

Concrete - students should have the opportunity to use objects and manipulatives to help them understand what they are doing.

Pictorial - students should then build on this concrete approach by using pictures.

This can then be used to reason and solve problems.

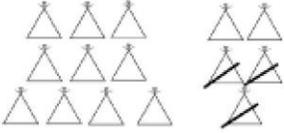
Abstract - secure students should be able to use numbers and key concepts with confidence.



Progression in Calculation - Subtraction

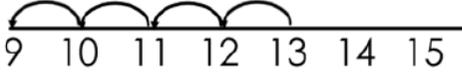
- EYFS/Year 1 - Objective and Strategies Taking away ones

Fluency - Learning in stages

Concrete	Pictorial	Abstract
<p>Use physical objects, counters, cubes etc to show how objects can be taken away.</p>  $6 - 2 = 4$ 	 $15 - 3 = \boxed{12}$ <p>Cross out drawn objects to show what has been taken away.</p>	$8 - 2 = 6$ $18 - 3 = 15$

- Year 1 - Objective and Strategies Counting back

Fluency - Learning in stages

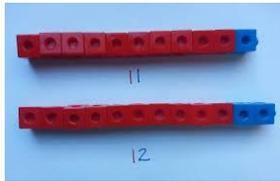
Concrete	Pictorial	Abstract
 <p>Make the larger number in your subtraction. Move the beads along your bead string as you count backwards in ones.</p> $13 - 4 =$ <p>Use counters and move them away from the group as you take them away counting backwards as you go.</p> 	<p>Count back on a numberline or number track</p>  <p>Start at the bigger number and count back the smaller number showing the jumps on the number line. Subtracting one-digit and two digit numbers to 20.</p> $19 - 7 =$ <p>This can progress all the way to counting back using two 2 digit numbers. 21-13</p>	<p>Put 13 in your head, count back 4. What number do you get to?</p>

Year 1 - Objective and Strategies Find the difference

Fluency - Learning in stages

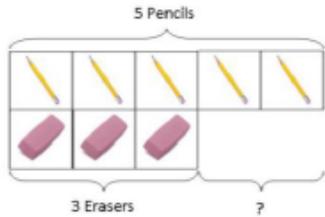
Concrete

Compare amounts and objects to find the difference.

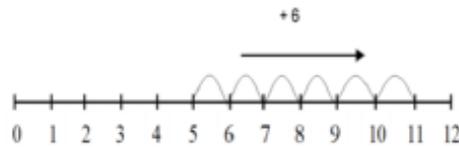


Use cubes to build towers or make bars to find the difference

Use basic bar models with items to find the difference



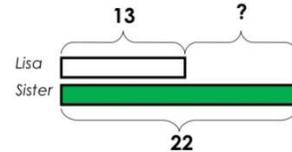
Pictorial



Count on to find the difference.

Comparison Bar Models

Lisa is 13 years old. Her sister is 22 years old. Find the difference in age between them.



Draw bars to find the difference between 2 numbers.

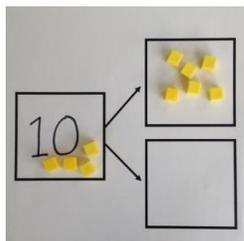
Abstract

Hannah has 23 sandwiches,
Helen has 15 sandwiches.
Find the difference between the number of sandwiches.

Year 1 - Objective and Strategies Part Part Whole Model

Fluency - Learning in stages

Concrete

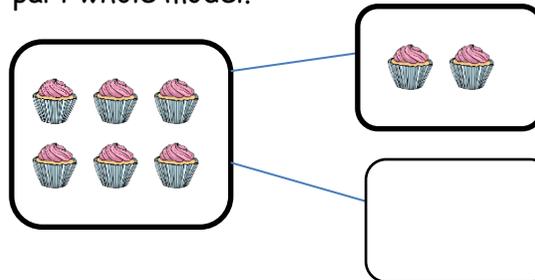


Link to addition- use the part whole model to help explain the inverse between addition and subtraction.

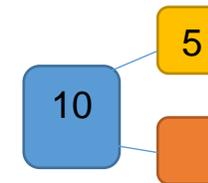
If 10 is the whole and 6 is one of the parts. What is the other part? $10 - 6 =$

Pictorial

Use a pictorial representation of objects to show the part part whole model.



Abstract

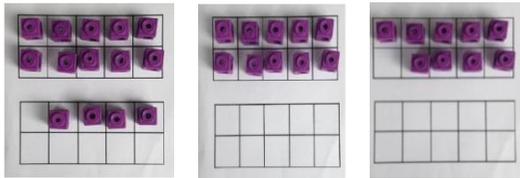


Move to using numbers within the part whole model.

Year 1/Year 2 - Objective and Strategies *Make 10*

Fluency - Learning in stages

Concrete

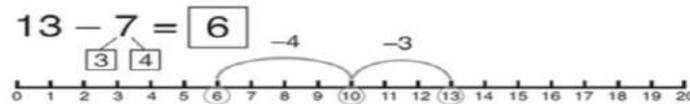


$$14 - 9 =$$

Make 14 on the ten frame.

Take away the four first to make 10 and then take away one more so you have taken away 5. You are left with the answer of 9.

Pictorial



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.

Abstract

$$16 - 8 =$$

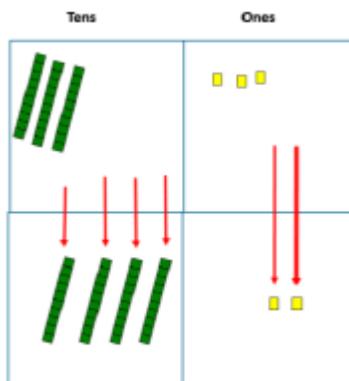
How many do we take off to reach the next 10?

How many do we have left to take off?

Year 2 - Objective and Strategies *Column method without regrouping*

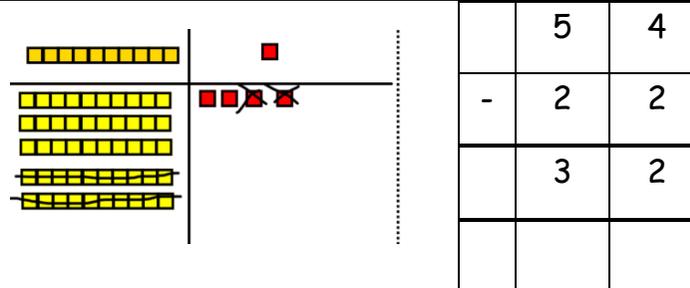
Fluency - Learning in stages

Concrete



Use Base 10 to make the bigger number then take the smaller number away.

Pictorial



Draw the Base 10 or place value counters alongside the written calculation to help to show working.

Abstract

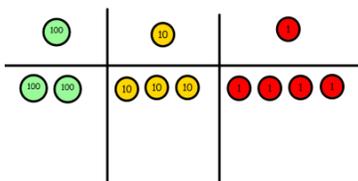
This will lead to a clear written column subtraction.

	6	5
-	4	1
	2	4

Fluency - Learning in stages

Concrete

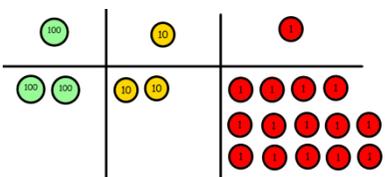
Use Base 10 to start with before moving on to place value counters.



Calculations

$$\begin{array}{r} 234 \\ - 88 \\ \hline \end{array}$$

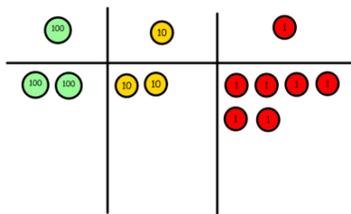
Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.



Calculations

$$\begin{array}{r} 234 \\ - 88 \\ \hline \end{array}$$

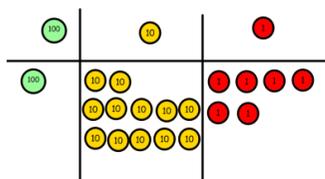
Now I can subtract my ones.



Calculations

$$\begin{array}{r} 234 \\ - 88 \\ \hline \end{array}$$

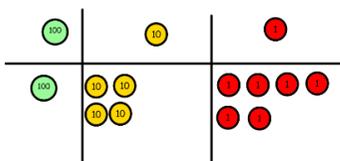
Now look at the tens, can I take away 8 tens easily? I need to exchange one hundred for ten tens.



Calculations

$$\begin{array}{r} 234 \\ - 88 \\ \hline \end{array}$$

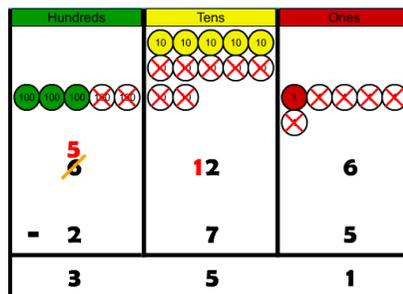
Now I can take away eight tens and complete my subtraction



Calculations

$$\begin{array}{r} 234 \\ - 88 \\ \hline 146 \end{array}$$

Pictorial

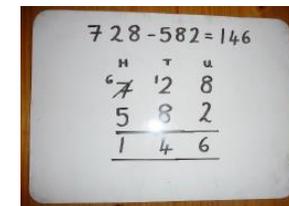


Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make.

Show children how the concrete method links to the written method alongside your working. Cross out the numbers when exchanging and show where we write our new amount.

Abstract

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.

$$\begin{array}{r} 728 \\ - 582 \\ \hline 146 \end{array}$$