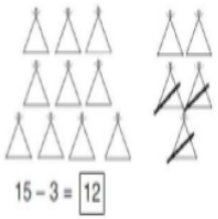
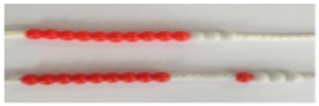
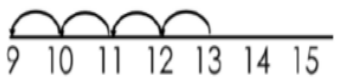
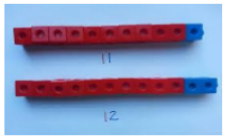
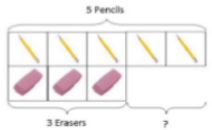
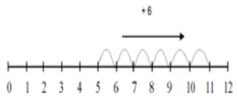
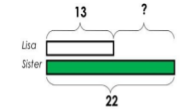
Progression in Subtraction leading to a written form

Objective and 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. 	18-3=15 8-6=2
Counting back	Make the larger number in your subtraction. Move the beads along your bead string as you count backwards in ones. 13 – 4  Use counters and move them away from the group as you take them away counting backwards as you go. 	Count back on a number line or number track  Jumping under the line	13-4= 9 Start at larger number and jump back 4 ones.
Finding difference	Compare amounts and objects to find the difference.  Use cubes to build towers or make bars to find the difference  Use basic bar models with items to find the difference	 Count on to find the difference. Comparison Bar Models Draw bars to find the difference between 2 numbers. Lisa is 13 years old. Her sister is 22 years old. Find the difference in age between them. 	5 + ☐ = 11

Year Group Expectations

[Mental strategies additional to Progression.]

Year 1

Fluency– to know addition number facts for all numbers up to 20 and related subtraction facts.

Place value– Begin to represent 2 digit numbers in tens and units [teens]

Mental calculations– 1 less

Children need to understand the equality sign so that the sign is not just interpreted as 'the answer'

Promote 6,7,8,and 9 as 5 + something through money, hands. and numicon.

Year 2

Fluency –to use known addition and related subtraction facts up to 20 to solve problems and relate to facts to 100.

Place value– represent each 2 digit number in 10s and units. To know 0 as a place holder.

Mental calculations– subtract any 1 digit from a 2 digit number

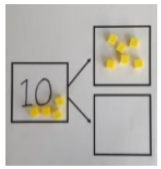
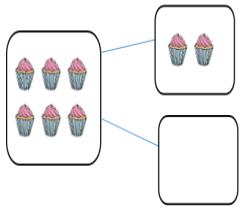
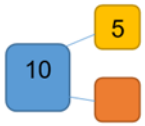
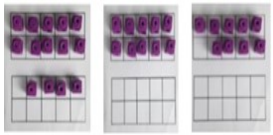
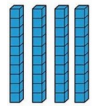
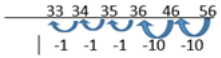
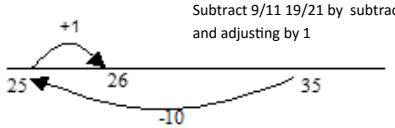
Any multiple of 10 from a 2 digit number

Some 2 digit from 2 digit numbers.

Mental strategies -to continue to promote even when moving to column expanded method.

Subtracting 9,11,19 and 21 by subtracting multiples of 10 and adjusting .

Bridging through 10 /multiples of 10

Objective and strategy	Concrete	Pictorial	Abstract
Part,part whole model	 Link to addition- use the part whole model to help explain the inverse between addition and subtraction. If 10 is the whole and 6 is one of the parts. What is the other part? 10 - 6 =	Use a pictorial representation of objects to show the part part whole model. 	 Move to using numbers within the part whole model.
Make 10 Bridging through ten	14 – 9 =  Make 14 on the ten frame. Take away the four first to make 10 and then takeaway one more so you have taken away 5. You are left with the answer of 9.	 Start at 13. Take away 3 to reach 10. Then take away the remaining 4 so you have taken away 7 altogether. You have reached your answer.	16 – 8= How many do we take off to reach the next 10? How many do we have left to take off?
Subtracting multiples of 10 and units	  48-29 48– 30 +1	 56-23 Subtract 9/11 19/21 by subtracting multiples of 10 and adjusting by 1 	56-23 56-10-10-1-1-1= 56-20= 36 36-3 =33 56-39 56-40=16 16+1=17

Year 3

Written expectations– 2 3 digit numbers using formal written.

Facts – to use known number facts to 20 ,100 and doubles.

Place Value– Represent 3 digit numbers in 100s,10s,and units and know 0 as a place holder.

Introduce tenths in the context of money with

decimal point. Awareness of negative numbers.

Mental calculations– additional to Y2 -subtract any 1 digit number from a 3 digit, subtract any multiple of 10 from 3 digits, subtract multiples of 100 from 3 digit number.

Continue to promote for mental calculation subtracting a near multiple of 10 ,100 from a 2 or 3 digit number and adjusting, bridging through a multiple of ten or 100 and using number facts and adjusting. Finding a difference.

Year 4

Written expectations-2 4-digit numbers.

Facts– to use known number facts to 20,100,1000 and

doubles.

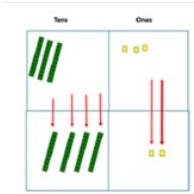
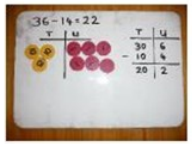
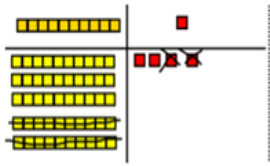
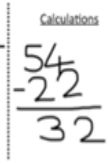
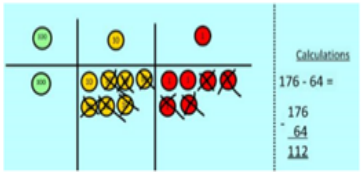
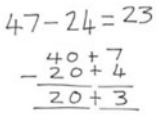
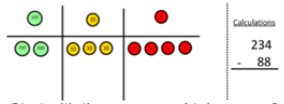
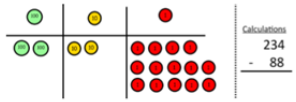
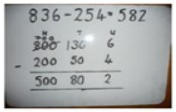
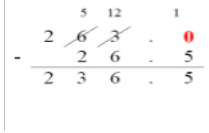
Place Value– Represent 4 digit numbers in 1000s, 100s,10s,and units and know 0 as a place holder.

Introduce tenths/hundredths with decimal point.

Mental calculations– additional to those from previous years 4 digit -1 digit, 4 digit -multiple of 10, 4 digit-multiple of 1000 .

Promote the use of number line to aid mental calculation by subtracting back near multiples of 10,100,1000 and adjusting,

Bridging through multiples of 10,finding difference.

Objective and strategy	Concrete	Pictorial	Abstract
Column method- without regrouping	 Use Base 10 to make the bigger number then take the smaller number away. Show how you partition numbers to subtract. Again make the larger number first. 	  Draw the Base 10 or place value counters alongside the written calculation to help to show working. 	 This will lead to a clear written column subtraction.
Column method Regrouping	Use Base 10 to start with before moving on to place value counters. Start with one exchange before moving onto subtractions with 2 exchanges. Make the larger number with the place value counters  Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.  Continue by exchanging one hundred for tens and how you can now take 8 tens away. Show children how to concrete method lines to the written method alongside your workings, cross out the numbers when exchange and show where we write the new amount	Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make. When confident, children can find their own way to record the exchange/regrouping. Just writing the numbers as shown here shows that the child understands the method and knows when to exchange/regroup.	 Children can start their formal written method by partitioning the number into clear place value columns. Moving forward the children use a more compact method. This will lead to an understanding of subtracting any number including decimals. 

Year 5

Written expectations –subtract whole numbers with more than 4 digits using a formal written method.

Subtract decimals with up to 2 decimal places.

Place value– using 7 digit numbers and knowing what each digit represents .

Working with tenths, hundredths thousands with decimal point.

Mental calculations -

Subtracting increasingly larger numbers using :

Partitioning in different ways, finding the difference , number-facts, subtracting near multiples of 10,100,1000 then adjusting, bridging through 10,100,1000 or to an hour in the context of time.

Year 6

Written expectations –Subtract whole numbers with more than 4 digits using a formal written method.

Subtract decimals with up to 3 decimal places.

Place value– using 8 digit numbers and knowing what each digit represents .

Working with tenths, hundredths thousands with decimal point.

Mental calculations-

Subtracting increasingly larger numbers and operations than involve mixed operations and brackets.

Subtracting increasingly larger numbers using :

Partitioning in different ways, finding the difference, number facts, subtracting near multiples of 10,100,1000 then adjusting, bridging through 10,100,1000 or to an hour in the context of time.