-stat guidance</p> <p>1AS-1 Compose numbers to 10 from 2 parts.</p> <p>Subtraction structures (reduction), including part-wholes and first, then, now statements and models.</p> <p>Read, write and interpret mathematical statements involving subtraction (-) and equals (=) signs.</p> <p>Solve one-step problems that involve subtraction using concrete objects and pictorial</p>	<p>Numicon (Place the minuend down, subtrahend on top, what is the difference?)</p>	 <p>Can you describe what is happening in the picture above? Can you write a number sentence to match?</p> 	<p>Can you draw these calculations using tens frames?</p> $4 - 1 =$ $6 - 2 =$ $9 - 5 =$	<p>Can you write your own subtraction story using first, then, now?</p> 	<p>Look at this image.</p>  <p>Mr Moore says: "This shows that $3 + 0 = 3$"</p> <p>Mrs Gardner says: "This shows that $3 - 0 = 3$"</p> <p>Who is correct?</p>



	representations, and missing number problems such as $11 = ? + 9$.					
1	<p>Represent and use number bonds and related subtraction facts within 20.</p> <p><i>Solve one-step problems that involve subtraction using concrete objects and pictorial representations, and missing number problems such as $11 = ? + 9$.</i></p>	<p>Objects</p> <p>Fingers (for 10s, partners for 20s)</p> <p>Coins (1p and 10p)</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Hoops and Bean bags for Part Part Whole</p> <p>Remember to Move the equals sign</p>	<p>Number line with numbers on</p> <p>20 rectangle (a hundred square cut)</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Add facts table</p> <p>Remember to Move the equals sign</p>	<p>Counting back (to get to 0 or 10)</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Moving the equals sign</p>	<p>How many different ways can you make 10 using subtraction?</p> <p>Procedural variation:</p> <p>$20 - 10 = 10$</p> <p>$19 - 9 = 10$</p> <p>$18 - 8 = 10$</p> <p>Here's a set of Numicon. Make the numbers 14, 17 and 20.</p> <p>What do you need to take away from these to get to ten? Can you write these as calculations?</p> <p>Look at the numbers.</p> <p>15 7 16 8</p> <p>Use two of these numbers to make this correct.</p> <p><input type="text"/> - <input type="text"/> = 7</p>	<p>Fill in the missing numbers.</p> <p>$11 + \square = 20$</p> <p>$20 - \square = 11$</p> <p>Can you make two more number sentences using the same three numbers?</p> <p>How many ways can you complete the see-saw?</p>  <p>Touch on commutative law during reasoning</p>

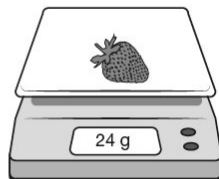
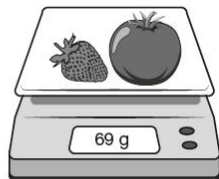
1	<p>Subtract one-digit and two-digit numbers within 20, including zero.</p> <p><i>Solve one-step problems that involve subtraction using concrete objects and pictorial representations, and missing number problems such as $11 = ? + 9$.</i></p>	<p>Objects</p> <p>Fingers (for 10s, partners for 20s)</p> <p>Coins (1p and 10p)</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Hoops and Bean bags for Part Part Whole</p> <p>Remember to Move the equals sign</p>	<p>Number line with numbers on 20 rectangle (a hundred square cut)</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Add facts table</p> <p>Remember to Move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of subtraction</p> <p>Moving the equals sign</p>	<p>Subtracting and ordering groups of calculations.</p> <p>Mark my work</p> <p>Contextual problems e.g. I have 8 eggs, how many more do I need to fill an egg box with twelve spaces.</p> <p>Missing digit problems e.g. $1\square + 4 = 17$ with resources to help</p> <p>Complete this subtraction table:</p> <table><tr><th>-</th><th>10</th><th>9</th><th>8</th><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th></tr><tr><th>1</th><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td></td><td>2</td><td>1</td><td>0</td></tr><tr><th>2</th><td>8</td><td></td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td><td></td></tr><tr><th>3</th><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td></td><td>1</td><td>0</td><td></td><td></td></tr><tr><th>4</th><td>6</td><td>5</td><td>4</td><td></td><td>2</td><td>1</td><td>0</td><td></td><td></td><td></td></tr><tr><th>5</th><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td><td></td><td></td><td></td><td></td></tr><tr><th>6</th><td>4</td><td></td><td>2</td><td>1</td><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><th>7</th><td>3</td><td>2</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><th>8</th><td>2</td><td>1</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><th>9</th><td>1</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><th>10</th><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	-	10	9	8	7	6	5	4	3	2	1	1	9	8	7	6	5	4		2	1	0	2	8		6	5	4	3	2	1	0		3	7	6	5	4	3		1	0			4	6	5	4		2	1	0				5	5	4	3	2	1	0					6	4		2	1	0						7	3	2	1								8	2	1	0								9	1	0									10	0										<p>I have some number cards:</p> <p>13, 15, 12, 10, 17</p> <p>Which two number cards have a difference of 4?</p> <p>James says: If I subtract any one of the cards from another I will get a number smaller than the number on either card.</p> <p>Is he correct? Try it with counters to prove your answer.</p> <p>Mark my work, explain the errors</p> <p>$11 - 2 = 10$, explain why this is wrong</p> <p>I think the following is true:</p> <p>$15 - 4 = 11$</p> <p>Is this correct? Prove your answer using resources?</p> <p>If I subtract an odd number from another odd number I will always get an odd number.</p> <p>Is this statement true? Prove your answer using resources.</p>
-	10	9	8	7	6	5	4	3	2	1																																																																																																																					
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Year 2

Year group :	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning							
2		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT									
2	<p>[EXS] [KEY] Recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7+3=10$, then $17+3=20$; if $7-3=4$, then $17-3=14$; leading to if $14+3=17$, then $3=14=17$, $17-14=3$ and $17-3=14$.)</p> <p>↳ GD objective: Solve problems with addition and subtraction rapidly recall and use addition and subtraction facts to 20 fluently, and</p>	<p>Fingers (for 10s, partners for 20s)</p> <p>Coins (1p, 10p, 20p)</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to Move the equals sign</p>	<p>Number line with numbers on 20 rectangle (a hundred square cut)</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Add facts table</p> <p>Remember to Move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of addition</p> <p>Part Part Whole model</p> <p>Remember to move the equals sign</p>	<p>There are 20 balloons. 7 balloons fly away. How many balloons are left?</p>  <p>Look at the numbers in this addition.</p> $\boxed{9} + \boxed{5} = \boxed{14}$ <p>Use the same numbers to make these correct.</p> $\boxed{} - \boxed{} = \boxed{9}$ $\boxed{} - \boxed{9} = \boxed{}$	<p>Spot the mistake in the calculations below:</p> $18 - 9 = 9$ $16 - 9 = 8$ $14 - 9 = 5$ <p>Complete the calculation below:</p> <table border="1"> <tr> <td>17</td> <td>-</td> <td></td> <td>=</td> <td>15</td> <td>-</td> <td>6</td> </tr> </table>	17	-		=	15	-	6
17	-		=	15	-	6							

	derive and use related facts up to 100. Recap addition facts to 20 and then start to derive and use related facts to 100. (Mainly covered in Fluency work.)							
2	2020 Guidance	2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice. Year 2 document – Pages 16 - 17						
2	<p>Subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and ones.</p> <p>Solve problems with subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.</p> <p>Solve problems with subtraction applying their increasing</p>	<p>Fingers</p> <p>Coins up to £1</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Blank Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Arrow cards</p> <p>Remember to move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <table border="1"><tr><td>25</td></tr><tr><td>7</td></tr></table> <p>Missing number problems</p> <p>Recording of subtraction</p> <p>Column method (just for layout.)</p>	25	7	<p>There are 20 balloons. 7 balloons fly away.</p> <p>How many balloons are left?</p> <p>Ben puts 15 buttons on a table.</p> <p>He hides some of them under his hand.</p> <p>How many buttons is Ben hiding?</p> 	<p>Odd / Even reasoning e.g. an odd number subtract another odd number will have an even difference; always, sometimes, never true?</p> <p>"The difference between two even numbers will always be odd" True or false?</p> <p>I am thinking of a two digit number, if I subtract ones from it, I will only need to change the ones digit.</p> <p>True or false? Explain your answer.</p>
25								
7								

	knowledge of mental and written methods. Show that subtraction of one number from another cannot be done in any order (non-commutative)			Moving the equals sign	Bethan has 6p. She wants to buy a drink.  drink 40p apple 10p banana 18p crisps 23p How much more money does she need?			
2	2020 Guidance	2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. Year 2 document - Pages 23 - 26						
2	Subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and tens Solve problems with subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures Solve problems with subtraction applying their increasing knowledge of mental and written methods.	Fingers Coins up to £1 (Particularly 10ps) Numicon Dienes Unifix cubes Bar model with cubes / dienes Remember to move the equals sign	Blank Number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Arrow cards Remember to move the equals sign	Counting on Abstract bar models, just numbers. <table border="1"><tr><td>37</td></tr><tr><td>20</td></tr></table> Missing number problems Recording of subtraction Column method (just for layout.) Moving the equals sign	37	20	Word and contextual problems Missing number in different forms, bar, objects, column, on a hundred square. 19 $\xrightarrow{\text{is 10 less than}}$  Calculations that include greater than and less than symbols Money questions, multiples of 10 more than a number e.g. an apple cost 45p, a banana costs 20p less, how much does a banana cost?	Harry says "I have 45 pence in my pocket. If I give out 10p to each of my friends eventually my pocket will be empty" Do you agree with Harry? Explain your answer.
37								
20								

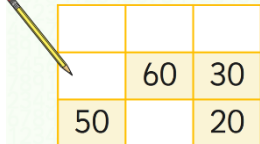
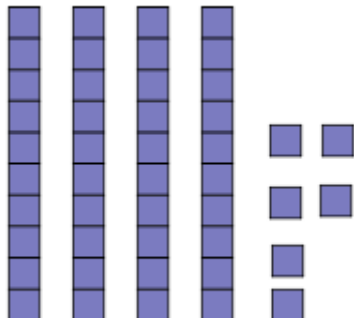
	Show that subtraction of one number from another cannot be done in any order (non-commutative)							
2	2020 Guidance	2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. Year 2 document - Pages 23 - 26						
2	<p>[Key] Subtract numbers using concrete objects, pictorial representations, and mentally, including two two-digit numbers.</p> <p>Solve problems with subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures</p> <p>Solve problems with subtraction applying their increasing knowledge of mental and written methods.</p> <p>Show that subtraction of one number</p>	<p>Fingers</p> <p>Coins up to £1</p> <p>Numicon</p> <p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Blank Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Arrow cards</p> <p>Remember to move the equals sign</p>	<p>Counting on</p> <p>Abstract bar models, just numbers.</p> <table><tr><td>44</td></tr><tr><td>23</td></tr></table> <p>Missing number problems</p> <p>Recording of subtraction</p> <p>Column method (just for layout.)</p> <p>Moving the equals sign</p>	44	23	<p>The strawberry weighs 24 grams.</p>  <p>The strawberry and tomato together weigh 69 grams.</p>  <p>What does the tomato weigh?</p>	<p>If I subtract one two-digit number from another the difference will always be a two-digit number. Always/Sometimes/Never</p> <p>Ben works out the answer to this</p> <p>57 – 16 =</p> <p>Ben gets the answer 11.</p> <p>Ben thinks he is incorrect. Can you check his answer and explain where he went wrong?</p>
44								
23								

	from another cannot be done in any order (non-commutative)					
2	2020 Guidance	2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. Year 2 document - Pages 27 - 29				
2	<p>[EXS] [KEY] Subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. 72-17).</p> <p>Solve problems with addition using concrete objects and pictorial representations including those involving numbers, quantities and measures.</p> <p>Solve problems with addition and applying their increasing knowledge of mental and written methods.</p> <p>Show that addition of two numbers can be done in any</p>	<p>Dienes</p> <p>Unifix cubes</p> <p>Bar model with cubes / dienes</p> <p>Remember to move the equals sign</p>	<p>Number lines</p> <p>Hundred square</p>	<p>Missing number problems</p> <p>Part Part Whole model</p> <p>Recording of addition no. sentences</p> <p>Bar model</p>	<p>Ben has £19</p> <p>A game costs £25</p> <p>How much more money does Ben need to buy the game?</p>  <p>There are 100g of chocolate chips in the bag.</p> <p>Sita uses 25g.</p> <p>Ben uses 35g.</p> <p>How many grams of chocolate chips are left in the bag?</p> 	<p>Use these signs: $-$ $+$ $=$</p> <p>You can use each sign more than once.</p> <p>Write signs in the boxes to make these correct.</p> <p>25 <input type="text"/> 19 <input type="text"/> 6</p> <p>15 <input type="text"/> 15 <input type="text"/> 0</p>

	order (commutative)					
2	2020 Guidance	2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. Year 2 document - Pages 27 - 29				

Year 3

Year group :	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning						
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT								
3	[Key] Subtract numbers mentally, including three-digit number and hundreds.	Coins, subtracting £1 Numicon Dienes Multi-link cubes Bar model with cubes / dienes Moving the equals sign	Number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Moving the equals sign	Counting back Abstract bar models, just numbers. Missing number problems Recording of addition Place value cards Moving the equals sign	Word and contextual problems Missing number in different forms: bar, objects, on a hundred square. <table border="1"><tr><td colspan="3">995</td></tr><tr><td>300</td><td>200</td><td>?</td></tr></table> James makes the number 464 using arrow cards. He wants to take away one hundred from his number and make the answer using arrow cards. Circle the arrow card that he needs. <div><div>3</div><div>30</div><div>300</div></div> What is Mr Moore's new number?	995			300	200	?	True or false: If I count back in hundreds from 350 I will say 100. Explain your answer. James completed the question below and his teacher marked it as incorrect: 733 - 200 = 713 Can you explain the mistake James has made?
995												
300	200	?										

	Shape space and measure opportunities: Adding pounds to an amount of money. Adding metres to a number of centimetres.									
3	2020 Guidance	3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27. 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: $80 + 60 = 140$; $140 - 60 = 80$. $30 \times 4 = 120$; $120 \div 4 = 30$. Year 3 document – pages 30 – 32.								
3	[Key] Subtract numbers mentally, including three-digit number and tens.	Coins particularly 10p Numicon Dienes Multi-link cubes Bar model with cubes / dienes Moving the equals sign	Number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Moving the equals sign	Counting back Abstract bar models, just numbers. Missing number problems Recording of addition Place value cards Moving the equals sign	Word and contextual problems Missing number in different forms: bar, objects, on a hundred square. <table border="1"><tr><td colspan="2">654</td></tr><tr><td>614</td><td>?</td></tr></table> Missing number squares e.g. Make 100:  Calculations that include greater than and less than symbols Money questions, multiples of 10 more than a number e.g. a laptop costs £354, a printer costs £90 less, how much does a printer cost?	654		614	?	Sarah has the following Dienes  Sarah says "If I keep taking away tens I will end up with zero" Is Sarah correct? Explain your answer. Show them a couple of calculations - What answer is not correct – how do you know?
654										
614	?									
	Shape space and measure opportunities: Subtracting multiples of 10p to an amount of money.									
3	2020 Guidance	3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: $80 + 60 = 140$; $140 - 60 = 80$. $30 \times 4 = 120$; $120 \div 4 = 30$. Year 3 document – pages 30 – 32.								

3	<p>[Key]</p> <p>Subtract numbers mentally, including three-digit number and ones. (Recap 2 digit and ones)</p>	<p>Fingers</p> <p>Numicon</p> <p>Dienes</p> <p>Coins for 2digit and 1 digit.</p> <p>Multi-link cubes</p> <p>Bar model with cubes / dienes</p> <p>Moving the equals sign</p> <p>PV Chart for placing objects</p>	<p>Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Chn draw</p> <p>Moving the equals sign</p> <p>Place value cards</p>	<p>Counting back</p> <p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Moving the equals sign</p>	<p>Word and contextual problems</p> <p>Missing number in different forms, bar, objects, column</p> <p>Calculations that include greater than and less than symbols</p> <p>Money questions, cost of multiple items</p> <p>There are 231 rulers in the school cupboard. Miss Goatman takes 4 and Mrs Welch takes 8. How many rulers are left in the cupboard?</p>	<p>I think, prove it.</p> <p>True or false:</p> <p><i>Odd number – Odd number = Odd number</i></p> <p><i>Even number – Odd number = Odd number</i></p> <p><i>Even number – Even number = Even number</i></p> <p><i>Even number – Odd number = Even number</i></p> <p>Explain your choices and give an example for each statement.</p> <p>Here are two questions:</p> <p>$239 - 7 = ?$ $237 - 9 = ?$</p> <p>Which one is more difficult? Explain your reasons.</p>
3	<p>2020</p> <p>Guidance</p>	<p>3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27</p> <p>3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: $80 + 60 = 140$; $140 - 60 = 80$. $30 \times 4 = 120$; $120 \div 4 = 30$. Year 3 document – pages 30-32</p>				

3	Subtract numbers with up to three digits, using formal written methods of columnar subtraction.	Coins Numicon Dienes Multi-link cubes Bar model with cubes / dienes Moving the equals sign Counters with PV charts	Number line 100 square Abacus PV chart Metre ruler Images Ruler/Counting stick Chn draw Arrow cards Moving the equals sign	Counting back Abstract bar models, just numbers. Missing number problems Recording of subtraction Moving the equals sign	I earn £345 pocket money last year but spent £85 this week. How much money have I got left? A book has five stories in it. This is the contents page. <div><div>Contents</div><table><thead><tr><th></th><th>page</th></tr></thead><tbody><tr><td>Rocket Ship</td><td>5</td></tr><tr><td>Night Journey</td><td>17</td></tr><tr><td>Secret Palace</td><td>25</td></tr><tr><td>Jack</td><td>41</td></tr><tr><td>Deep Water</td><td>59</td></tr></tbody></table></div> Deep Water finishes on page 68 Which is the longest story?		page	Rocket Ship	5	Night Journey	17	Secret Palace	25	Jack	41	Deep Water	59	Sam saved £342 in his bank account. He spent £282. He makes the calculation below to give him a remaining amount of £140. <div><div><div>342</div><div>- 282</div><div>140</div></div></div> Do you agree with Sam's calculation? Why / Why not? If you think it is incorrect, can you correct it?
		page																
Rocket Ship	5																	
Night Journey	17																	
Secret Palace	25																	
Jack	41																	
Deep Water	59																	
Shape space and measure opportunities: Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change																		
3	2020 Guidance	3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. Year 3 document – pages 25-27. 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example: 80 + 60 = 140; 140 - 60 = 80. 30 x 4 =120; 120 ÷ 4 = 30. Year 3 document – pages 30 – 32. 3AS–2 Add and subtract up to three-digit numbers using columnar methods. Year 3 document – pages 36 – 39.																

Year 4

Year group :	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning						
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT								
4	<p>Subtract numbers with up to 4 digits using the formal written methods of columnar addition where appropriate .</p> <p>[KEY] Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Coins</p> <p>Dienes</p> <p>Bar model</p> <p>Move the equals sign</p> <p>Measuring jug /scale</p> <p>Abacus</p> <p>Arrow Cards</p>	<p>Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Arrow cards</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Measuring jug / scale</p> <p>Chn draw</p>	<p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of subtraction</p> <p>Place value cards</p> <p>Part part whole model</p> <p>Moving the equals sign</p> <p>Columnar methods</p>	<p>Complete this bar model using only subtraction:</p> <table><tr><td colspan="3">4000</td></tr><tr><td>2000</td><td>?</td><td>634</td></tr></table> <p>Mrs George has 2098 pencils in the office cupboard. Mr Moore takes 133 pencils. How many does Mrs George have now?</p> <p>As Mr Moore leaves with his pencils Mrs Powell comes into the office and takes 44 pencils. How many pencils does Mrs George have now?</p> <p>Ms Palk has £4,012 in her class budget and Mrs Gardner has £6,257 in her class budget</p> <p>What is the difference between the two budgets?</p>	4000			2000	?	634	<p>Harry says:</p> <p>“When you do a subtraction the difference is always smaller than the number you start with, for example $29 - 15 = 14$, 14 is smaller than 29.”</p> <p>Is Harry always, sometimes or never true? Explain your answer.</p> <p>Complete the calculation</p> <div><div>004</div><div>- 201</div><div>340</div></div>
4000												
2000	?	634										

					Fill in the missing numbers. $352 + \square = 480$ $70 + 99 + \square = 270$ $\square - 55 = 84$ $\square - 3000 = 600$	
	Shape space and measure opportunities: Add amounts of money to give change, using both £ and p in practical contexts Calculate the perimeter of simple 2-D shapes					
4	2020 Guidance	4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), for example: $8 + 6 = 14$ and $14 - 6 = 8$ so $800 + 600 = 1400$ and $1400 - 600 = 800$. $3 \times 4 = 12$ and $12 \div 4 = 3$ so $300 \times 4 = 1200$ and $1200 \div 4 = 300$. Year 4 document – Pages 32 - 35				

Year 5						
Year group :	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning

		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
5	<p>[KEY] Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)</p> <p>[KEY] Subtract numbers mentally with increasingly large numbers.</p> <p>Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Coins</p> <p>Dienes</p> <p>Bar model</p> <p>Move the equals sign</p> <p>Measuring jug /scale</p> <p>Abacus</p>	<p>Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Arrow cards</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Measuring jug / scale</p> <p>Chn draw</p>	<p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of addition</p> <p>Moving the equals sign</p> <p>Part part whole model</p> <p>Columnar</p>	<p>A five digit number and a four digit number have a difference of 4,365</p> <p>Give me three possible pairs of numbers.</p> <p>Adam earns £48 650 a year. He has to take a pay cut of £16 125. How much is his new salary?</p>	<p>My answer is 6,786 What's the question? Create 3 subtraction calculations. Did you use a strategy? Explain it.</p> <p>There are mistakes in the following calculations.</p> <p>Explain the mistake, then make a correction to find the correct answer.</p> <div> <div>782</div> <div>-435</div> <div>353</div> </div> <div> <div>623</div> <div>- 332</div> <div>311</div> </div> <p>A stadium has a capacity of 60 000</p> <p>It needs to sell 35 000 tickets for a concert to go ahead. The concert sells out, but then 45 250 people are taken ill and want their money back. Will the concert be able to go ahead? Explain your answer.</p>
	<p>Shape space and measure opportunities:</p> <p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p> <p>Calculate different measures, including money in pounds and pence</p> <p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p>					

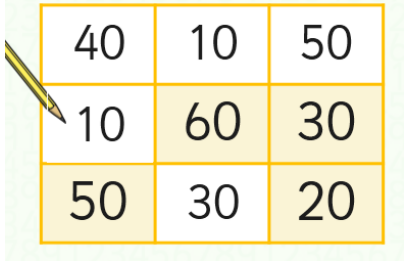
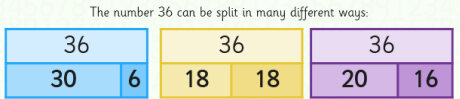
5	2020 Guidance	5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth), for example: $8 + 6 = 14$, $0.8 + 0.6 = 1.4$, $0.08 + 0.06 = 0.14$; $3 \times 4 = 12$, $0.3 \times 4 = 1.2$; $0.03 \times 4 = 0.12$. Year 5 document – Pages 37 - 40
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Area of Maths = Addition and Subtraction combined

Year 1

Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
1	Demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. if $3 + 2 = 5$, then $5 - 2 = 3$). (Addition and Subtraction)	Coins Dienes Move the equals sign Tens frames Numicon	Drawing more counters / crossing out counters. Filling tens frames.			



Year 2

Year 2						
Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
2	Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.	Coins Dienes Move the equals sign Unifix Numicon	Blank Number line 100 square Abacus PV chart Arrow Cards Bar Model Metre ruler Images Ruler/Counting stick Chn draw Move the equals sign	Missing Number problems. Pattern finding E.g. $2 + 6 = 8$ and $20 + 60 = 80$ Move the equals sign Greater than less than signs	<p>Make 100 and/or tricky triangles.</p>  <p>How many ways can you split a bar model to make 20: (Example below is</p> <p>with a different number.)</p>  <p>The number 36 can be split in many different ways:</p> <p>There are 76 cars in the car park.</p> <p>18 more cars go into the car park.</p> <p>Then 35 cars go out.</p> <p>How many cars are in the car park now?</p>	Kim says, If I know that $3 + 7 = 10$. I know $30 + 70 = 100$. True or False. Prove it!
2	[Key] Recognise and use the inverse relationship between addition and subtraction and	Coins Dienes	Blank Number line Bar Model	Missing number calculations. Fact families	<p>Mark my Work (Use the inverse to check.)</p> <p>I think of a number.... What was my number to start?</p>	Charlie says: To work out a missing number you just do the inverse operation. E.g.









	use this to check calculations and solve missing number problems.	Move the equals sign Unifix Numicon	100 square Abacus PV chart Arrow Cards Metre ruler Images Ruler/Counting stick Chn draw Move the equals sign	Move the equals sign	Addition and Subtraction pyramids	For $23 + ? = 30$ you would do $30 - 23 = ?$ True or False – How do you know?
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Year 3

Year 3																				
Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning														
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT																
3	Estimate the answer to a calculation and use inverse operations to check answers.	Coins Dienes Move the equals sign	Number line 100 square Abacus PV chart Arrow Cards Metre ruler Images Ruler/Counting stick Chn draw Move the equals sign	Move the equals sign. 32 + 59 My Estimate: $\square + \square$ Calculate the addition below then use an inverse calculation to check it: (Use the formal method your class are used to.) <div><div><div>48</div><div>+</div><div>35</div><div>-</div></div><div><div>_____</div><div>_____</div><div>_____</div></div></div> <div><div>73</div><div>-</div><div>27</div><div>+</div></div> <div><div>_____</div><div>_____</div><div>_____</div></div>	John wants to buy 3 video games costing £22 each. He has a £50 note to spend. Give an estimated calculation to show that John does not have enough money. Check these bar models for accuracy: <div><table><tr><td>350</td><td>350</td></tr><tr><td colspan="2">600</td></tr></table> <table><tr><td colspan="2">250</td></tr><tr><td>137</td><td>113</td></tr></table> <table><tr><td colspan="3">500</td></tr><tr><td>250</td><td>120</td><td>230</td></tr></table></div>	350	350	600		250		137	113	500			250	120	230	Niamh estimates the answer to 489 + 109 as shown:489 + 109 =500 Do you agree with Niamh? Explain your answer. Estimate how many pencils there are in Year 3 and Year 4. Explain the numbers you chose for your estimate
350	350																			
600																				
250																				
137	113																			
500																				
250	120	230																		

3	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Coins Dienes Move the equals sign	Number line 100 square Abacus PV chart Arrow Cards Metre ruler Images Ruler/Counting stick Chn draw Move the equals sign	<div><div>Missing Number</div><div></div><div><table><tr><td>One-digit</td><td>1</td><td>+</td><td><input type="text"/></td><td>=</td><td>2</td></tr><tr><td>Two-digit</td><td>57</td><td>-</td><td><input type="text"/></td><td>=</td><td>25</td></tr><tr><td>Three-digit</td><td><input type="text"/></td><td>+</td><td>953</td><td>=</td><td>1806</td></tr></table></div></div> <div><div><div>15</div><div><input type="text"/></div></div><div><div>+</div><div>4</div><div><input type="text"/></div><div>4</div></div><div><div><div><div></div></div></div><div>15</div></div></div> <div>Move the equals sign</div>	One-digit	1	+	<input type="text"/>	=	2	Two-digit	57	-	<input type="text"/>	=	25	Three-digit	<input type="text"/>	+	953	=	1806	Sally buys a drink for 35p and pays with a £1 coin. How much change does she receive? There are 250 pupils in a school. 162 are in Key Stage 2 and the remainder are in Foundation Stage and Key Stage 1. How many pupils are in Foundation Stage and Key Stage 1? Seb has a box of 120 cubes. He uses some of the cubes to build a tower. 77 cubes are left over. How many cubes has he used? Seb has 77 cubes left over. He builds two more towers. One tower uses 18 cubes and the other uses 35 cubes. How many of his 77 cubes has he got left now?	Dev has three discs. <div></div> <div>Each disc has a 7 on one side and an 8 on the other side. He spins all the discs and adds the three scores together. How many different totals can he get using the three discs? Dev adds another disc. How many different totals can he get now?</div>
One-digit	1	+	<input type="text"/>	=	2																			
Two-digit	57	-	<input type="text"/>	=	25																			
Three-digit	<input type="text"/>	+	953	=	1806																			

Year 4

Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
4	[KEY] Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Coins Dienes Move the equals sign Measuring jug /scale	Number line 100 square Abacus PV chart Arrow Cards Metre ruler Images Ruler/Counting stick Measuring jug / scale Chn draw Move the equals sign	Abstract bar models, just numbers. Missing number problems Recording of subtraction Part part whole model Moving the equals sign Columnar methods Work out the value of each shape <div>  +  = 16 </div> <div>  +  +  = 25 </div> <div>  +  +  = 30 </div>	A supermarket has 1284 loaves of bread at the start of the day. During the day, 857 loaves are sold and a further 589 loaves are delivered. How many loaves of bread are there at the end of the day?	Here is a number sentence: $350 + 278 + 250$ Add the numbers in different orders to find the answer. Is one order of adding easier? Why? Sam is trying to work out his change from a twenty pound note. He spent £7 on a lunchbox and £6 on a pencil case. Explain how you would work out his change. Is there more than one method?

4	<p>Estimate and use inverse operations to check answers to a calculation.</p> <p>[KEY] Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Coins</p> <p>Dienes</p> <p>Move the equals sign</p> <p>Measuring jug /scale</p>	<p>Number line</p> <p>100 square</p> <p>Abacus</p> <p>PV chart</p> <p>Arrow Cards</p> <p>Metre ruler</p> <p>Images</p> <p>Ruler/Counting stick</p> <p>Measuring jug / scale</p> <p>Chn draw</p>	<p>Abstract bar models, just numbers.</p> <p>Missing number problems</p> <p>Recording of addition</p> <p>Place value cards</p> <p>Moving the equals sign</p> <p>Part part whole model</p> <p>Columnar</p> <p>Word problems</p>	<ul style="list-style-type: none">Hazel fills in this bar model <table border="1"><tr><td colspan="2">2821</td></tr><tr><td>2178</td><td></td></tr></table> <p>She makes the following calculations from it.</p> <p>2,821 – 2,178 = 757</p> <p>2,821 – 757 = 2,178</p> <p>2,178 + 757 = 2,821</p> <p>757 + 2,178 = 2,821</p> <p>Is she correct?</p> <p>Explain why.</p> <p>Julie has 1,578 stamps.</p> <p>Heidi has 2,456 stamps.</p> <p>How many stamps do they have altogether?</p> <p>Show how you can check your answer using the inverse.</p>	2821		2178		<ul style="list-style-type: none">With a friend, discuss before working each out which will be greater or smaller than the other. Why do you think this? What key facts did you use? <table><tr><td>3,567 – 567</td><td><input type="radio"/></td><td>3,677 – 344</td></tr><tr><td>4,738 + 36</td><td><input type="radio"/></td><td>4,738 + 18 + 18</td></tr><tr><td>2,139 – 85 + 27</td><td><input type="radio"/></td><td>2,151 – 86 + 30</td></tr></table>	3,567 – 567	<input type="radio"/>	3,677 – 344	4,738 + 36	<input type="radio"/>	4,738 + 18 + 18	2,139 – 85 + 27	<input type="radio"/>	2,151 – 86 + 30
2821																			
2178																			
3,567 – 567	<input type="radio"/>	3,677 – 344																	
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Year 5

Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning																				
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT																						
5	<p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p> <p>[KEY] Add numbers mentally with increasingly large numbers.</p> <p>Solve addition multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Coins</p> <p>Dienes</p> <p>Number line with counters (Filled and blank)</p>	<p>Number line (Filled and blank)</p> <p>Tally chart</p> <p>Images (coins, dienes, abacus, Arrow Cards)</p> <p>Measuring jug / scales</p>	<p>Greater than and less than.</p> <p>Round 4987 to the nearest a. 10 b. 100 c. 1000</p> <p>12,458 rounded to the nearest [blank] is 12,000</p>	<p>There are 1,231 people on an aeroplane. 378 people have not ordered an inflight meal.</p> <p>How many people have ordered the inflight meal?</p> <p>Give your answer to the nearest hundred.</p> <p>I buy items from a shop costing £99, £104 and £47.</p> <p>Roughly how much money will I need to find while I'm queuing up to pay?</p> <p>Liam, Sarah and Amy buy lunch at a salad bar.</p> <table border="1"><thead><tr><th colspan="4">salad bar</th></tr><tr><th colspan="2">Salads</th><th colspan="2">Desserts</th></tr></thead><tbody><tr><td>cheese</td><td>£1.20</td><td>banana</td><td>25p</td></tr><tr><td>egg</td><td>90p</td><td>apple pie</td><td>50p</td></tr><tr><td>tuna</td><td>£1.60</td><td>yogurt</td><td>35p</td></tr></tbody></table> <p>Liam has £2.50 to spend.</p> <p>He buys a tuna salad and an apple pie.</p> <p>How much money has he got left?</p>	salad bar				Salads		Desserts		cheese	£1.20	banana	25p	egg	90p	apple pie	50p	tuna	£1.60	yogurt	35p	<p>True or false.</p> <p>4,999-1,999 = 5,000-2,000</p> <p>Explain how you know. Did you need to do a formal method?</p> <p>Martin is measuring his room for a new carpet.</p> <p>It has a width of 8m and a length of 12m.</p> <p>He rounds his measurements to the nearest 10 metres.</p> <p>Will he have the right amount of carpet?</p> <p>Explain your reasoning.</p>
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Year 6

Year 6						
Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
		Make it! SAY IT	Show it/Draw it! SAY IT	Read/Write it! SAY IT		
6	[EXS] [KEY] Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Coins Dienes Move the equals sign Measuring jug /scale	Number line 100 square Abacus PV chart Arrow Cards Metre ruler Images Ruler/Counting stick Measuring jug / scale Chn draw	Abstract bar models, just numbers. Missing number problems Recording of addition Place value cards Moving the equals sign Part part whole model Columnar Written word problems	Adam earns £37,566 pounds a year. Sarah earns £22,819 a year. How much do they earn altogether? They have to pay £7,887 income tax per year. How much are they left with after this is taken off? The number in A is twice the number in D . The number in B is 5 less than the number in C . The number in D is 10 more than the number in B . Write the missing numbers in this diagram. <div> </div> Emily, Ben and Nisha take part in a	Leon and Sara each started with different numbers. Leon added five to his number. Sara subtracted 8 from her number Leon and Sara both get the same answer. What numbers could they have started with? Can you give another pair? Can you find a rule to solve this problem?

					sponsored swim to collect money for charity. Emily collects £2.75 more than Nisha. Ben collects £15 Nisha collects £7 less than Ben. Altogether how much money do the three children collect?	
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