Juniper Hill School Calculation Policy March 2026

At Juniper Hill School, our vision is to empower our community to have the courage to make a difference in the world, teaching children the importance of being open to new possibilities and of working together to enable everyone to fulfil their goals. Our calculation policy is underpinned by our school aims:

- **Kindness** – we find ways to support and look after each other in our maths
- **Enjoyment** – we see the learning of calculation strategies as an exciting opportunity to find new and interesting ways of solving mathematical problems
- **Achievement** – we encourage everyone to achieve their best, whatever their level, by providing the necessary resources and progression for all of our learners.

This calculation policy outlines the progression in mathematical skills from EYFS to Year 6. It is a working document that will be revised and amended as necessary. Our approach is flexible, in that teaching and learning in each year group may draw from strategies in year groups both above and below their own, in order to meet the needs of a particular cohort.

Our teaching is underpinned by the Concrete-Pictorial-Abstract (CPA) approach: throughout the school, manipulatives, such as Numicon, Dienes and place value counters, and visual representations, such as bar models, number lines and part-whole diagrams are used alongside and to support the introduction of jottings and formal, written methods in all four operations. Teachers will adapt the range of concrete and pictorial strategies to best meet the needs of a given cohort.

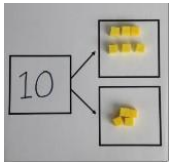
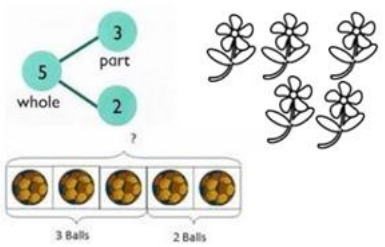
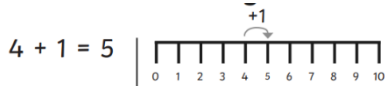
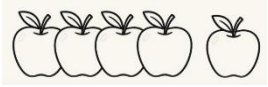
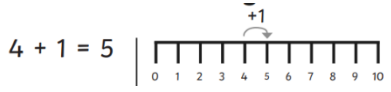
All four operations are taught alongside their inverse (multiplication with division, addition with subtraction) in order for children to fully master each operation and make connections between them. Each operation is also linked to real life contexts, rich problem-solving activities and worded problems. By the end of Key Stage 2, our aim is for all children to be secure in a reliable and efficient written method for each operation. Our children are encouraged to critically consider a calculation and the most efficient method to reach the answer, by asking themselves, “Can I do this in my head? Can I do this in my head using drawings or jottings? Do I need a pencil and paper procedure?”.

Our calculation policy is supported by the following pedagogies, in line with our school values:

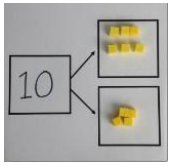
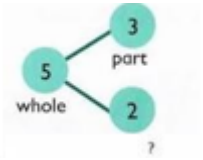
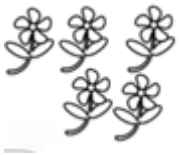
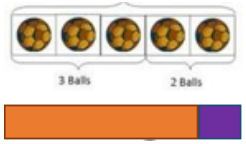
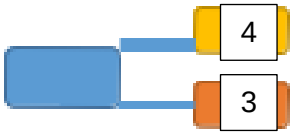
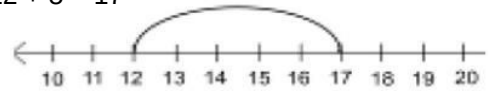
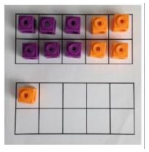
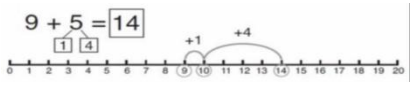
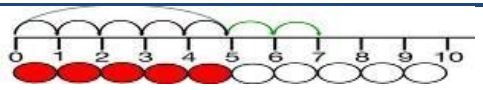
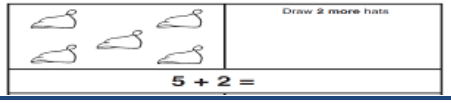
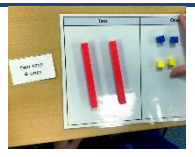
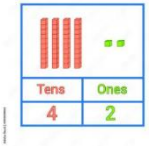
- Frequent opportunity to reinforce and develop understanding of number and place value, building children’s **courage** to tackle new concepts
- Fostering **independence** by encouraging children to select appropriate concrete and pictorial resources to support their learning
- Regular practical and problem-solving activities to develop **curiosity** and **creativity** in problem-solving
- Differentiation of activities so that all children can achieve at their level and that more able children can independently explore and deepen their conceptual understanding
- Frequent opportunities to work within mixed ability groups to engender **respect** within working relationships and a supportive **community** of learning
- Opportunities to take risks, make mistakes and learn from experiences, as well as opportunities to explore misconceptions in order to deepen understanding.

December 2023

EYFS Addition

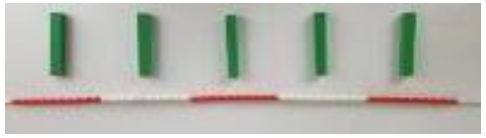
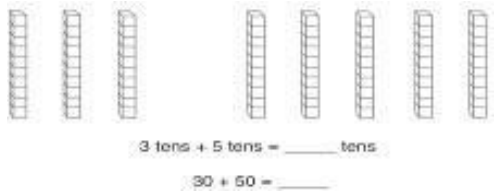
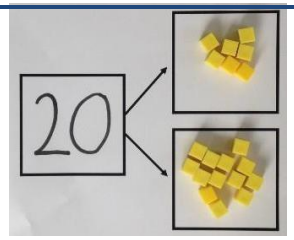
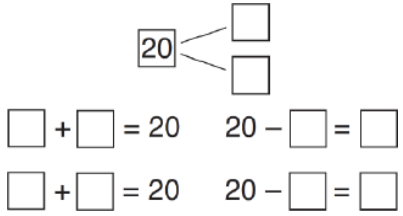
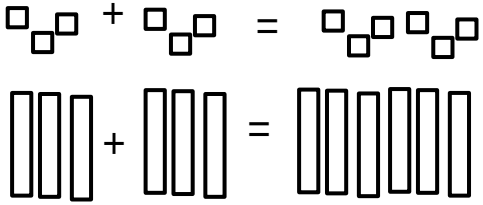
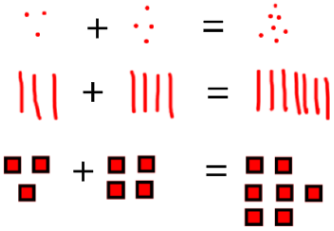
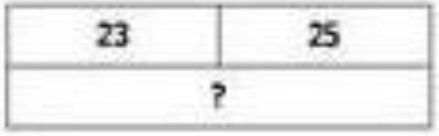
Objective & Strategy	Concrete	Pictorial	Abstract
Practical activities relating addition to combining two groups (including composition)	   Use manipulatives such as cubes or counters to add two groups/numbers together Later represented by the part-whole model	 Use pictures, both presented or drawn, to add two numbers together as a group.	Beginning to record number sentences introducing the + and = signs to record practical addition problems. 4 + 3 = 7
Finding one more than a number from 1 to 10	 Using a variety of manipulatives such as a bead string, cubes etc, start with the larger number and then count on 1. 	Count forwards one using a  number track or line. Draw pictures and add 1 more. 	Record as a number sentence using the + and = signs 4 + 1 = 5
Adding single digit numbers	Using a variety of manipulatives such as Numicon. Children are encouraged to verbalise the number sentence: **4 + 2 = 6** 	By the end of the EYFS year, children are encouraged to select their own concrete resources and pictorial representations as well as record as a number sentence.	
Starting with the bigger number and counting on	 Start with the larger number on the bead string or cubes and then count on one by one. . 	Count on in ones using a number track or line, starting with the bigger number. 	2 + 5 = 7 With simple addition problems, place the larger number in your head and count on the smaller number to find your answer, so this becomes “5 add 2 equals seven”.
In practical activities, begin to use the vocabulary of addition: add, more, plus, together, equals, makes.			
Introduce the + and = signs to record practical addition.			

Y1 Addition

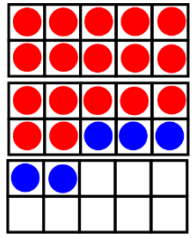
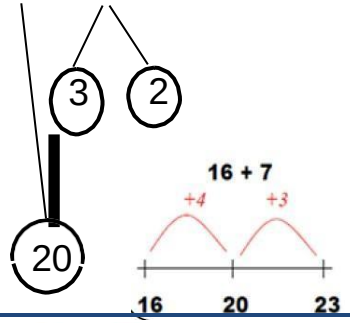
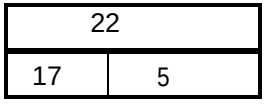
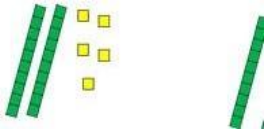
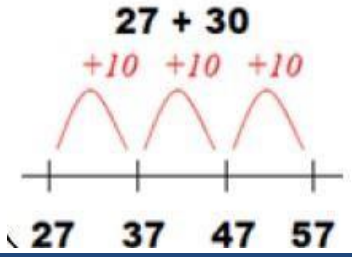
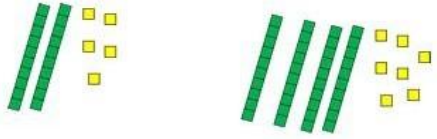
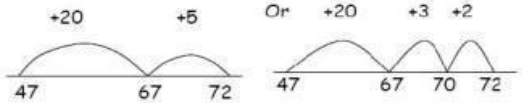
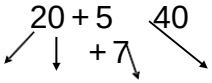
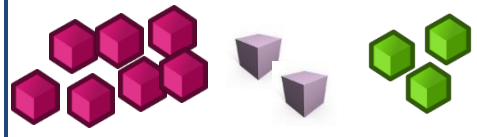
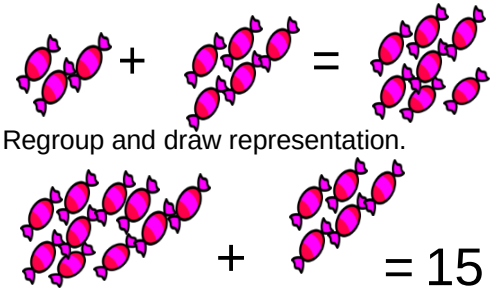
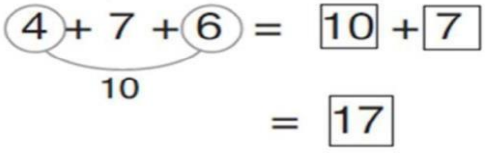
Objective & Strategy	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part- whole model	   Use part whole model. Use cubes to add two numbers together as a group or in a bar.	   8 1 Use pictures to add two numbers together as a **group** or in a bar.	 4 + 3 = 7 10=6+4 Use the part-part whole diagrams as shown above to move into the abstract.
Starting at the bigger number and counting on	 Start with the larger number on the bead string and then count on.	12 + 5 = 17  Start at the larger number on the number line and count on in ones or in one jump to find the answer.	5 + 12 = 17 Place the larger number in your head and count on the smaller number to find your answer.
Regrouping to make 10. *This is an essential skill for column addition later.*	Start with the bigger number and use the smaller number to make 10.  6 + 5 = 11  Use ten frames.	Use pictures, a number line or fingers. Regroup or partition the smaller number using the part: part whole model to make 10. 	7 + 4= 11 If I am at 7, how many more do I need to make 10. How many more do I add on now?
Represent & use number bonds and related subtraction facts within 20	2 more than 5. 	 	Emphasis should be on the language *'1 more than 5 is equal to 6.'* *'2 more than 5 is 7.'* *'8 is 3 more than 5.'*
Represent 2 digit numbers using dienes – tens and ones.	 24 – 2 tens and 4 ones		Emphasis on language 19 has 1 ten and 9 ones.
Use the + and = symbols to record addition calculations and problems.			

Know that addition can be done in any order.

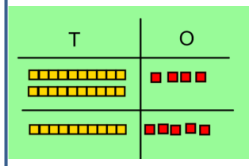
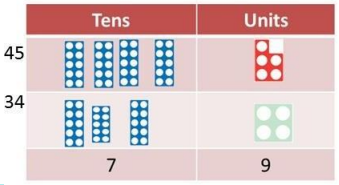
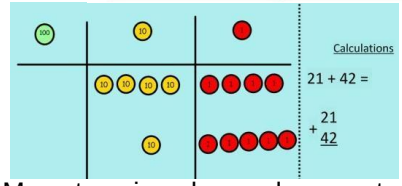
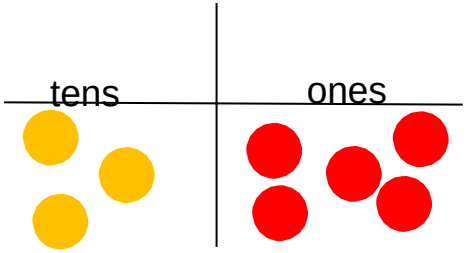
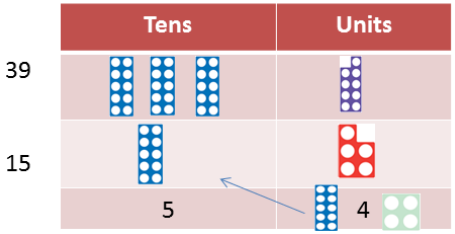
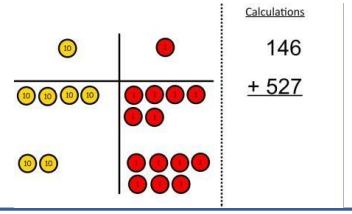
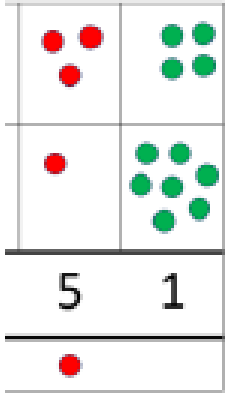
Y2 Addition

Objective & Strategy	Concrete	Pictorial	Abstract
Adding multiples of ten	50= 30 = 20  Model using dienes and bead strings	 3 tens + 5 tens = _____ tens 30 + 50 = _____ Use representations for base ten.	20 + 30 = 50 70 = 50 + 20 40 + □ = 60
Use known number facts Part: part-whole model	 Children explore ways of making numbers within 20	 □ + □ = 20 20 − □ = □ □ + □ = 20 20 − □ = □	□ + 1 = 16 16 − 1 = □ 1 + □ = 16 16 − □ = 1
Using known facts		 Children draw representations of H,T and O	3 + 4 = 7 *leads to* 30 + 40 = 70 *leads to* 300 + 400 = 700
Bar model	 3 + 4 = 7	 7 + 3 = 10	 23 + 25 = 48

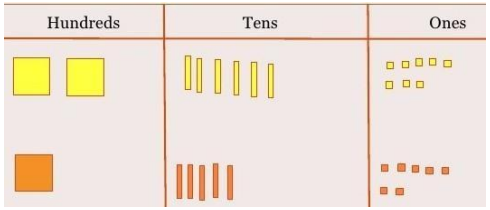
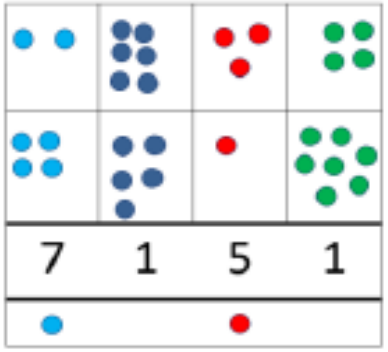
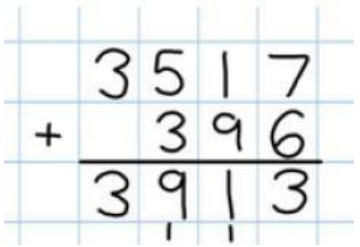
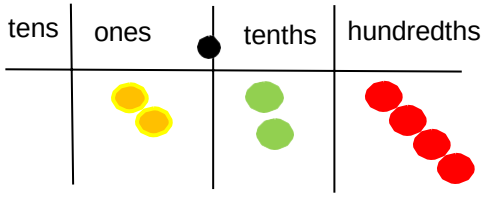
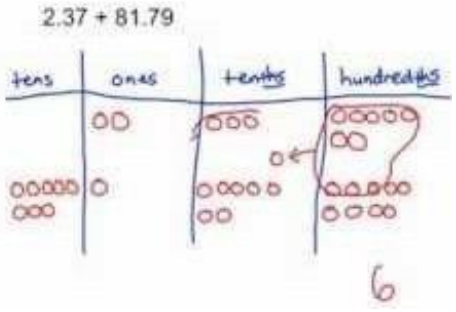
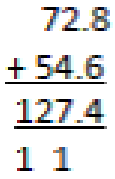
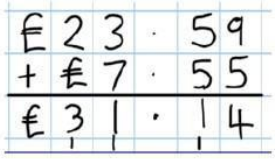
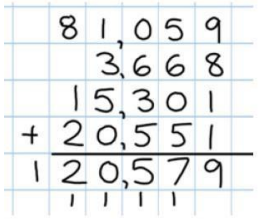
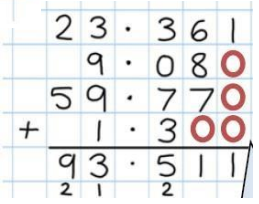
Y2 Addition

Objective & Strategy	Concrete	Pictorial	Abstract
Add a two-digit number and ones	 17 + 5 = 22 Use ten frames to make 'magic ten Children explore the pattern. 17 + 5 = 22 27 + 5 = 32	17 + 5 = 22 Use part part whole and number line to model. 	17 + 5 = 22 Explore related facts 17 + 5 = 22 5 + 17 = 22 22—17 = 5 22—5 = 17 
Add a 2 digit number and tens	 25 + 10 = 35 Explore that the ones digit does not change		27 + 10 = 37 27 + 20 = 47 27 + □ = 57
Add two 2-digit numbers	Model using dienes, place value counters and Numicon 	 Use number line and bridge ten using part whole if necessary.	25 + 47  20 + 40 = 60 5 + 7 = 12 60 + 12 = 72
Add three 1-digit numbers	 Combine to make 10 first if possible, or bridge 1o then add third digit		 Combine the two numbers that make/ bridge ten then add on the third.

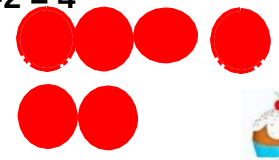
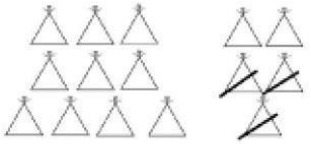
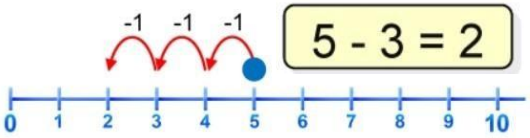
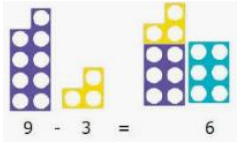
Y3 Addition

Objective & Strategy	Concrete	Pictorial	Abstract
Column Addition— no regrouping (friendly numbers) Add two or three 2 or 3- digit numbers.	 Model using Dienes or Numicon Add together the ones first, then the tens.   Move to using place value counters	Children move to drawing the counters using a tens and one frame. 	2 2 3 + 1 1 4 3 3 7 Add the ones first, then the tens, then the hundreds.
Column Addition with regrouping.	 Exchange ten ones for a ten. Model using numicon and pv counters. 	 Children can draw a representation of the grid to further support their understanding, carrying the ten **underneath** the line	Children are introduced to formal column to show the exchange. 536 + 85 621 1 1

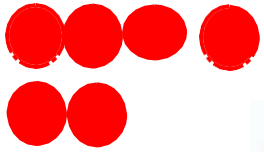
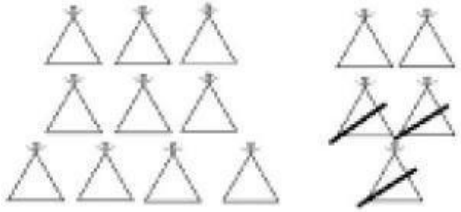
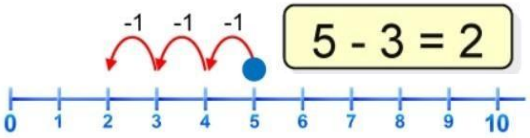
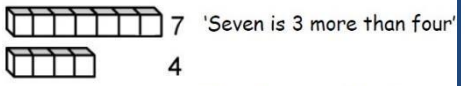
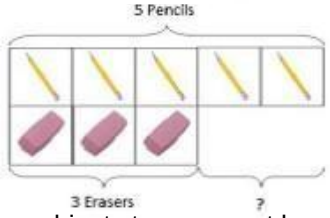
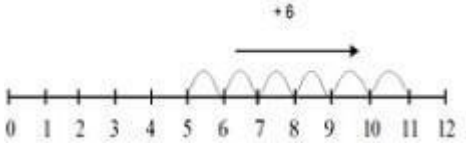
Y4 - 6 Addition

Objective & Strategy	Concrete	Pictorial	Abstract
Y4—add numbers with up to 4 digits	Children continue to use dienes or pv counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand. 	 Draw representations using pv grid.	 Continue from previous work to carry hundreds as well as tens.
Y5—add numbers with more than 4 digits. Add decimals with 2 decimal places, including money.	 Introduce decimal place value counters and model exchange for addition for decimal addition.		Relate to money and measures.  
Y6—add several numbers of increasing complexity, including adding money, measure and decimals with different numbers of decimal points.	As Y5	As Y5	 Insert zeros for place holders. 

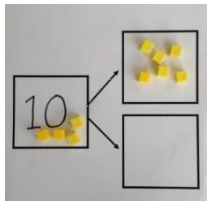
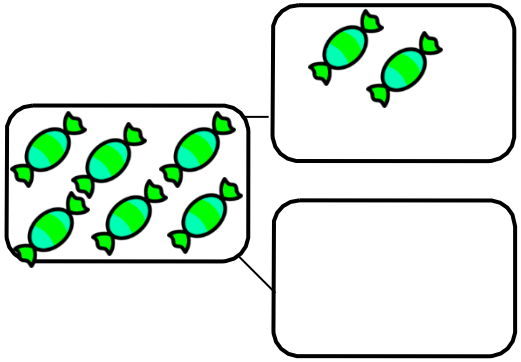
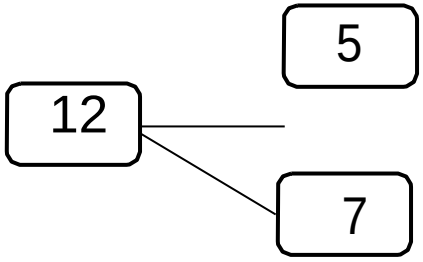
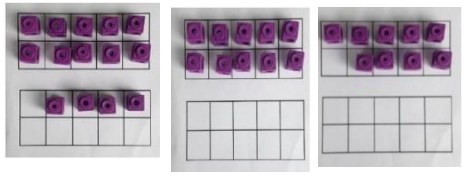
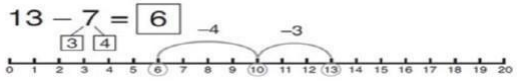
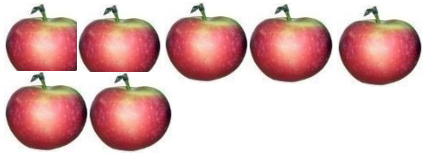
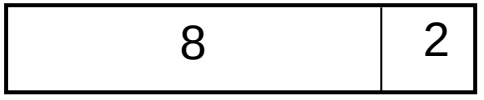
EYFS Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
Taking away one.	Use physical objects, counters, cubes, etc. to show how objects can be taken away **6 -2 = 4**  .  **4- 2 = 2**	 15 – 3 = 12 Cross out drawn objects to show what has been taken away.	Beginning to record number sentences introducing the - and = signs to record practical subtraction problems. 7 - 4 = 3
Counting back	 Move objects away from the group, counting backwards.	 Count back in ones using a number line or number track.	Count backwards from 20 by rote. Be able to recall subtraction facts to 5.
Find the Difference	Using Numicon, laying one piece over another: 		
Finding one less.	Bead strings and physical objects to find one less.  	Count backwards 1 using a number line or number track. Draw pictures and take 1 away by crossing it out. (See taking away ones above)	Record as a number sentence using the - and = signs 4 - 1 = 3
Word problems (addition and subtraction).	Use objects to make own number sentence. E.g., 'first, there were 6 pigs. Then, two more came. Now there are 8 pigs altogether.'. Progress to recording the sentence in numbers and symbols.  and two more  makes 8 → 6 + 2 = 8		

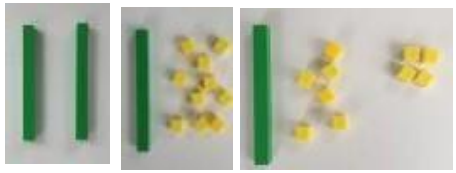
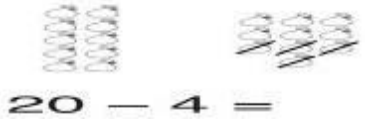
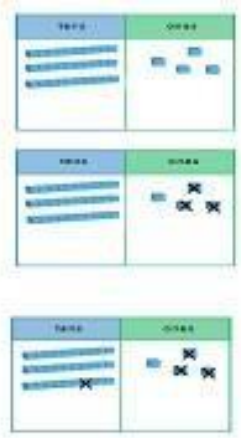
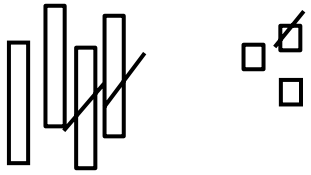
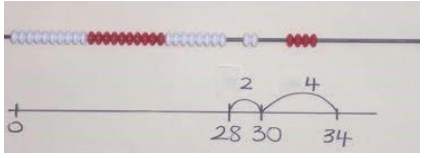
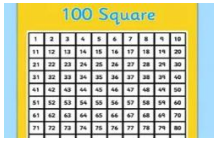
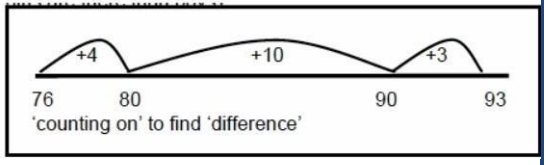
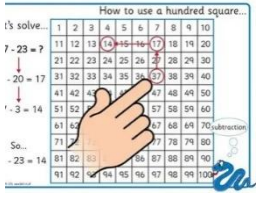
Y1 Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
Taking away ones.	Use physical objects, counters, cubes, etc. to show how objects can be taken away.  6—4 = 2  4—2 = 2	 15 – 3 = 12 Cross out drawn objects to show what has been taken away.	7—4 = 3 16—9 = 7
Counting back	 Move objects away from the group, counting backwards.	 Count back in ones using a number line.	Put 13 in your head, count back 4. What number are you at?
Find the Difference	Compare objects and amounts  'Seven is 3 more than four' 'I am 2 years older than my sister'  Lay objects to represent bar model.	Count on using a number line to find the difference. 	Hannah has 12 sweets and her sister has 5. How many more does Hannah have than her sister.?

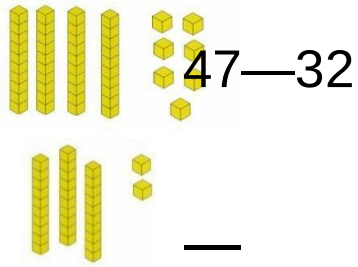
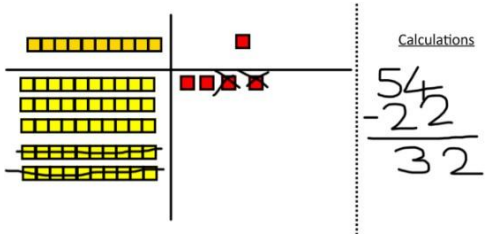
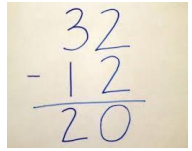
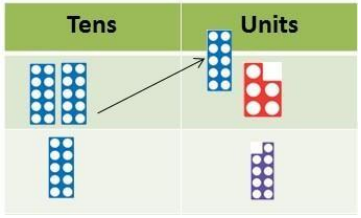
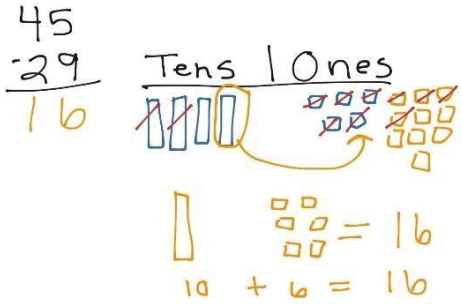
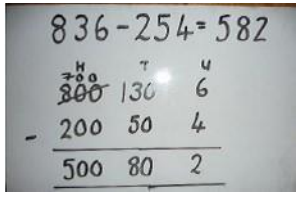
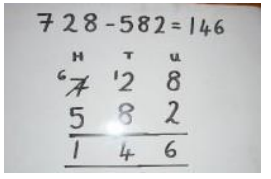
Y1 Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
Represent and use number bonds and related subtraction facts within 20 Part Part Whole model	 Link to addition. Use PPW model to model the inverse. If 10 is the whole and 6 is one of the arts, what s the other part? 10—6 = 4	 Use pictorial representations to show the part.	Move to using numbers within the part whole model. 
Make 10	14—9  Make 14 on the ten frame. Take 4 away to make ten, then take one more away so that you have taken 5.	13—7  Jump back 3 first, then another 4. Use ten as the stopping point. Progress to jumping by the whole number.	16—8 How many do we take off first to get to 10? How many left to take off?
Bar model	 5—2 = 3		 10 = 8 + 2 10 = 2 + 8 10—2 = 8 10—8 = 2

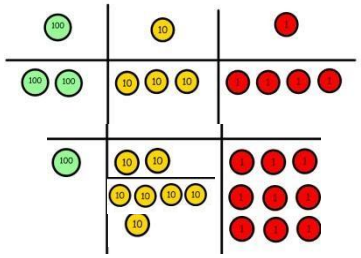
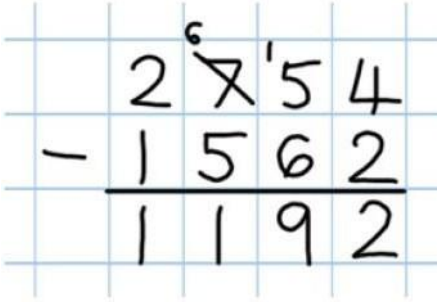
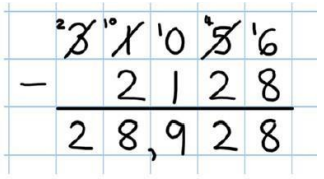
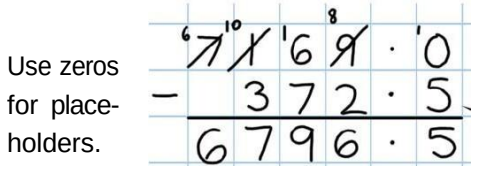
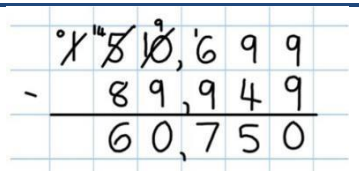
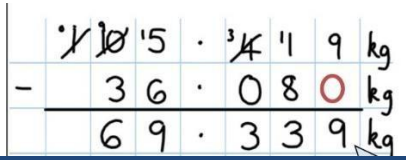
Y2 Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
Regroup a ten into ten ones	 Use a PV chart to show how to change a ten into ten ones, use the term 'take and make'		20—4 = 16
Partitioning to sub-tract without re-grouping. *'Friendly numbers'*	34—13 = 21  Use Dienes to show how to par-tition the number when subtracting without regroup-ing.	Children draw representations of Dienes and cross off.  43—21 = 22	43—21 = 22
Make ten strategy *Progression should be crossing one ten, crossing more than one ten, crossing the hundreds.*	 34—28  Use a bead bar / bead strings or 100 square to model counting to next ten and the rest.	 Use a number line to count on to next ten and then the rest. 	93—76 = 17

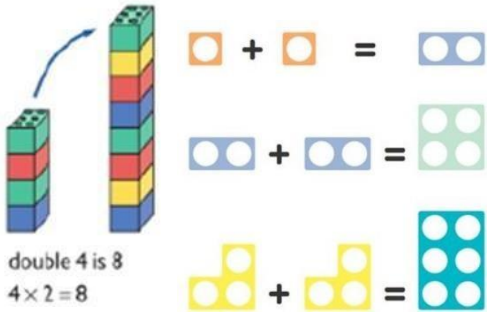
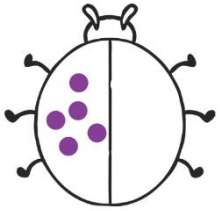
Y3 Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
Column subtraction without regrouping (friendly numbers)	 Use base 10, dienes and counters to model.	 Draw representations to support understanding	Intermediate steps may be needed to lead to clear subtraction understanding. 
Column subtraction with regrouping	 Begin with base 10 or Numicon. Move to place value counters, modelling the exchange of a ten into ten ones.	 Children may draw base ten or PV counters and cross off.	 Begin by partitioning into place value columns  Then move to formal method.

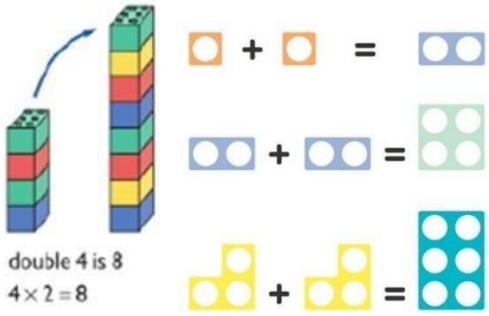
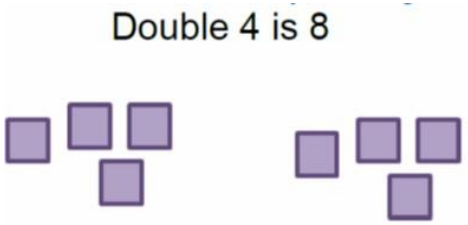
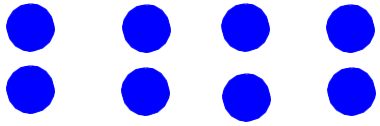
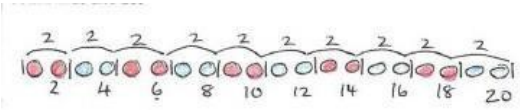
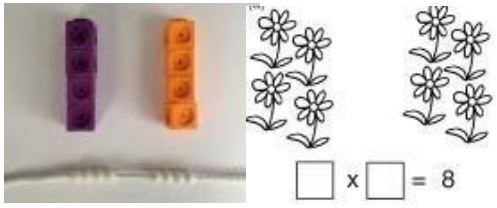
Y4-6 Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
Year 4: Subtracting tens and ones; subtract with up to 4digits. *Introduce decimal subtraction through context of money*	234 - 179  Model process of exchange using Numicon, base ten and then move to PV counters.	Children to draw place value counters and show their exchange—see Y3	 Use the phrase 'take and make' for exchange
Year 5: Subtract with at least 4 digits, including money and measures. *Subtract with decimal values, including mixtures of integers and decimals and aligning the decimal*			  Use zeros for place-holders.
Year 6: Subtract with increasingly large and more complex numbers; subtract decimal values.			 

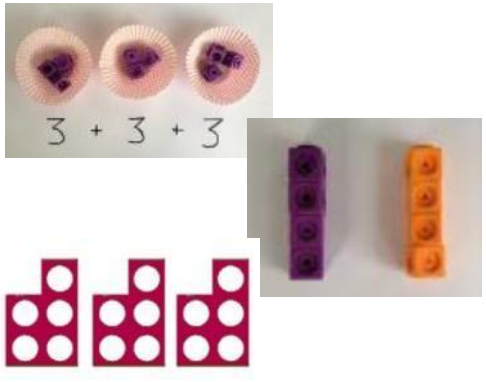
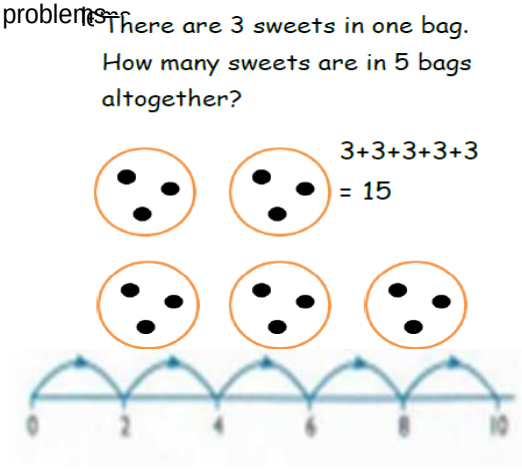
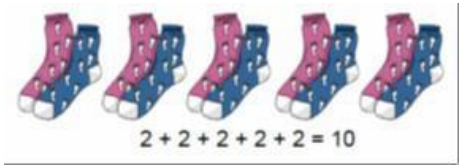
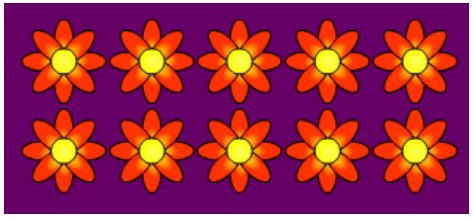
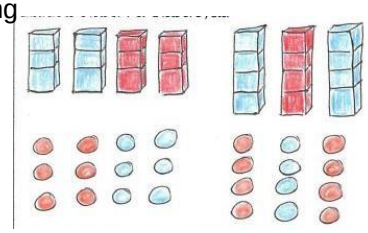
EYFS Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Doubling	Use practical activities using manipulatives, including cubes and Numicon to demonstrate doubling 	Matching pictorial representations of doubles and finding the total. 	Using the vocabulary of “double”: Automatically recalling doubling facts to 5 Doubling facts beyond 5 is encouraged for children who are more able
Counting in multiples of 2	Animals going into the ark “two by two” to introduce the concept. 		Children begin to understand the pattern of counting in 2s by rote.

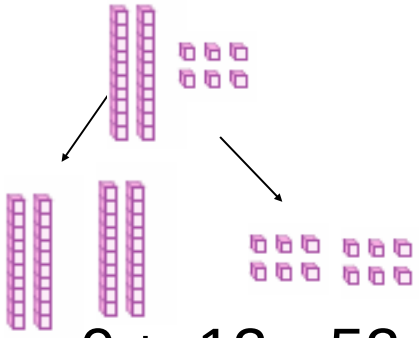
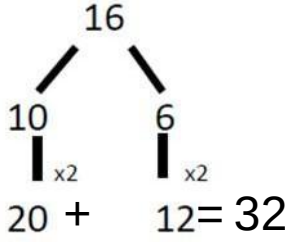
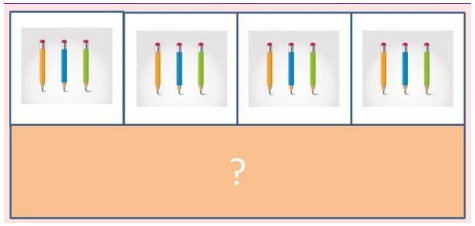
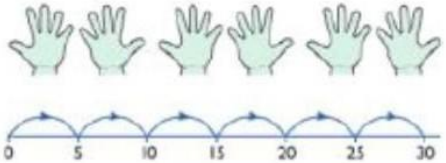
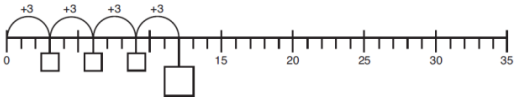
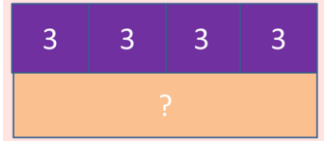
Y1 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Doubling	Use practical activities using manipulatives, including cubes and Numicon to demonstrate doubling 	Draw pictures to show how to double numbers 	Double 8 is 16 so 8 X 2 = 16
Counting in multiples	Count the groups as children are skip counting, children may use their fingers as they are skip counting.  	 Children make representations to show counting in multiples. 	Count in multiples of a number aloud. Write sequences with multiples of numbers. 2, 4, 6, 8, 10 5, 10, 15, 20, 25 , 30
Making equal groups and counting the total	 Use manipulatives to create equal groups.	Draw  to show 2 x 3 = 6 Draw and make representations	2 x 4 = 8

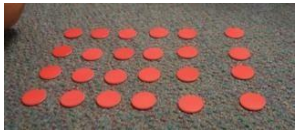
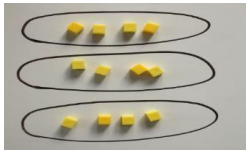
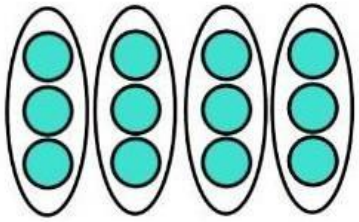
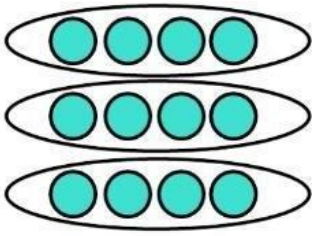
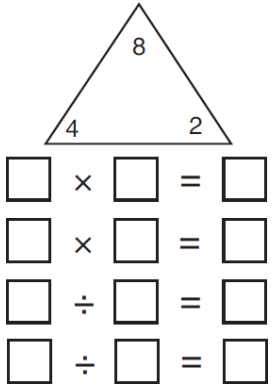
Y1 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Repeated addition	 Use different objects to add equal groups	Use pictorial including number lines to solve problems. 	Write addition sentences to describe objects and pictures. 
Understanding arrays	Use objects laid out in arrays to find the answers to 2 lots 5, 3 lots of 2 etc. 	Draw representations of arrays to show understanding 	3 x 2 = 6 2 x 5 = 10

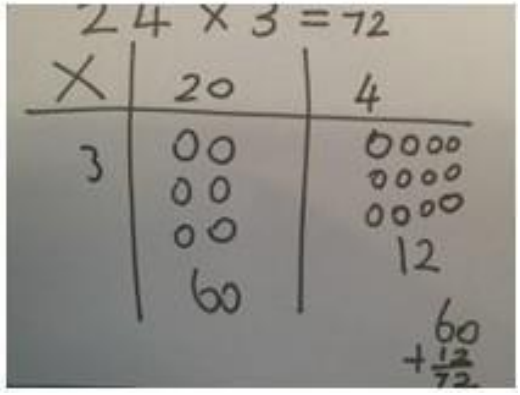
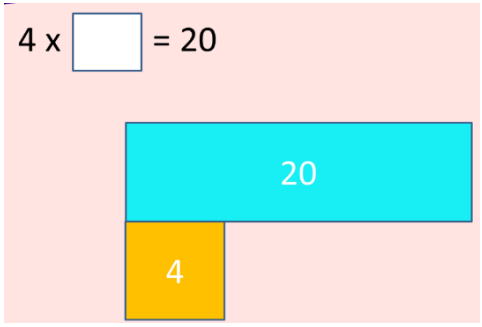
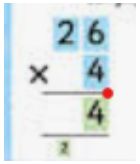
Y2 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Doubling	Model doubling using dienes and PV counters.  40 + 12 = 52	Draw pictures and representations to show how to double numbers	Partition a number and then double each part before recombining it back together. 
Counting in multiples of 2, 3, 5, 10 from 0 (repeated addition)	Count the groups as children are skip counting, children may use their fingers as they are skip counting. Use bar models.  5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40   	Number lines, counting sticks and bar models should be used to show representation of counting in multiples.    	Count in multiples of a number aloud. Write sequences with multiples of numbers. 0, 2, 4, 6, 8, 10 0, 3, 6, 9, 12, 15 0, 5, 10, 15, 20, 25 , 30 $4 \times 3 = \square$

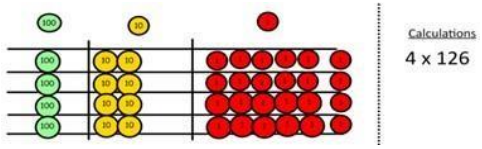
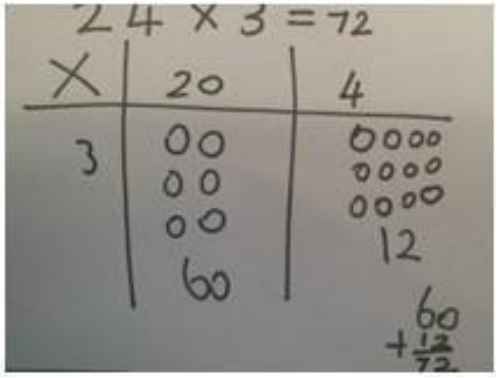
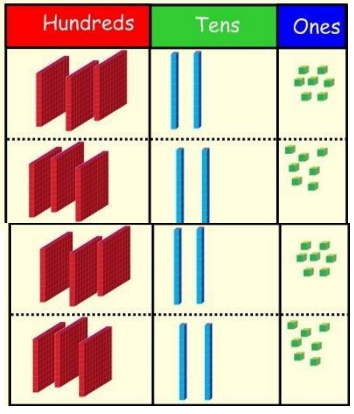
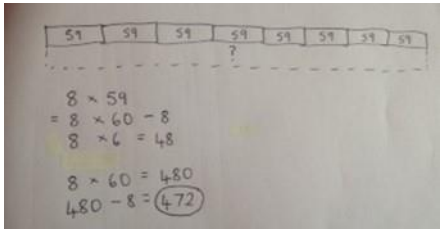
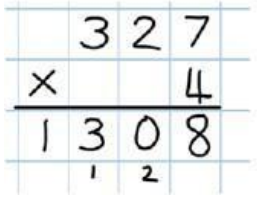
Y2 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Multiplication is commutative	Create arrays using counters and cubes and Numicon.    Pupils should understand that an array can represent different equations and that, as multiplication is commutative, the order of the multiplication does not affect the answer.  	Use representations of arrays to show different calculations and explore commutativity.  	$12 = 3 \times 4$ $12 = 4 \times 3$ Use an array to write multiplication sentences and reinforce repeated addition.  5 + 5 + 5 = 15 3 + 3 + 3 + 3 + 3 = 15 5 x 3 = 15 3 x 5 = 15
Using the Inverse *This should be taught alongside division, so pupils learn how they work alongside each other.*			2 x 4 = 8 4 x 2 = 8 8 ÷ 2 = 4 8 ÷ 4 = 2 8 = 2 x 4 8 = 4 x 2 2 = 8 ÷ 4 4 = 8 ÷ 2 Show all 8 related fact family sentences.

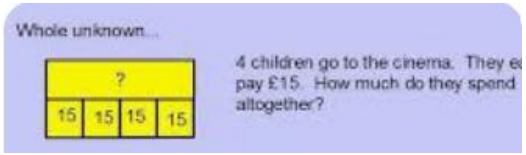
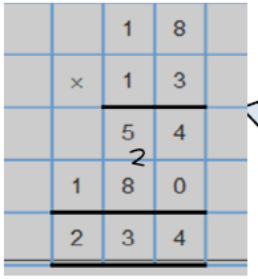
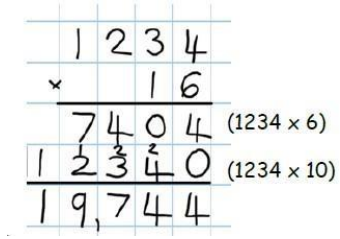
Y3 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Multiplying 2-digit numbers by 1 digit (Year 3 expectation).	Children can represent their work with place value counters in a way that they understand.	They can draw the counters using colours to show different amounts or just use the circles in the different columns to show their thinking as shown below.  Bar models are used to explore missing numbers  	Multiplying a two digit number by one-digit numbers using the compact method. 

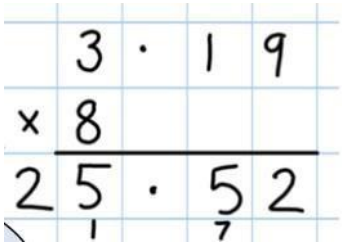
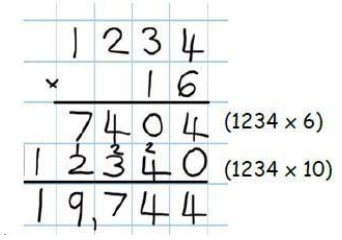
Y4 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Multiplying 3-digit numbers by 1 digit. (Year 4 expectation). Column multiplication (compact method)	Use place value counters to show how to find groups of a number – here, we are multiplying by 4 so we need 4 rows: Then fill each row with 126:  	Children can represent their work with place value counters in a way that they understand. They can draw the counters using colours to show different amounts or just use the circles in the different columns to show their thinking as shown below.  	Multiplying a three digit number by one-digit number using the compact method. 
	Children can continue to be supported by place value counters at the stage of multiplication. This is initially done where there is no regrouping. 321 x 2 = 642  It is important at this stage that the ones are always multiplied first. The corresponding long multiplication is modelled alongside	 Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods.	The children recap the compact method with answers within the method that do carry over the 10 (i.e. in the example below 4x7=28 the 2 moves or is carried into the tens column). 

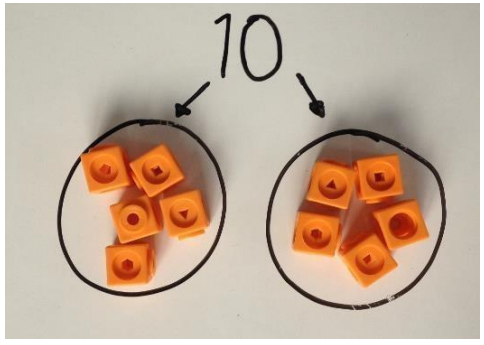
Y5 Multiplication

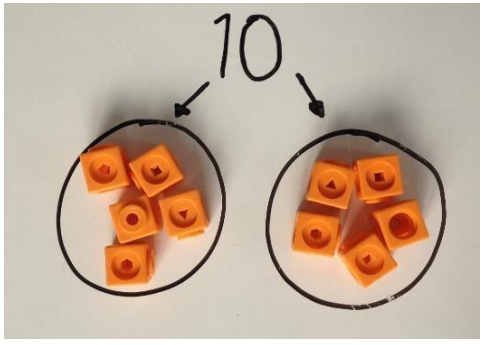
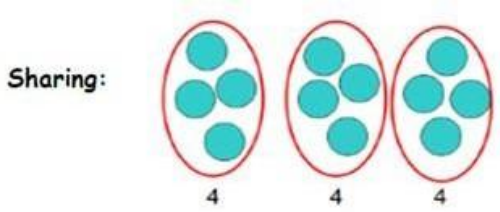
Objective & Strategy	Concrete	Pictorial	Abstract
Column multiplication Multiplying 2, 3 and 4 digit numbers by a one and a two digit number, including an introduction into long multiplication	Manipulatives may still be used with the corresponding long multiplication modelled alongside to support students. 	Continue to use bar modelling to support problem-solving. 	 18 x 3 on the first row (8 x 3 =24, carrying the 2 for 20, then 1 x 3) 18 x 10 on the 2nd row. Show multiplying by 10 by putting zero in the ones column first. 

Y6 Multiplication

Objective & Strategy	Concrete	Pictorial	Abstract
Multiply decimals up to 2 decimal places by a single digit.			Remind children that the single digit belongs in the ones column. Line up the decimal points in the question and the answer. 
Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication			

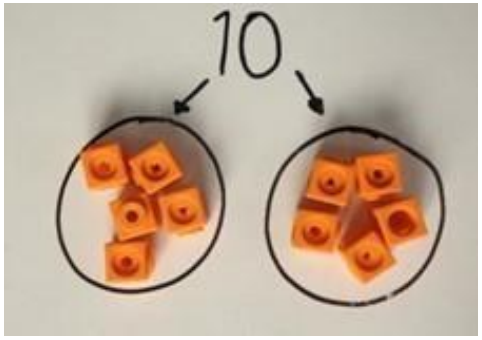
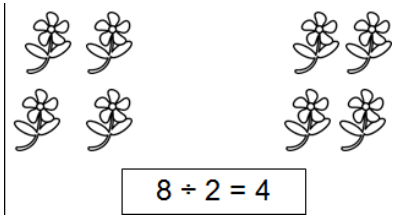
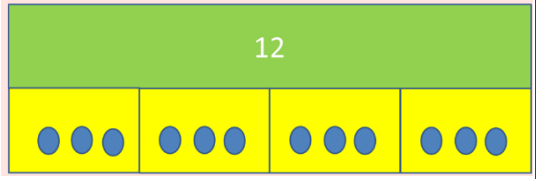
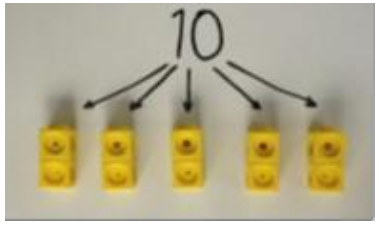
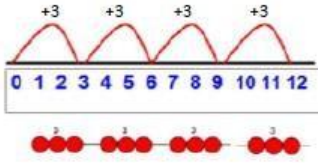
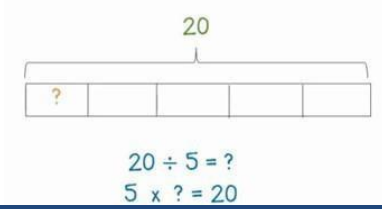
EYFS Division

Objective & Strategy	Concrete	Pictorial	Abstract
Division as sharing and grouping	   I have 10 cubes, can you share them equally in 2 groups?		

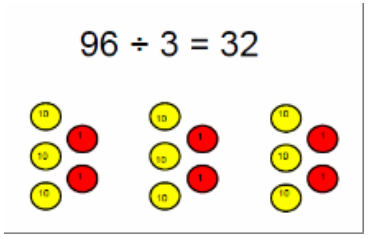
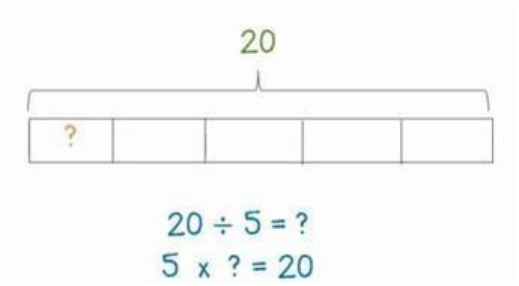
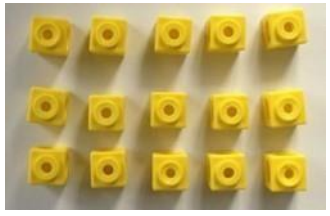
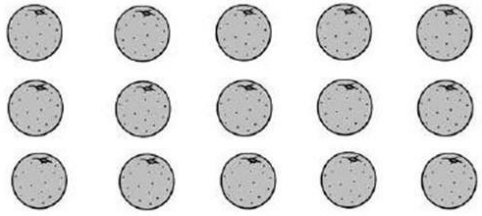
Objective & Strategy	Concrete	Pictorial	Abstract
Division as sharing	   I have 10 cubes, can you share them equally in 2 groups?	Children use pictures or shapes to share quantities. .  8 shared between 2 is 4 	Twelve shared between three is four. Progress to recording as a calculation: 12 ÷ 3 = 4

Y1 Division

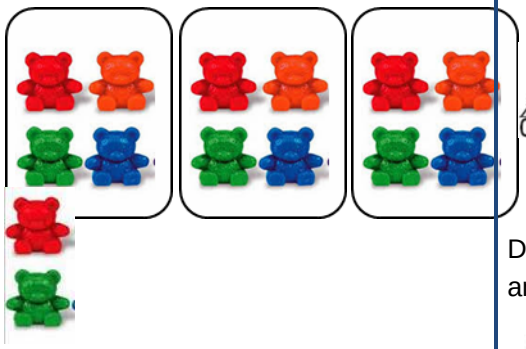
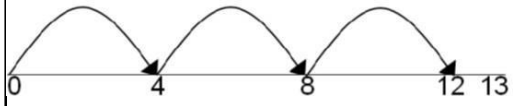
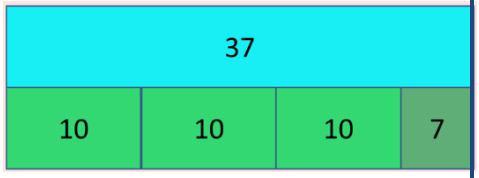
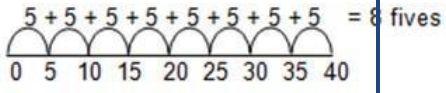
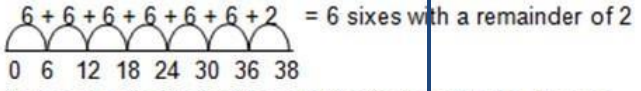
Y2 Division

Objective & Strategy	Concrete	Pictorial	Abstract
Division as sharing	 I have 10 cubes; can you share them equally in 2 groups?	Children use pictures or shapes to share quantities.  8 ÷ 2 = 4 Children use bar modelling to show and support understanding.  12 ÷ 4 = 3	12 ÷ 3 = 4
Division as grouping	Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding.  	Use number lines for grouping:  12 ÷ 3 = 4 Think of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group. 	28 ÷ 7 = 4 Divide 28 into 7 groups. How many are in each group?

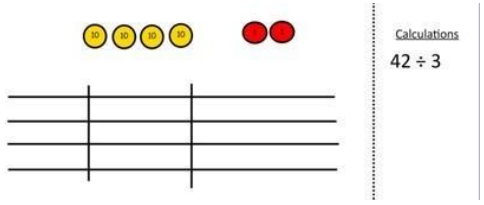
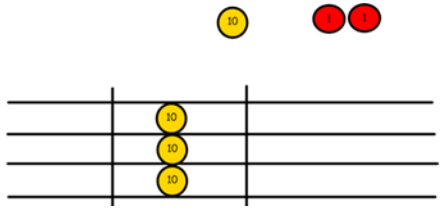
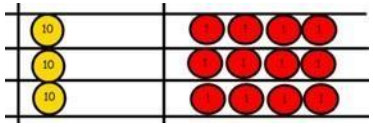
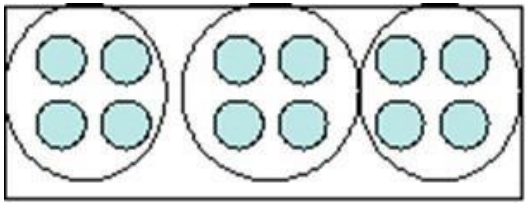
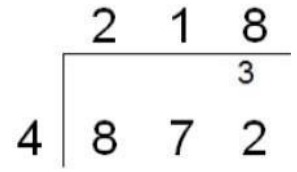
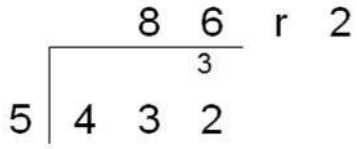
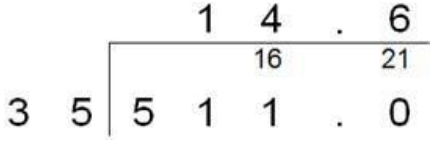
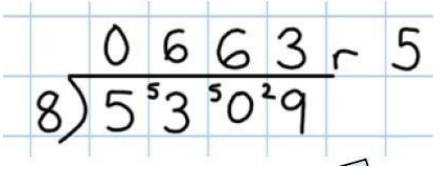
Y3 Division

Objective & Strategy	Concrete	Pictorial	Abstract
Division as grouping	Use cubes, counters, objects or place value counters to aid understanding.  24 divided into groups of 6 = 4 	Continue to use bar modelling to aid solving division problems. 	How many groups of 6 in 24? 24 ÷ 6 = 4
Division with arrays	 Link division to multiplication by creating an array and thinking about the number sentences that can be created. E.g. 15 ÷ 3 = 5 5 x 3 = 15 15 ÷ 5 = 3 3 x 5 = 15	Draw an array and use lines to split the array into groups to make multiplication and division sentences 	Find the inverse of multiplication and division sentences by creating eight linking number sentences. 7 x 4 = 28 4 x 7 = 28 28 ÷ 7 = 4 28 ÷ 4 = 7 28 = 7 x 4 28 = 4 x 7 4 = 28 ÷ 7 7 = 28 ÷ 4

Y3 Division

Objective & Strategy	Concrete	Pictorial	Abstract
Division with remainders.	14 ÷ 3 = Divide objects between groups and see how much is left over 	Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.  Draw dots and group them to divide an amount and clearly show a remainder.  Use bar models to show division with remainders.  Example without remainder: 40 ÷ 5 Ask "How many 5s in 40?"  Example with remainder: 38 ÷ 6  For larger numbers, when it becomes inefficient to count in single multiples, bigger jumps can be recorded using known facts.	Complete written divisions and show the remainder using "r".  Introduction to short multiplication with no remainders (See Y4/5)

Y4-6 Division

Objective & Strategy	Concrete	Pictorial	Abstract
Divide at least 3-digit numbers by 1 digit. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Y6: Extend to division by two digits	Year 4: 96 ÷ 3  Use place value counters to divide using the bus stop method alongside  42 ÷ 3= Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.  We exchange this ten for ten ones and then share the ones equally among the groups.  We look how much in 1 group so the answer is 14.	Year 4: Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.  Encourage them to move towards counting in multiples to divide more efficiently.	Year 4/5: Begin with divisions that divide equally with no remainder.  Move onto divisions with a remainder.  Year 6: Finally move into decimal places to divide the total accurately.  

Y6 Division

Objective & Strategy	Concrete	Pictorial	Abstract
Divide numbers up to 4 digits by two-digits using long division; interpret remainders as whole number remainders, fractions, or by rounding for the context.			496 ÷ 11 becomes 4 5 r 1 11) 4 9 6 5 Answer: $45\frac{1}{11}$ 432 ÷ 15 becomes 2 8 · 8 15) 4 3 2 · 0 3 0 ↓ 1 3 2 1 2 0 ↓ 1 2 0 1 2 0 0 Answer: 28·8 **Long division** 432 ÷ 15 becomes 2 8 r 12 15) 4 3 2 3 0 0 1 3 2 1 2 0 1 2 Answer: 28 remainder 12