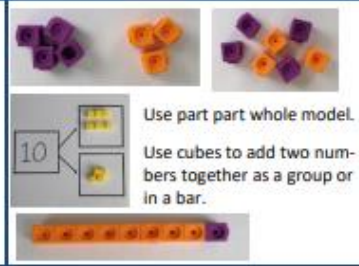
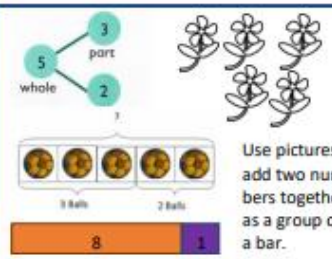
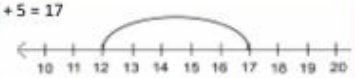
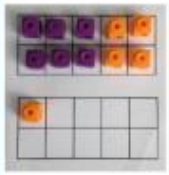
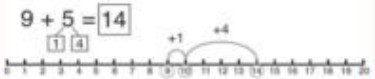
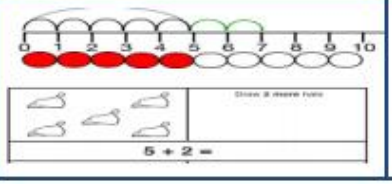
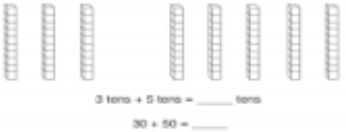
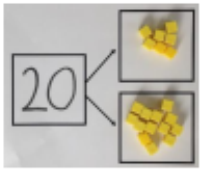
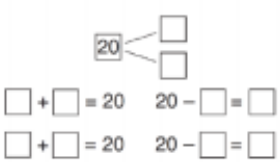
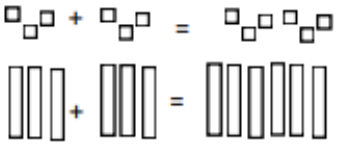
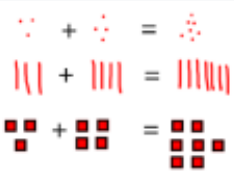
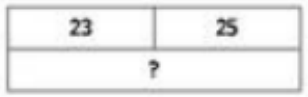
Key Vocabulary: add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line , equal to, how many more, most, least, count back

Y1 ADDITION +

Objective & Strategy	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part- whole model	 Use part part whole model. Use cubes to add two numbers together as a group or in a bar.	 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 diagram 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 to the smaller number 1 by 1 to find the answer.	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.*	 6 + 5 = 11  Start with the bigger number and use the smaller number to make 10. Use ten frames.	 3 + 9 = Use pictures or a number line. Regroup or partition the smaller number using the part part whole model to make 10. 9 + 5 = 14 	7 + 4= 11 If I am at seven, 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.	 5 + 2 =	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.'*

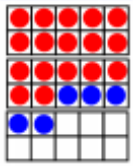
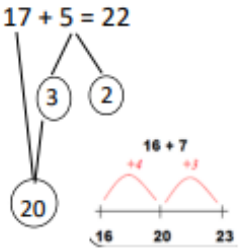
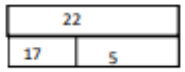
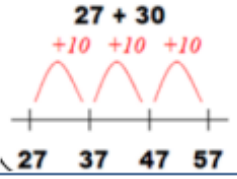
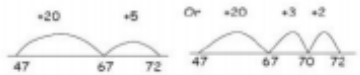
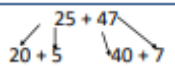
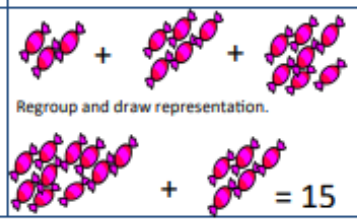
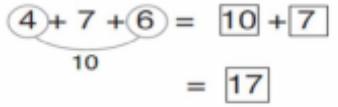
Key Vocabulary: add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line , equal to, how many more, most, least, count back, count on, strategy, sum, tens, units, ones, partition, addition, column, tens boundary

Y2 ADDITION +

Objective & Strategy	Concrete	Pictorial	Abstract
Adding multiples of ten	50= 30 = 20  Model using dienes and bead strings	 Use representations for base ten.	20 + 30 = 50 70 = 50 + 20 40 + □ = 60
Use known number facts Part part whole	 Children explore ways of making numbers within 20		□ + 1 = 16 1 + □ = 16 16 – 1 = □ 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

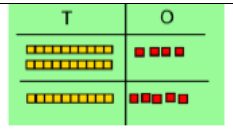
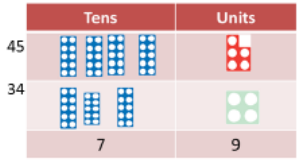
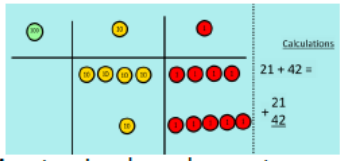
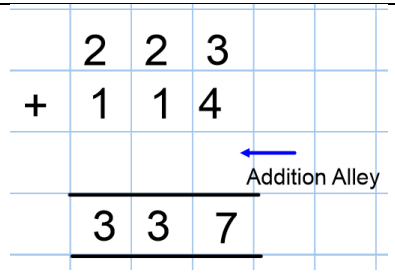
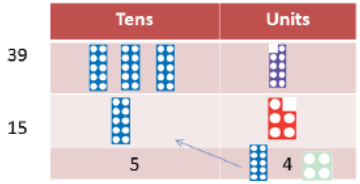
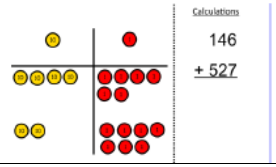
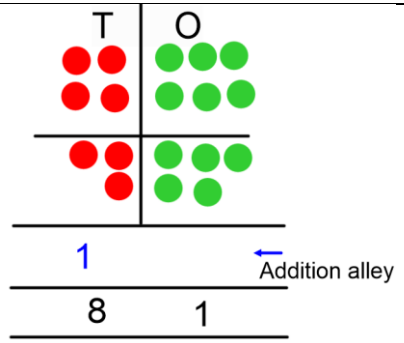
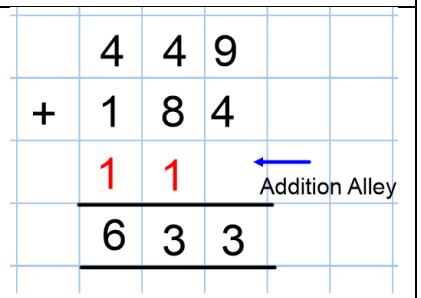
Key Vocabulary: add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line , equal to, how many more, most, least, count back, count on, strategy, sum, tens, units, ones, partition, addition, column, tens boundary

Y2 ADDITION +

Objective & Strategy	Concrete	Pictorial	Abstract
Add a two digit number and ones	 17 + 5 = 22 Use ten frame to make 'magic ten Children explore the pattern. 17 + 5 = 22 27 + 5 = 32	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	 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.	 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.

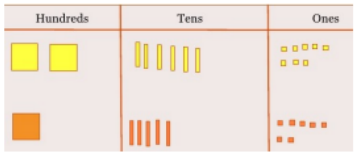
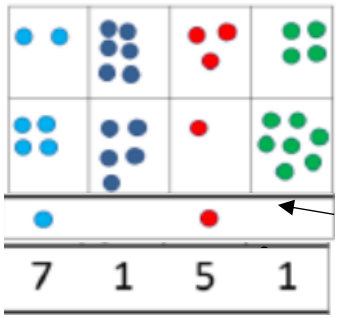
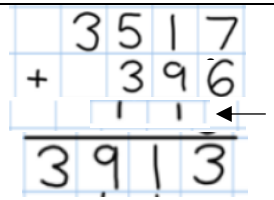
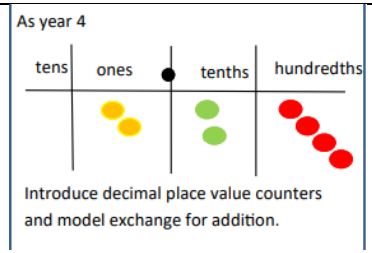
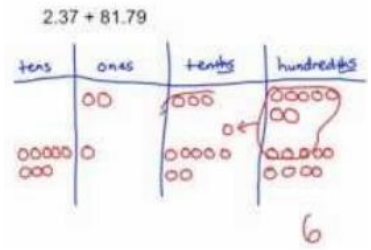
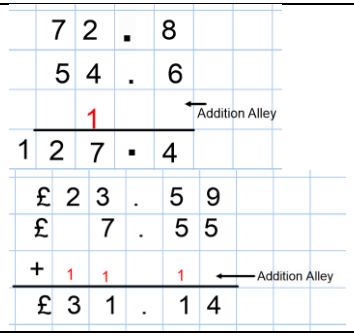
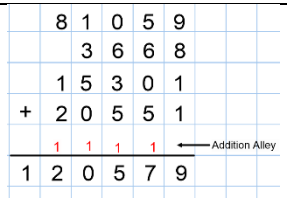
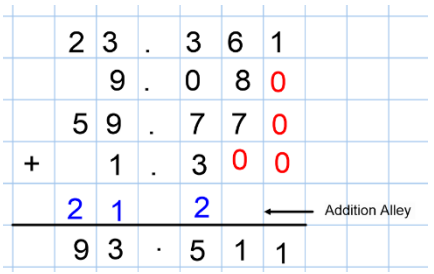
Key Vocabulary: add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line , equal to, how many more, most, least, count back, count on, strategy, sum, tens, units, ones, partition, addition, column, tens boundary exchange, hundreds, value, digit, hundreds boundary, increase, vertical, 'carry', expanded, compact

Y3 ADDITION +

Objective & Strategy	Concrete	Pictorial	Abstract
Children should be taught column addition with no carrying before moving to number crossing the boundary. 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.  Children draw Addition Alley even though it is not needed yet to understand what is to come.	 Add the ones first, then the tens, then the hundreds.
Column Addition with 'carrying' crossing the tens and hundreds barrier.	 Exchange ten ones for a ten. Model using numicon and pv counters. 		

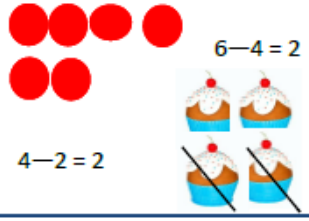
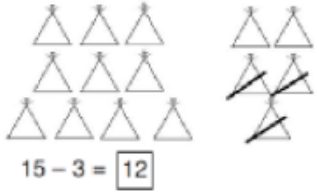
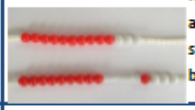
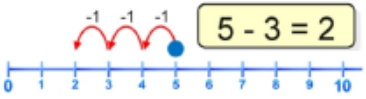
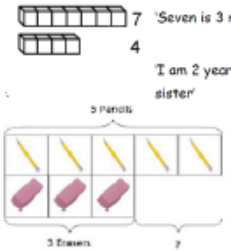
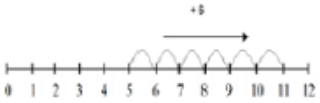
Key Vocabulary: See previous year groups vocabulary also. exchange, hundreds, value, digit, hundreds boundary, increase, vertical, 'carry', expanded, compact, inverse thousands, hundreds, digits, inverse Yr4 (tenths, hundredths, thousandths, decimal point, decimal, decimal places Yr5/6)

Y4-6 ADDITION +

Objective & Strategy	Concrete	Pictorial	Abstract
Y4—add numbers with up to 4 digits **When addition alley has been introduced, it will continue to be used when using formal written method.**	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.	 Addition alley Continue from previous work to carry hundreds as well as tens. Relate to money and measures.
Y5—add numbers with more than 4 digits. Add decimals with 2 decimal places, including money.			
Y6—add several numbers of increasing complexity Including adding money, measure and decimals with different numbers of decimal points.	As Y5		

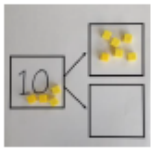
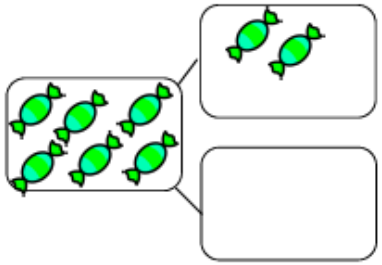
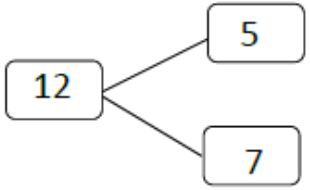
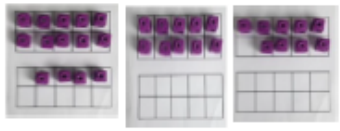
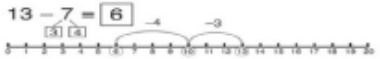
Key Vocabulary: total, equal to, equals, count on, number line , equal to, take, take away, less, minus, subtract, leaves, distance between, how many fewer / less than, most, least, count back , how many left, how much less is_?

Y1 SUBTRACTION

Objective & Strategy	Concrete	Pictorial	Abstract
Taking away ones.	Use physical objects, counters , cubes etc to show how objects can be taken away. 	 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.  Move the beads along the bead string as you count 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  Lay objects to represent bar model.	Count on using a number line to find the difference. 	Hannah has12 sweets and her sister has 5. How many more does Hannah have than her sister.?

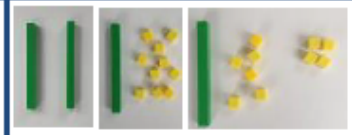
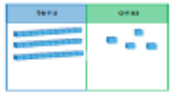
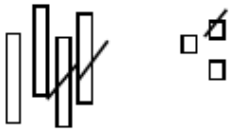
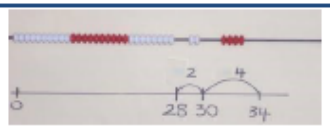
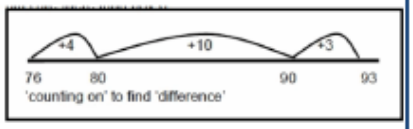
Key Vocabulary: total, equal to, equals, count on, number line , equal to, take, take away, less, minus, subtract, leaves, distance between, how many fewer / less than, most, least, count back , how many left, how much less is_?

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.	16—8 How many do we take off first to get to 10? How many left to take off?
Bar model	 5—2 = 3		8 | 2 10 = 8 + 2 10 = 2 + 8 10—2 = 8 10—8 = 2

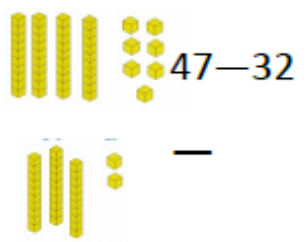
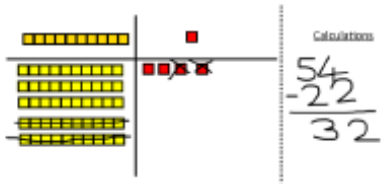
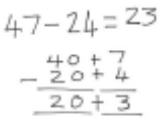
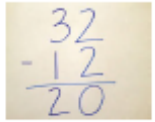
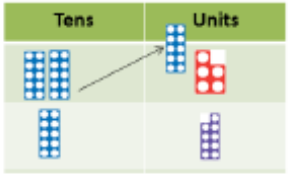
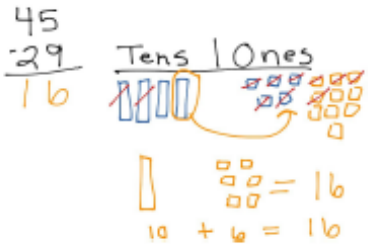
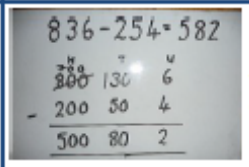
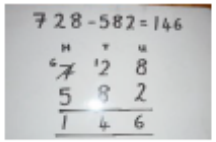
Key Vocabulary: total, equal to, equals, count on, number line , equal to, take, take away, less, minus, subtract, leaves, distance between, how many fewer / less than, most, least, count back , how many left, how much less is_?difference, count on, strategy, sum, tens, units, ones, partition, column, tens boundary

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 subtract without regrouping. *'Friendly numbers'*	34—13 = 21   Use Dienes to show how to partition the number when subtracting without regrouping. 	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 or bead strings 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

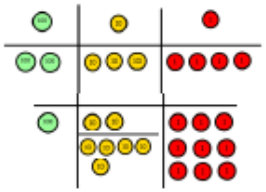
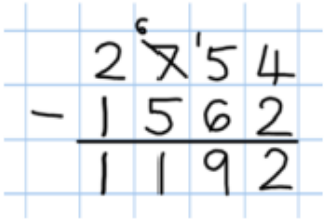
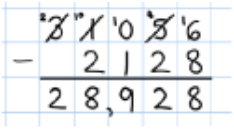
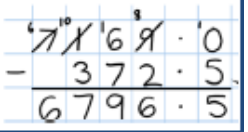
Key Vocabulary: total, equal to, equals, count on, number line , equal to, take, take away, less, minus, subtract, leaves, distance between, how many fewer / less than, most, least, count back , how many left, how much less is_?**difference, count on, strategy, sum, tens, units, ones, partition, column, tens boundary** exchange, decrease, hundreds, value, digit, hundreds boundary, increase, vertical, 'carry', expanded, compact

Y3 SUBTRACTION -

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

Key Vocabulary See previous year groups vocabulary also inverse thousands, hundreds, digits, inverse Yr4
tenths, hundredths, thousandths, decimal point, decimal, decimal places Yr5/6

Y4-6 SUBTRACTION -

Objective & Strategy	Concrete	Pictorial	Abstract
Subtracting tens and ones Year 4 subtract with up to 4 digits. *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 pv 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*	As Year 4	Children to draw pv counters and show their exchange—see Y3	 Use zeros for place-holders. 
Year 6—Subtract with increasingly large and more complex numbers and decimal values.