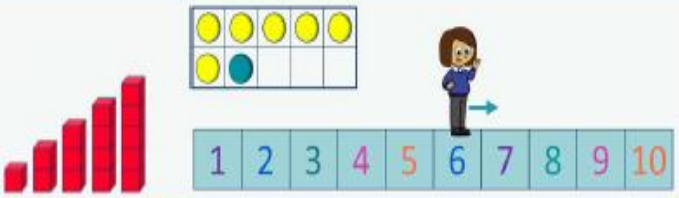
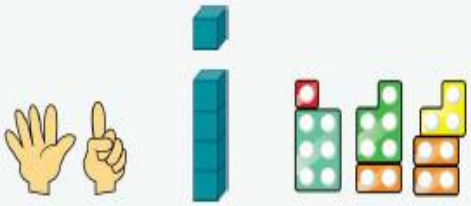
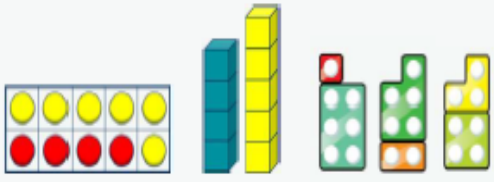
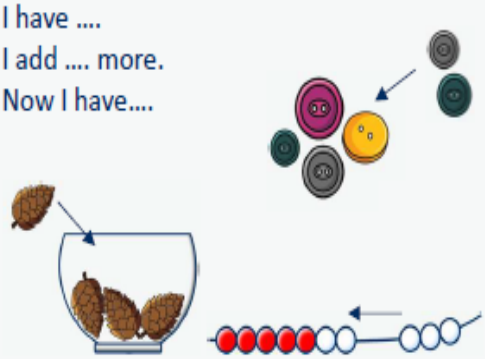
Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

RECEPTION

ADDITION

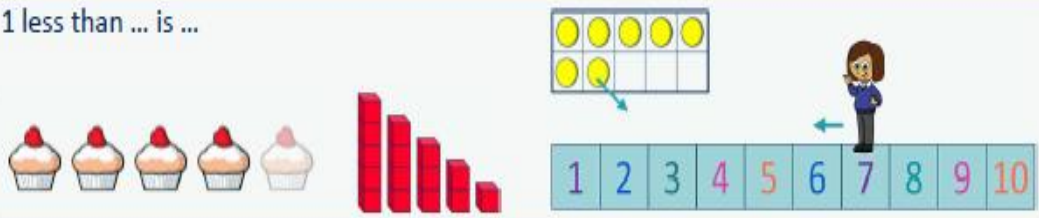
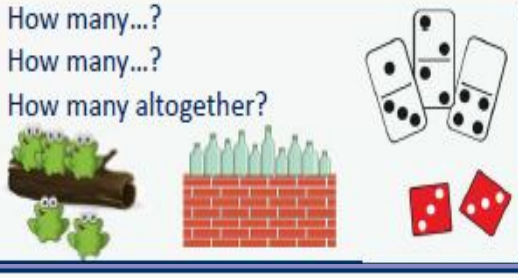
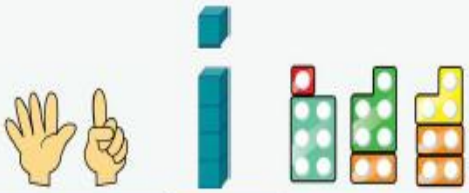
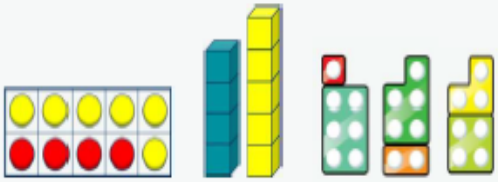
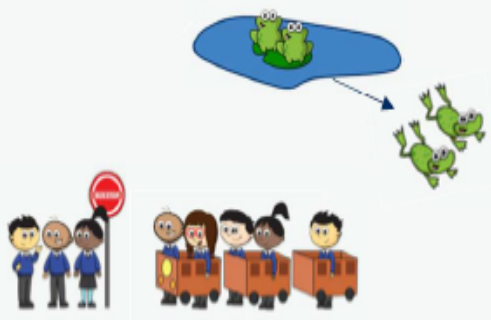
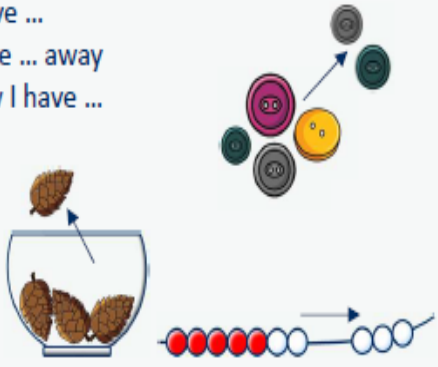
Conceptually subitise to 5
1 more
Notice the composition of numbers within 10.
Combine 2 groups
Add more

Progression of skills	Key representations	
Conceptually subitise to 5 Notice the parts that make up the whole.	What do you see? How do you see it?	
1 more Continue to link to stories, songs and rhymes.	1 more than ... is ...	
Notice the composition of numbers within 10 Link to stories, songs and rhymes.	How many...? How many...? How many altogether?	How many ways can you make...? 
Combine 2 groups 2 groups are combined to find the total.	There are .... There are .... There are .... altogether.	.... and .... make .... 
Add more A quantity is increased.	First... Then.... Now....	I have .... I add .... more. Now I have.... 

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

SUBTRACTION

Conceptually subitise to 5
1 less
Notice the composition of numbers within 10
Partition
Take away

Progression of skills	Key representations
Conceptually subitise to 5 Notice the parts that make up the whole.	What do you see? How do you see it? 
1 less Continue to link to stories, songs and rhymes.	1 less than ... is ... 
Notice the composition of numbers within 10 Link to stories, songs and rhymes.	How many...? How many...? How many altogether?  How many ways can you make...? 
Partition Using objects, explore different ways to partition a number into 2 or more parts.	There are ... altogether. I can see ... here and ... there.  ... and ... make ... 
Take away A quantity is reduced.	First... Then... Now...  I have ... I take ... away Now I have ... 

MULTIPLICATION

Double to 10
Make equal groups

Progression of skills	Key representations
Double to 10 Prompt children to notice that double means twice as many and to notice that there are two equal groups.	Double ... is ... ... is double ... 
Make equal groups Provide opportunities to make equal groups when tidying up or during snack time. Encourage children to check that each group has the same amount.	There are ... groups of ... There are ... altogether. 

DIVISION

Sharing
Grouping

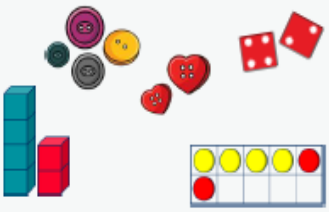
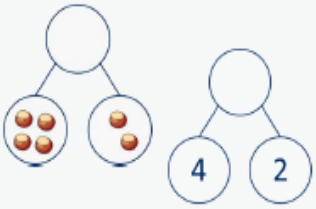
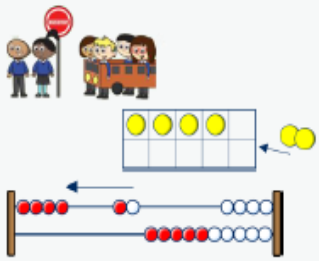
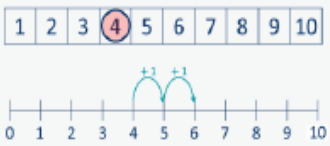
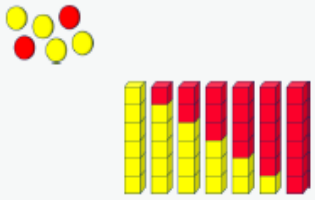
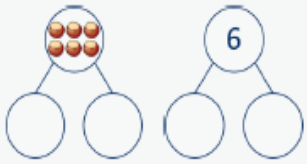
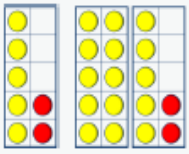
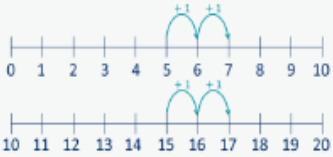
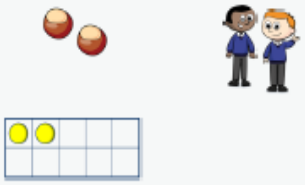
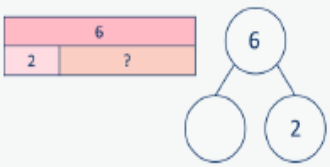
Progression of skills	Key representations
Sharing Provide practical activities such as sharing items during snack time. Encourage children to check whether items have been shared fairly (equally).	There are ... altogether. They are shared equally between ... groups. 
Grouping Provide opportunities to make equal groups when tidying up or during snack time. Encourage children to check that each group has the same amount.	There are ... groups of ... There are ... altogether. 

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

Y1

ADDITION

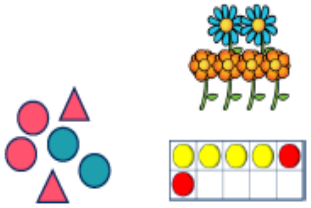
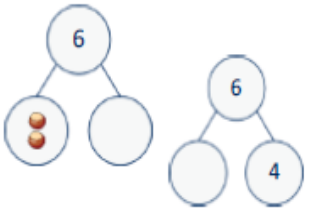
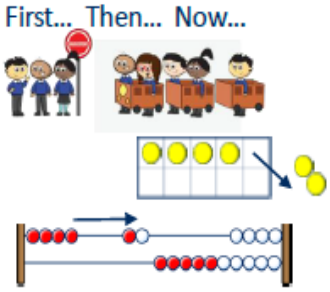
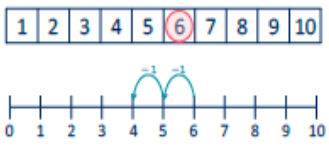
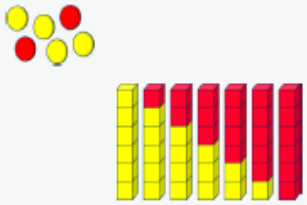
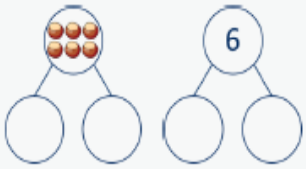
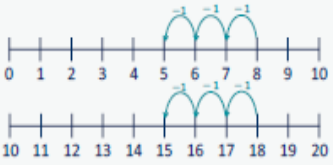
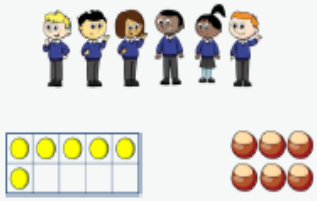
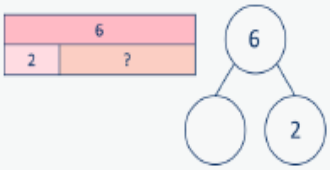
Add together
Add more
Bonds within 10
Related facts within 20
Missing numbers

Progression of skills	Key representations		
Add together (aggregation) 2 quantities are combined to find the total.	There are ... There are ... There are ... altogether. 	... is a part. ... is a part. ... is the whole. 	... plus ... is equal to ... ... is equal to .... + ... 4 + 2 = 6 2 + 4 = 6 6 = 4 + 2 6 = 2 + 4
Add more (augmentation) A quantity is increased.	First... Then... Now... 	I start at ... I jump on ... I land on ... 	... plus ... is equal to ... is equal to ... + ... 4 + 2 = 6 2 + 4 = 6 6 = 4 + 2 6 = 2 + 4
Bonds within 10 Include bonds for each number within 10 Encourage children to notice patterns.	... is made of ... and ... ... and ... make ... 	... can be partitioned into ... and ... 	... plus ... is equal to ... 6 + 0 = 6 5 + 1 = 6 4 + 2 = 6 3 + 3 = 6 2 + 4 = 6 1 + 5 = 6 0 + 6 = 6
Related facts within 20 Make links to known facts.	I know that ... and ... = ... so ... and ... = ... 	... more than ... is ... so ... more than ... is ... 	What patterns do you notice? 5 + 2 = 7 15 + 2 = 17 7 = 5 + 2 17 = 15 + 2
Missing numbers Make links to known facts.	How many more do you need to make ...? 	If ... is the whole and ... is a part, the other part must be... 	... plus ... is equal to ... 2 + □ = 6 6 = 2 + □ 

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

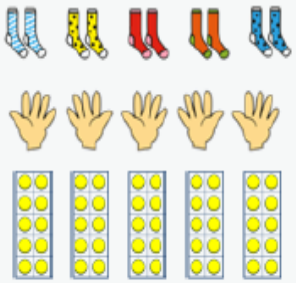
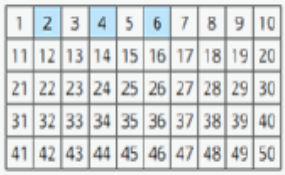
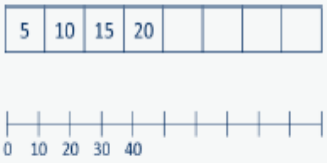
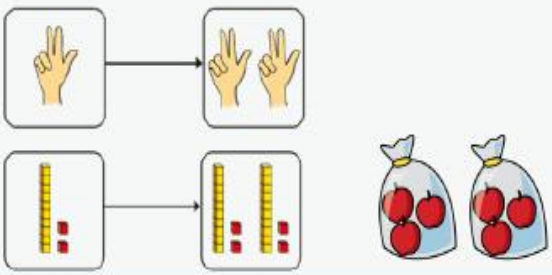
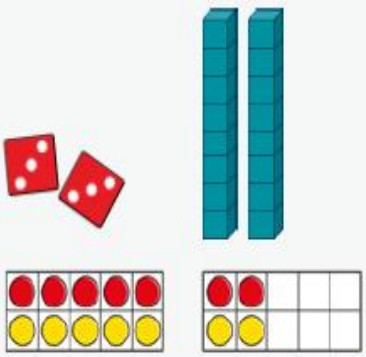
SUBTRACTION

Find a part
Take away
Bonds within 10
Related facts within 20
Take away

Progression of skills	Key representations		
Find a part Link to number bonds and known facts. E.g. 2 + 4 = 6 so if 6 is the whole and 4 is a part, the other part must be 2	There are ... in total. ... are ... How many are **not** ...? 	... is the whole. ... is a part. ... is a part. 	... subtract ... is equal to ... ... is equal to ... − ... 6 − 2 = 4 6 − 4 = 2 4 = 6 − 2 2 = 6 − 4
Take away A quantity is decreased.	First... Then... Now... 	I start at ... I jump back ... I land on ... 	... minus ... is equal to ... ... is equal to ... − ... 6 − 2 = 4 6 − 4 = 2 4 = 6 − 2 2 = 6 − 4
Bonds within 10 Focus on subtraction facts. Encourage children to notice patterns.	... is made of ... and ... ... and ... make ... 	... can be partitioned into ... and ... 	... minus ... is equal to ... 6 − 0 = 6 6 − 1 = 5 6 − 2 = 4 6 − 3 = 3 6 − 4 = 2 6 − 5 = 1 6 − 6 = 0
Related facts within 20 Make links to known facts.	I know that ... minus ... = ... so ... minus ... = ... 	... less than ... is ... so ... less than ... is ... 	What patterns do you notice? 8 − 3 = 5 18 − 3 = 15 5 = 8 − 3 15 = 18 − 3
Missing numbers Make links to known facts.	How many do you need to subtract to make ...? 	If ... is the whole and ... is a part, the other part must be... 	... minus ... is equal to ... 6 − □ = 2 2 = 6 − □ 

MULTIPLICATION

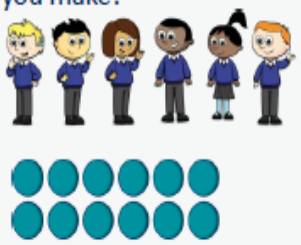
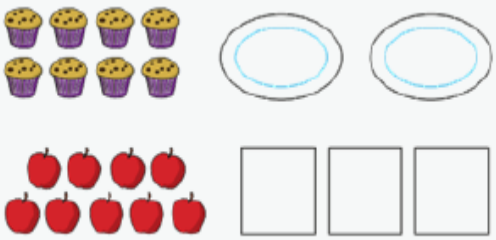
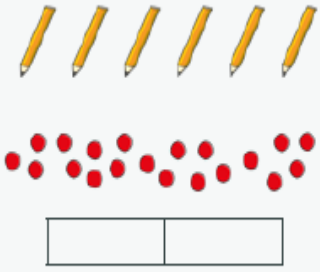
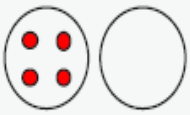
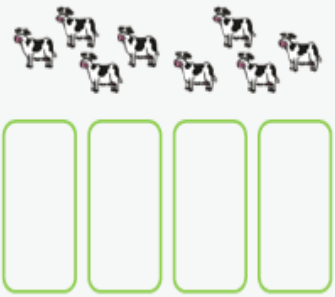
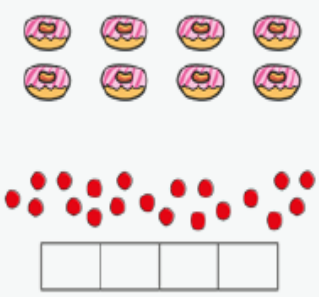
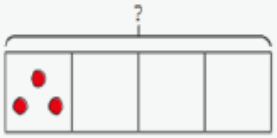
Count in 2's, 5's and 10's
Add equal groups
Make arrays
Make doubles

Progression of skills	Key representations		
Count in 2s, 5s and 10s Begin by counting objects that naturally come in 2s, 5s and 10s, for example pairs of socks or fingers.	There are ... equal groups of ... There are ... altogether. 	Continue to colour in ...s What do you notice?  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	Complete the number track/number line by counting in ...s.  5 10 15 20 0 10 20 30 40
Add equal groups (repeated addition) Children should be able to write a repeated addition to represent equal groups and to draw pictures or use objects to represent a repeated addition.	There are ... groups of ... There are ... altogether.  10 + 10 + 10 = 30  5 + 5 + 5 + 5 = 20	What is the same? What is different? 2 + 2 + 2 = 5 + 5 + 5 = 10 + 10 + 10 = Use objects or a drawing to represent the equal groups and find how many in total.	
Make arrays Children use their knowledge of adding equal groups to arrange objects in columns and rows.	There are ... rows of ... There are ... altogether. There are ... columns of ... There are ... altogether. 		
Make doubles Children understand that doubles are two equal groups. Children may begin to explore doubles beyond 20 using base 10	Double ... is ... ... + ... = ... 		

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

DIVISION

Making equal groups – grouping
Making equal groups – sharing
Find a half
Find a quarter

Progression of skills	Key representations		
Make equal groups - grouping Encourage children to physically move objects into equal groups. They can also circle equal groups when using pictures.	There are ... altogether. How many groups of ... can you make? 	Circle groups of 2 There are ... groups of 2 	Take ... cubes. Make equal groups.  There are ... groups of ...
Make equal groups – sharing Encourage children to check that the objects have been shared fairly and each group is the same.	... have been shared equally between... There are ... on/in each ... 	Take ... cubes. Share them between ...  12 shared between ... is ...	
Find a half Start with practical opportunities to share a quantity into 2 groups. Progress to circling half of the objects in a picture and then to finding the whole from a given half.	To find half, I need to share into 2 equal groups.  There are ... in each group.	Half of ... is ... 	If ... is half, what is the whole?  4 is half of ...
Find a quarter Start with practical opportunities to share a quantity into 4 groups. Progress to using pictures or bar models to find a quarter and then to finding the whole from a given quarter.	To find a quarter, I need to share into 4 equal groups.  There are ... in each group.	A quarter of ... is ... 	If ... is one quarter, what is the whole?  3 is one quarter of ...

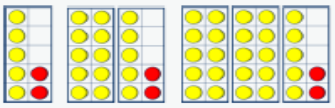
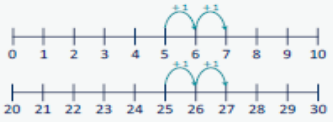
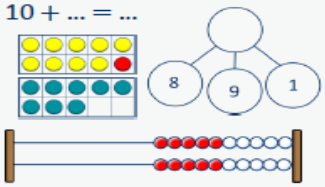
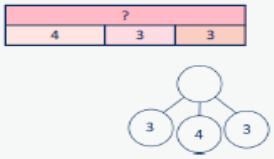
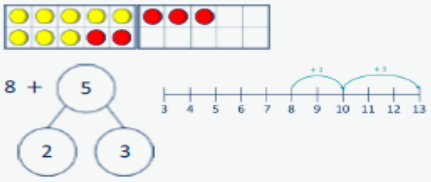
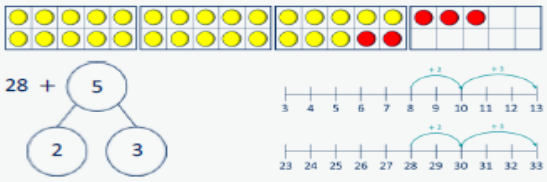
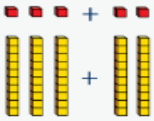
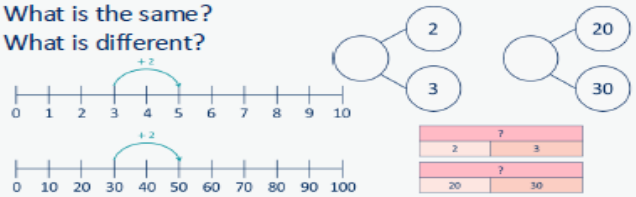
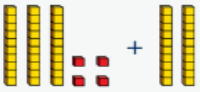
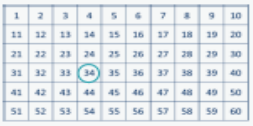
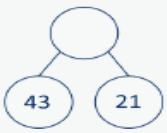
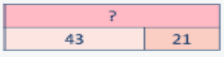
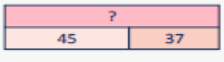
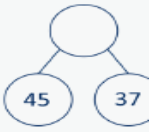
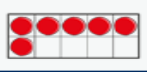
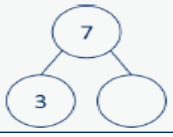
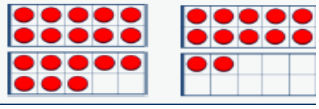
Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

Y2

ADDITION

Add 1's to any number
Add three 1-digit numbers
Add across a 10
Add multiples of 10

Add 10s to any number
Add two 2-digit numbers (not across a ten)
Add two 2-digit numbers (across a ten)
Missing numbers

Progression of skills	Key representations		
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 =
Add across a 10 Partition the number being added to make a full ten.	... can be partitioned into ... and ... 	I add ... to get to ... then I add ... 8 + 5 = 13 28 + 5 = 33 	
Add multiples of 10 Make links to known facts within ten.	... ones + ... ones = ... ones so ... tens + ... tens = ... tens  3 + 2 = 5 30 + 20 = 50	What is the same? What is different? 	
Add 10s to any number Make links to known facts.	... tens + ... tens = ... tens ... tens and ... ones = ... 	To add ... I need to add 10 ... times. 	I know that ... and ... = ... so ... and ... = ... 30 + 20 = 50 34 + 20 = 54
Add 2-digit numbers (not across a ten) Lining up ones and tens in columns will support with later written methods.	... ones + ... ones = ... ones ... tens + ... tens = ... tens 		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.	There are .... ones, so I do/do not need to make an exchange. ... ones = ... ten and ... ones 	 	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 + □ = 10 10 − □ = 6	If ... is a whole and ... is a part, then ... is the other part. □ + 3 = 7 7 − 3 = □ 	... can be partitioned into ... and ... 10 + 8 = 12 + □ 

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

SUBTRACTION

Subtract 1s from any number (related facts)
Subtract across a 10
Subtract multiples of 10
Subtract 10s from any number

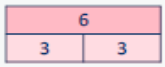
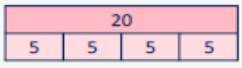
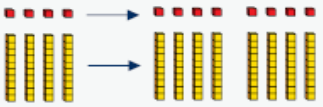
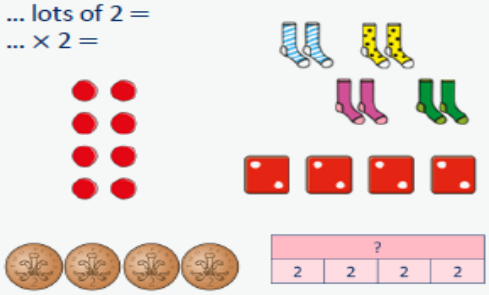
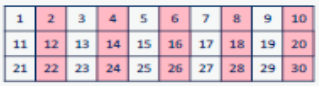
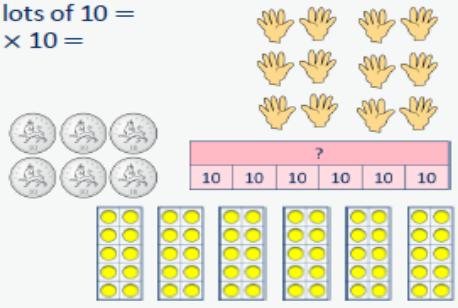
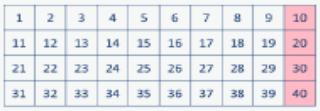
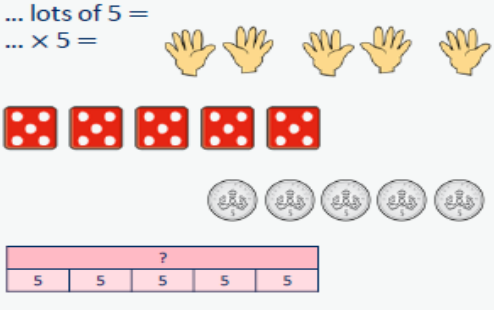
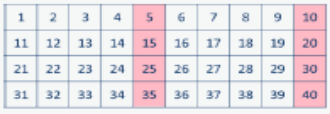
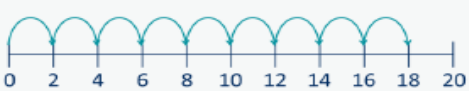
Subtract two 2-digit numbers (not across a ten)
Subtract two 2-digit numbers (across a ten)
Missing numbers

Progression of skills	Key representations		
Subtract ones from any number (related facts) Make links to known facts.	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 = 25...
Subtract across a 10 Partition the number being subtracted to bridge through a ten.	... can be partitioned into ... and ... 13 − 5 = 3 + 2	Make links with related facts. 33 − 5 = 3 + 2	
Subtract multiples of 10 Make links to known facts within ten.	... ones − ... ones = ... ones so ... tens − ... tens = ... tens 5 − 2 = 3 50 − 20 = 30	What is the same? What is different?	
Subtract 10s from any number Make links to known facts.	... tens − ... tens = ... tens ... tens and ... ones = ...	To subtract ... I need to subtract 10 ... times.	I know that ... minus ... = ... so ... minus ... = ... 50 − 20 = 30 54 − 20 = 34
Subtract two 2-digit numbers (not across a ten)	... ones − ... ones = ... ones ... tens − ... tens = ... tens 43 − 21 = ?	3 ones − 1 one = 2 ones 4 tens − 2 tens = 2 tens 2 tens and 2 ones = 22	
Subtract two 2-digit numbers (across a ten) Begin to exchange 1 ten for 10 ones.	I need to make an exchange because I do not have enough ones to subtract ... ones. 43 − 25 = ?	3 ones − 5 ones (I need to exchange 1 ten for 10 ones)	13 ones − 5 ones = 8 ones 3 tens − 2 tens = 1 ten 1 ten and 8 ones = 18
Missing numbers Solve missing number problems and use the inverse to check.	How many do you need to subtract to make ...? 10 − □ = 6 6 + □ = 10	If ... is a whole and ... is a part, then ... is the other part. 7 − 3 = □ □ + 3 = 7	... can be partitioned into ... and ... 18 − □ = 12 + 2

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

MULTIPLICATION

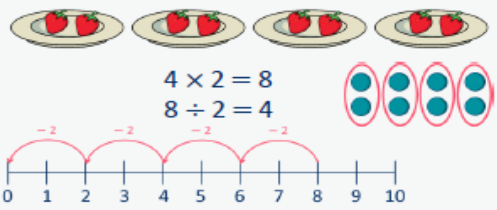
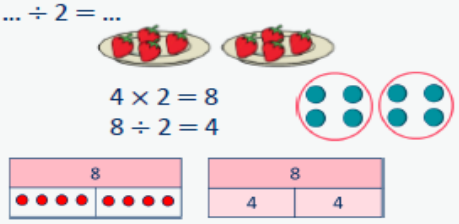
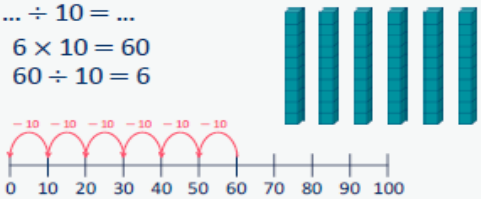
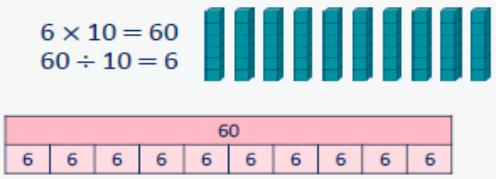
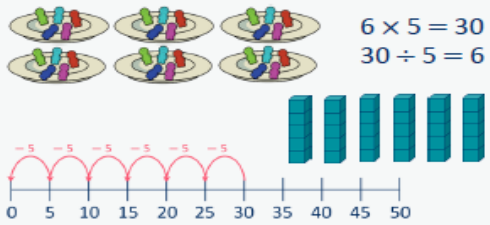
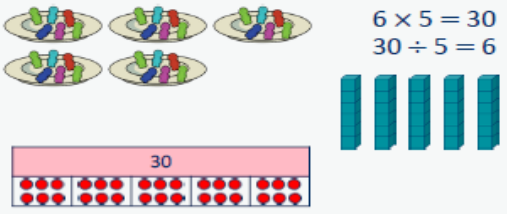
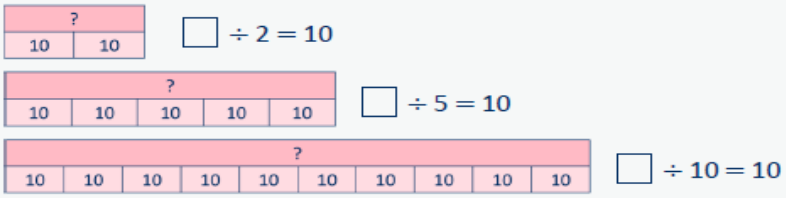
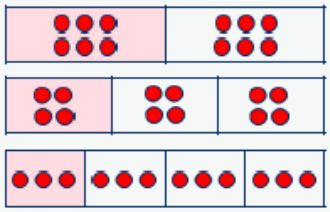
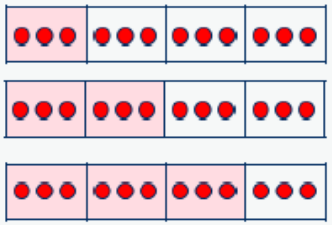
Link repeated addition Use arrays Double The 2-times table	The 5-times table The 10-times table Missing numbers

Progression of skills	Key representations
Link repeated addition and multiplication Encourage children to make the link between repeated addition and multiplication.	There are ... equal groups with ... in each group. There are ... altogether.   $3 + 3 = 6$ $2 \times 3 = 6$   $5 + 5 + 5 + 5 = 20$ $4 \times 5 = 20$
Use arrays Encourage children to see that multiplication is commutative.	There are ... rows with ... in each row. There are ... columns with ... in each column.  3 lots of 5 = 15 5 + 5 + 5 = 15 5 lots of 3 = 15 3 + 3 + 3 + 3 + 3 = 15 I can see ... × ... and ... ×... $3 \times 5 = 15$ $5 \times 3 = 15$ $3 \times 5 = 5 \times 3$
Double Encourage children to make links with related facts.	Double ... is ...  Double 4 = 4 + 4 Double 4 is 8 Double ... is ... so double ... is ...  Double 4 is 8 Double 40 is 80
The 2 times-table Encourage daily counting in multiples both forwards and back. Notice that all multiples of 2 are even numbers.	... lots of 2 = ... × 2 =  ... times 2 is equal to ...  $1 \times 2 = 2$ $2 = 1 \times 2$ $2 \times 2 = 4$ $4 = 2 \times 2$ $3 \times 2 = 6$ $6 = 3 \times 2$  0 2 4 6 8 10 12 14 16 18 20 22 24
The 10 times-table Encourage daily counting in multiples both forwards and back. Notice the pattern in the numbers.	... lots of 10 = ... × 10 =  ... times 10 is equal to ...  $1 \times 10 = 10$ $10 = 1 \times 10$ $2 \times 10 = 20$ $20 = 2 \times 10$ $3 \times 10 = 30$ $30 = 3 \times 10$  0 10 20 30 40 50 60 70 80 90 100 110 120
The 5 times-table Encourage daily counting in multiples both forwards and back. Notice the pattern in the numbers.	... lots of 5 = ... × 5 =  ... times 5 is equal to ...  $1 \times 5 = 5$ $5 = 1 \times 5$ $2 \times 5 = 10$ $10 = 2 \times 5$ $3 \times 5 = 15$ $15 = 3 \times 5$  0 5 10 15 20 25 30 35 40 45 50 55 60
Missing numbers Make links to known facts.	... is equal to ... groups of ... 18 socks, how many pairs?   0 2 4 6 8 10 12 14 16 18 20 ... times ... is equal to ... $\square \times 2 = 18$ $18 = 2 \times \square$

Galley Common Infant School Calculation Policy. This policy is based on the White Rose Calculation policies for YR, Y1, Y2

DIVISION

Divide by 2 Divide by 10 Divide by 5 Missing numbers	Unit fractions Non-unit fractions

Progression of skills	Key representations	
Divide by 2 Encourage children to compare the grouping and sharing structures of division and to make links with times-table facts and halving.	There are ... equal groups of 2 ... ÷ 2 = ... 	... shared equally between 2 is ... Half of ... is ... ... ÷ 2 = ... 
Divide by 10 Encourage children to compare the grouping and sharing structures of division and to make links with times-table facts.	There are ... equal groups of 10 ... ÷ 10 = ... 	... shared equally between 10 is ... ... ÷ 10 = ... 
Divide by 5 Encourage children to compare the grouping and sharing structures of division and to make links with times-table facts.	There are ... equal groups of 5 ... ÷ 5 = ... 	... shared equally between 5 is ... ... ÷ 5 = ... 
Missing numbers Bar models are useful to show the link between multiplication and division.	... divided by 2/5/10 is equal to ... 	
Unit fractions In Y2 the focus is on finding $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$ Bar models are useful to show the link between division and finding a fraction.	The objects have been shared fairly into ... groups. $\frac{1}{\square}$ of ... is ... 	There are ... equal parts. There is ... part circled. $\frac{1}{\square}$ is circled. 
Non-unit fractions In Y2 the focus is on finding $\frac{2}{4}$ and $\frac{3}{4}$ Prompt children to notice that $\frac{2}{4}$ is equivalent to $\frac{1}{2}$	The objects have been shared fairly into ... groups. $\frac{\square}{\square}$ of ... is ... 	There are ... equal parts. There are ... parts circled. $\frac{\square}{\square}$ is circled. 