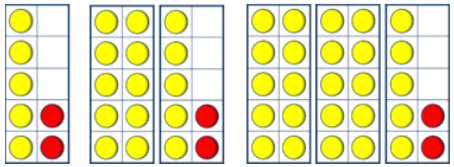
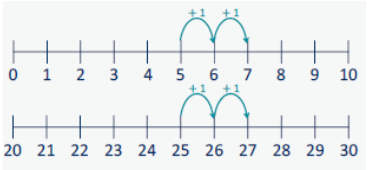
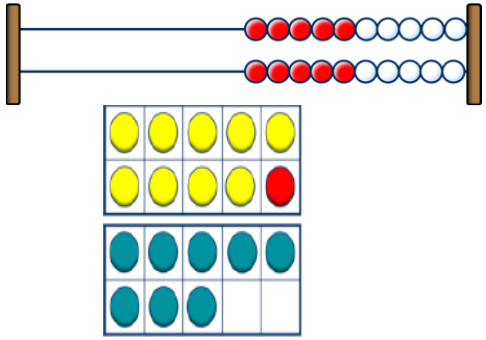
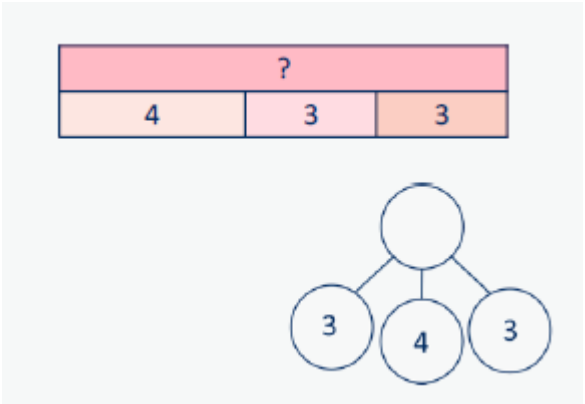
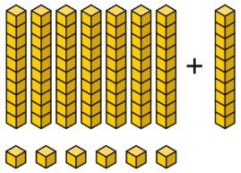
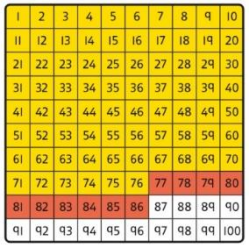
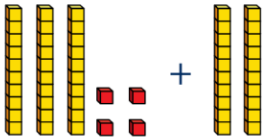
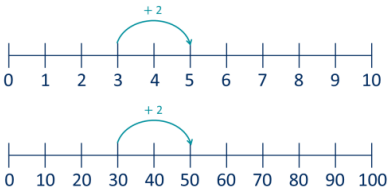
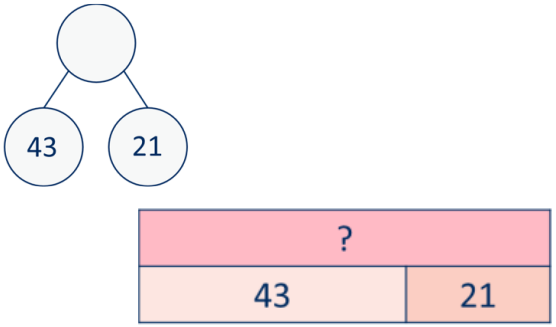
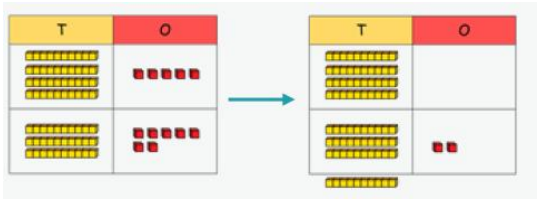
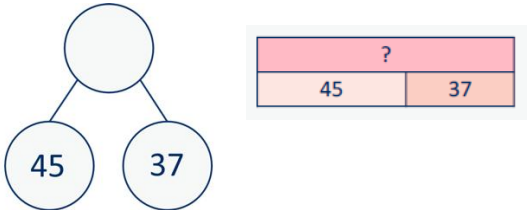
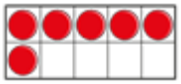
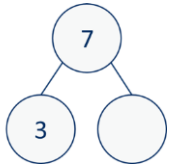
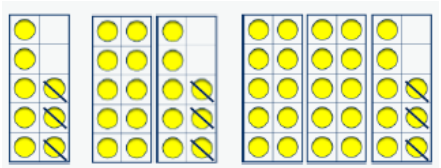
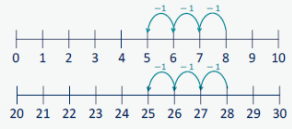
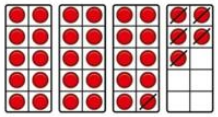
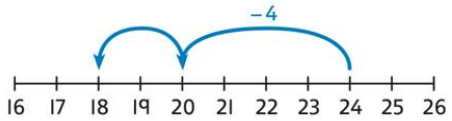
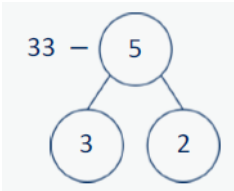
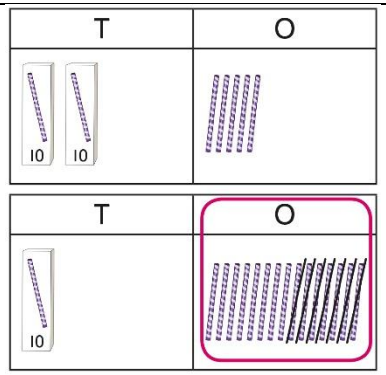
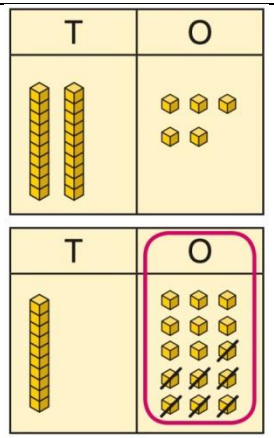
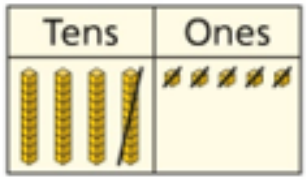
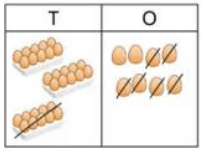
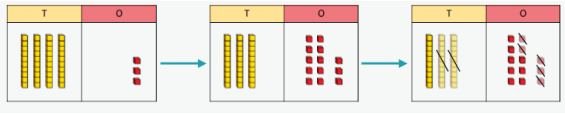
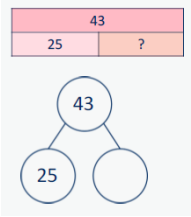
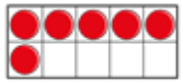
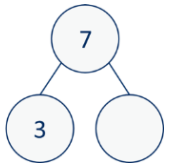
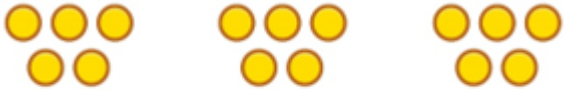
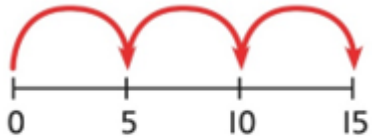
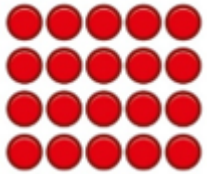
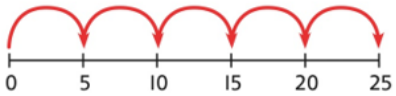
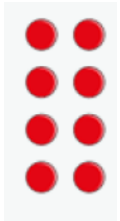
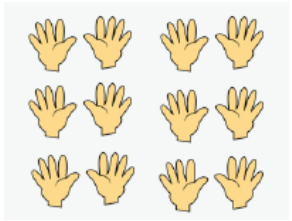
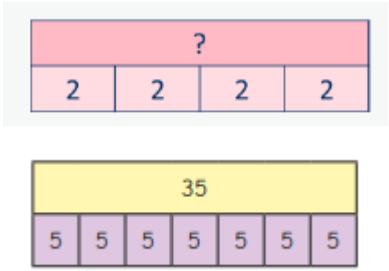
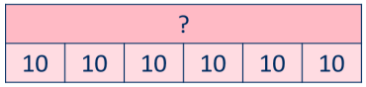
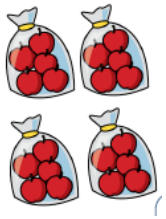
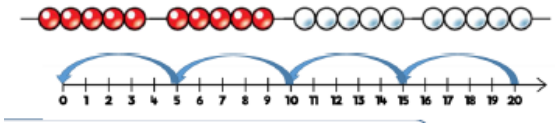
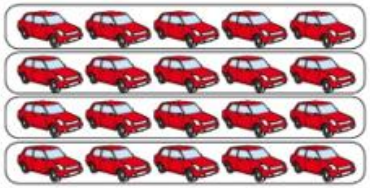
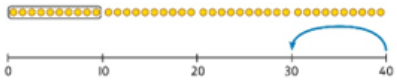
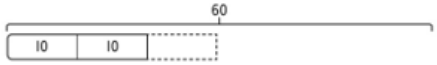
Year 2 Addition			
Concept	Concrete	Pictorial	Abstract
Add ones to any number (related facts) Make links to known facts.	I know that … and … = … so … and … = … 	… more than … is … so … more than … is … 	What do you notice? Can you continue the pattern? 5 + 2 = 7 15 + 2 = 17 25 + 2 = 27…
Add three 1-digit numbers Prompt children to understand that addition can be done in any order and to make links to known facts.	… and … are a bond to 10 10 + … = … 	Double … + … = … 	What do you notice? Which addition is the easiest to calculate? 8 + 9 + 1 = 8 + 1 + 9 = 9 + 1 + 8 =
Adding a multiple of 10 to a 2 digit number	Add the 10s and then recombine.  *27 is 2 tens and 7 ones.* *50 is 5 tens.* *There are 7 tens in total and 7 ones.* *So, 27 + 50 is 7 tens and 7 ones.*	Add the 10s and then recombine.  *66 is 6 tens and 6 ones.* *66 + 10 = 76*	Add the 10s and then recombine. *37 + 20 =* *30 + 20 = 50* *50 + 7 = 57* *37 + 20 = 57*

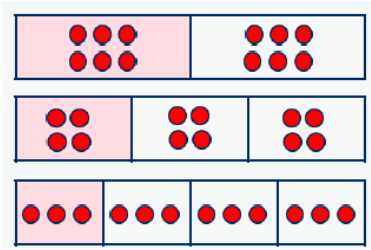
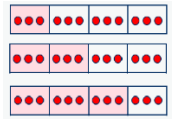
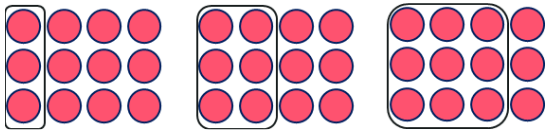
		A 100 square can support this understanding. 	
Adding a multiple of 10 to a 2-digit number	… tens + … tens = … tens … tens and … ones = … 		Make links to known facts within ten. 3 + 2 = 5 30 + 20 = 50
Add 2-digit numbers (not across a ten) Lining up ones and tens in columns will support with later written methods.			3 ones + 1 one = 4 ones 4 tens + 2 tens = 6 tens 6 tens + 4 ones = 64
Add 2-digit numbers (across a ten) Begin to exchange 10 ones for 1 ten.			5 ones + 7 ones = 12 ones 12 ones = 1 ten and 2 ones 4 tens + 3 tens + 1 ten = 8 tens 8 tens and 2 ones = 82

Missing numbers Solve missing number problems and use the inverse to check.	How many more do you need to make …?  $6 + \square = 10$ $10 - \square = 6$	If … is a whole and … is a part, then … is the other part. 	… can be partitioned into … and … $\square + 3 = 7$ $7 - 3 = \square$
Year 2 Subtraction			
Concept	Concrete	Pictorial	Abstract
Subtract ones from any number	I know that … minus ... = … so … minus … = ... 	… less than … is … so … less than … is … 	What do you notice? Can you continue the pattern? 8 − 3 = 5 18 − 3 = 15 28 − 3 = 2 …
Subtracting a single digit number bridging 10	Bridge 10 by using known bonds.  *35 − 6* *I took away 5 counters, then 1 more.*	Bridge 10 by using known bonds. 	Make links with related facts. 

Subtracting a single digit number using exchange			25 – 7 =
Subtracting a 2 digit number (no exchange)		Subtract the ones then the tens  *38 – 16 = 22*	38 – 16 = 22
Subtracting a 2 digit number with an exchange	I need to make an exchange because I do not have enough ones to subtract … ones. 		43 – 25 =
Missing numbers Solve missing number problems and use the	How many do you need to subtract to make …?  $6 + \square = 10$ $10 - \square = 6$	If … is a whole and … is a part, then … is the other part. 	… can be partitioned into … and …

inverse to check.		$\square + 3 = 7$ $7 - 3 = \square$	
Year 2 Multiplication			
Concept	Concrete	Pictorial	Abstract
Equal groups and repeated addition		 *3 groups of 5* *15 in total*	 0 5 10 15 *5 + 5 + 5 = 15* *3 × 5 = 15*
Using arrays to represent multiplication and support understanding		Four groups of 5 	 0 5 10 15 20 25 *5 × 5 = 25*
Learning 2x, 5x and 10 x tables facts	 	 ? | 2 | 2 | 2 | 2 35 | 5 | 5 | 5 | 5 | 5 | 5 | 5	1 × 10 = 10 10 = 1 × 10 2 × 10 = 20 20 = 2 × 10 3 × 10 = 30 30 = 3 × 10

			
Year 2 Division			
Concept	Concrete	Pictorial	Abstract
Grouping equally	 There are 20 apples altogether. They are put in bags of 5. How many bags are there?		20 ÷ 5 = 4
Using known times tables to solve divisions	 *4 groups of 5 cars is 20 cars in total.* *20 divided by 4 is 5.*	 *40 divided by 4 is 10.* Use a bar model to support understanding of the link between times-table knowledge and division. 	1 × 10 = 10 2 × 10 = 20 3 × 10 = 30 4 × 10 = 40 5 × 10 = 50 6 × 10 = 60 7 × 10 = 70 8 × 10 = 80 I used the 10 times-table to help me. 3 × 10 = 30. *I know that 3 groups of 10 makes 30, so I know that 30 divided by 10 is 3.* *3 × 10 = 30 so 30 ÷ 10 = 3*
Unit Fractions ½ ¼ 1/3	The objects have been shared fairly into … groups.		

			There are … equal parts. There is … part circled. $\frac{1}{\square}$ is circled.
Non- unit fractions Recognise 2/4 and 3/4	The objects have been shared fairly into … groups. 		There are … equal parts. There are … parts circled. $\frac{\square}{\square}$ is circled.