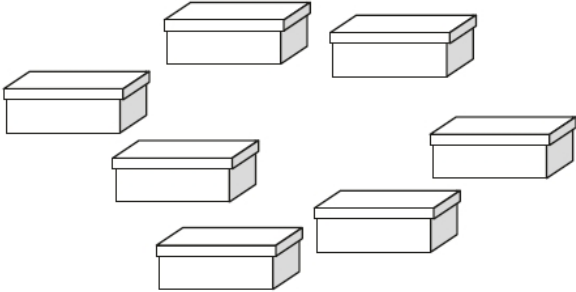



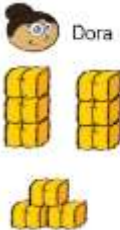
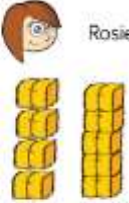


## Area of Maths = Multiplication + Division

<b>Multiplication</b>	<p><b>Definition:</b> Multiplication is the process of repeatedly adding a number to itself.</p> <p>An array is a set of objects in rows and columns.</p>	<p><b>Vocabulary:</b> Multiplication, times, lots of, multiples, multiply, groups of, factors, product, repeated addition, array.</p>	<p><b>Structure:</b></p> <p><b>Whole numbers:</b> factor x factor = product</p> <p><b>Decimals / fractions:</b> multiplicand x multiplier = product</p>
<b>Division</b>	<p><b>Definition:</b> Division is sharing an amount of things or a number into equal parts / groups.</p>	<p><b>Vocabulary:</b> Division, share, put into (equal) groups, divide, dividend, divisor, quotient, array.</p>	<p><b>Structure:</b></p> <p><b>KS1:</b> Number / amount being shared ÷ number of groups = number in each group</p> <p><b>KS2:</b> Dividend ÷ Divisor = Quotient</p>

### Year 1

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

<p>1</p>	<p>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</p>	<p>Counters</p> <p>Objects</p> <p>Hoops, cups or plates for sharing into.</p> <p>Unifix</p> <p>Money – 2p, 5p, 10p</p> <p>Dienes (tens)</p> <p>Dice</p>	<p>Pictures of objects and groups.</p> <p>Pictures of practical resources.</p> <p>Arrays</p>	<p>Number sentences (Include repeated addition.)</p> <p>Missing numbers</p> <p>Missing symbols</p> <p>Move the equals sign</p>	<div style="text-align: center;">  </div> <p>Sita puts 2 shoes in each of these boxes. How many shoes are there altogether?</p> <div style="text-align: center;">  </div> <p>A shopkeeper has 20 fish and 5 fish bowls. He puts the same number of fish in each bowl. How many fish go in each bowl?</p> <p>How many birds are there altogether?</p> <div style="text-align: center;">  </div> <p>There are ____ birds in each tree.</p> <p>There are ____ trees.</p> <p>There are ____ birds altogether.</p>	<div style="text-align: center;">  </div> <p>Sam says: You would need 28 crayons to fill all three boxes.</p> <p>Is Sam correct?</p> <p>Explain why / why not.</p> <p>Sarah has 6 boxes of 5 crayons. Would this be enough to fill the three boxes above?</p> <p>Dora and Rosie are making hay bundles.</p> <p>Who has made equal groups?</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Dora</p> </div> <div style="text-align: center;">  <p>Rosie</p> </div> </div> <p>I am thinking of a number between 20 and 30.</p>
----------	---	---	--	--	---	---

Tommy and Jack each have the same number of sweets.

Tommy has 5 equal groups of 2

Jack has 1 equal group.

How many sweets are in Jack's group?



Share the muffins equally between the two plates.



Complete the sentence.

\_\_\_ cakes shared equally between 2 is \_\_\_

I can only make equal groups of 5

What must my number be?

What happens when I try to make groups of 2 with it?

What happens when I try to make groups of 10 with it?

There are 10 cakes and 2 boxes.

An equal amount needs to be put into each box.


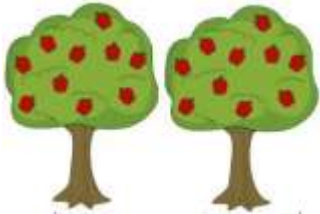


Who is correct?

Explain your answer.


# Year 2




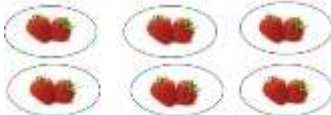
Year group:	NC L.O.	Practical	Pictorial	Abstract	Problem Solving	Reasoning
	<b>On Ave. 6 lessons per objective</b>	<b>Make it!</b> <b>SAY IT</b>	<b>Show it/Draw it!</b> <b>SAY IT</b>	<b>Read/Write it!</b> <b>SAY IT</b>		
<b>2</b>	<p>Recognise the relationships between addition and subtraction <b>and rewrite addition statements as simplified multiplication statements</b> e.g.  <math>10 + 10 + 10 + 5 + 5 = 3 \times 10 + 2 \times 5 = 4 \times 10</math></p> <p>Understanding of the equals sign being a balance is key.</p>	<p>Counters</p> <p>Objects</p> <p>Hoops, cups or plates for showing 'groups' or 'lots of'.</p> <p>Numicon</p> <p>Unifix</p> <p>Money – 2p, 5p, 10p</p> <p>Dienes (tens)</p> <p>Dice</p> <p>Hands / fingers</p>	<p>Tens frames with different alternating coloured counters to define each number.</p> <p>Pictures of objects and groups.</p> <p>Pictures of practical resources.</p> <p>Arrays</p> <p>Images linked to repeated addition, such as socks, fingers, money</p>	<p>Complete these equations:</p> $10 + 10 + 10 = 10 \times ?$ $2 \times ? = 2 + 2 + 2 + 2$ $5 + 5 + 5 + 5 = 10 \times ?$		
<b>2</b>	2020 Guidance	2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.				
<b>2</b>	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd	<p>Counters</p> <p>Objects</p> <p>Hoops, cups or plates for sharing into.</p>	<p>Pictures of objects and groups.</p> <p>Pictures of practical resources.</p> <p>Arrays</p>	<p>Number sentences (Include repeated addition.)</p> <p>Missing numbers</p> <p>Missing symbols</p>	Can you draw 14 sweets shared equally into 2 groups? What 2 number sentences can you write for your drawing?	Spot the mistake:


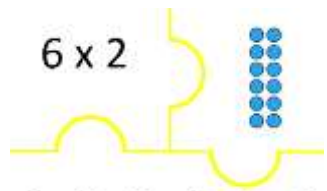

<p>and even numbers.</p> <p>White Rose have some really good resource examples for 2's, 5's and 10's:</p> <p><a href="https://whiterosemaths.com/wp-content/uploads/2019/SoLs/Primary/Autumn2019-20/Year-2-Autumn-Block-4-Number-Multiplication-and-Division.pdf">https://whiterosemaths.com/wp-content/uploads/2019/SoLs/Primary/Autumn2019-20/Year-2-Autumn-Block-4-Number-Multiplication-and-Division.pdf</a></p>	<p>Numicon</p> <p>Unifix</p> <p>Money – 2p, 5p, 10p</p> <p>Dienes (tens)</p> <p>Dice</p> <p>Hands / fingers</p>	<p>Images linked to 2, 5, 10 such as socks, fingers, money</p>	<p>Move the equals sign</p> <p>Start with the repeated addition of the same number, showing pupils that this can be inefficient as we add more addends and maybe there's an easier way to represent the calculation.</p> <p><math>2 + 0 = 2</math></p> <p><math>2 + 2 = 4</math></p> <p><math>2 + 2 + 2 = 6</math></p> <p><math>2 + 2 + 2 + 2 = 8</math></p>	<p>Insert a symbol: <math>\langle = \rangle</math></p> <p><math>9 \times 5</math> <input type="checkbox"/> <math>5 \times 9</math></p> <p><math>1 \times 10</math> <input type="checkbox"/> <math>6 \times 2</math></p> <p>Ben has <b>five</b> marbles.</p> <p>Kemi has <b>seven times</b> that number.</p> <p>How many marbles does Kemi have?</p> 	 <p>Alex says: "There are 10 equal groups with two in each group. There are ten 2's"</p> <p>Mr Moore says "Every number in the 5 times table is even"</p> <p>Mrs Welch says " Every number in the 2 times table is even"</p> <p>Who is correct? Give some examples to show your answer.</p>
--	---	--	--	---	--

Shape, space, measure and statistic opportunities:

Year 1: Recognise and know the value of different denominations of coins and notes (Multiples of 2p, 5p, 10p, £5 and £10 notes)

<p><b>2</b></p>	<p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</p>	<p>Counters</p> <p>Objects</p> <p>Hoops, cups or plates for sharing into.</p> <p>Numicon</p> <p>Unifix</p>	<p>Pictures of objects and groups.</p> <p>Pictures of practical resources.</p> <p>Arrays</p>	<p>Number sentences (Include repeated addition.)</p> <p>Missing numbers</p> <p>Missing symbols</p> <p>Move the equals sign</p>	<p>Tick or Cross these number sentences if they represent this picture:</p>  <p><math>12 \div 3 = 4</math>      <math>3 \div 12 = 4</math></p> <p><math>12 \div 4 = 3</math>      <math>4 \div 12 = 3</math></p>	<p><math>0 \times 2 = 0</math>    <math>2 \times 0 = 0</math></p> <p><math>1 \times 2 = 2</math>    <math>2 \times 1 = 2</math></p> <p><math>2 \times 2 = 4</math>    <math>2 \times 2 = 4</math></p> <p><math>3 \times 2 = 6</math>    <math>2 \times 3 = 6</math></p> <p>Can you spot any patterns? I think the next number sentences are <math>5 \times 2 = 10</math></p>
-----------------	---	--	--	--	---	--

	(Try this on its own as well as drip feed)	Money – 2p, 5p, 10p Dienes (tens) Dice			Write 4 number sentences for this array:  	and $2 \times 5 = 10$ . Am I right? Why?  Mr Moore thinks: $12 \div 4$ would give you the same answer as $4 \div 12$ .  True or False? Prove it!
2	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs.  (Remember to include halves and quarters)	Counters Objects Hoops, cups or plates for sharing into. Numicon Unifix Money – 2p, 5p, 10p Dienes (tens) Dice	Pictures of objects and groups. Pictures of practical resources. Arrays	Number sentences (Include repeated addition.) Missing numbers Missing symbols Move the equals sign	Can you write 4 different ways of sharing these cupcakes? $12 \div \quad = \quad 12 \div \quad =$ $12 \div \quad = \quad 12 \div \quad =$  Mince pies are sold in boxes of 6. How many boxes can be filled using these mince pies? 	Mrs Wheeldon thinks this image shows: $12 \div 2 = 6$  True or False? How do you know?

<p><b>2</b></p>	<p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p> <p>(Run alongside the previous two objectives)</p>	<p>Counters</p> <p>Objects</p> <p>Hoops, cups or plates for sharing into.</p> <p>Numicon</p> <p>Unifix</p> <p>Money – 2p, 5p, 10p</p> <p>Dienes (tens)</p> <p>Dice</p>	<p>Pictures of objects and groups.</p> <p>Pictures of practical resources.</p> <p>Arrays</p>	<p>Number sentences (Include repeated addition.)</p> <p>Missing numbers</p> <p>Missing symbols</p> <p>Move the equals sign</p>	<p>Apples are sold in packs of 4</p> <p>How many packs of apples can be filled using the apples from the tree?</p>  <p>Tulips are sold in bunches of 5. Randle buys 30 tulips. How many bunches does he buy?</p> <p>David is hosting a birthday party. He has invited nine children. He will give each child a goody-bag containing ten marbles. How many marbles will he give away in total?</p>	<p><b>True or False?</b></p> <p><math>6 \times 2</math></p>  <p><math>2 + 2 + 2 + 2 + 2 + 2</math></p> <p>These all show the same representation.</p> <p>Part of this array is hidden:</p>  <p>The total is less than 16.</p> <p>What could the array be?</p>
<p><b>2</b></p>	<p>2020 Guidance</p>	<p>2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division). Year 2 document – Pages 33-34</p>				