

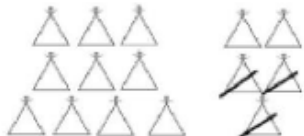


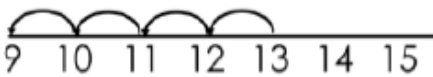
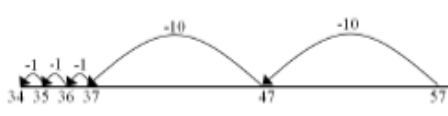



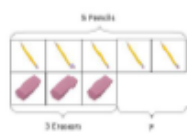
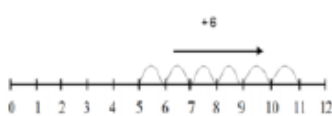
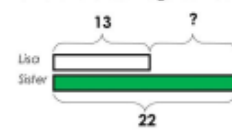
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition	<p>Combining two parts to make a whole: part whole model.</p> <p>Starting at the bigger number and counting on.</p> <p>Regrouping to make 10.</p>	<p>Adding three single digits.</p> <p>Column method – no regrouping.</p>	<p>Column method- regrouping. (up to 3 digits)</p>	<p>Column method- regrouping. (up to 4 digits)</p>	<p>Column method- regrouping. (with more than 4 digits) (Decimals- with the same amount of decimal places)</p>	<p>Column method- regrouping. (Decimals- with different amounts of decimal places)</p>

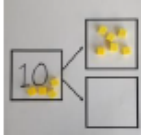



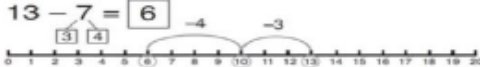
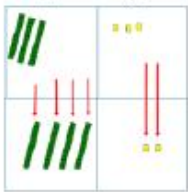

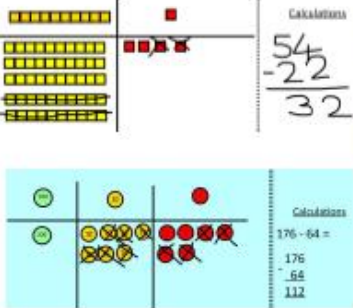
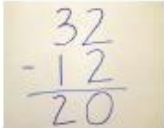
Objective and Strategies	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part-whole model	<p>Use cubes to add two numbers together as a group or in a bar.</p>	<p>Use pictures to add two numbers together as a group or in a bar.</p>	<p>$4 + 3 = 7$</p> <p>$10 = 6 + 4$</p> <p>Use the part-part whole diagram as shown above to move into the abstract.</p>
Starting at the bigger number and counting on	<p>Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer.</p>	<p>$12 + 5 = 17$</p> <p>Start at the larger number on the number line and count on in ones or in one jump to find the answer.</p>	<p>$5 + 12 = 17$</p> <p>Place the larger number in your head and count on the smaller number to find your answer.</p>

<p>Regrouping to make 10.</p> <p>$6 + 5 = 11$</p> <p>Start with the bigger number and use the smaller number to make 10.</p>	<p>$3 + 9 =$</p> <p>Use pictures or a number line. Regroup or partition the smaller number to make 10.</p> <p>$9 + 5 = 14$</p>	<p>$7 + 4 = 11$</p> <p>If I am at seven, how many more do I need to make 10. How many more do I add on now?</p>
---	--	--

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Subtraction	Taking away ones Counting back Find the difference Part whole model Make 10	Counting back Find the difference Part whole model Make 10 Column method- no regrouping	Column method with regrouping. (up to 3 digits)	Column method with regrouping. (up to 4 digits)	Column method with regrouping. (with more than 4 digits) (Decimals- with the same amount of decimal places)	Column method with regrouping. (Decimals- with different amounts of decimal places)

Objective and Strategies	Concrete	Pictorial	Abstract
Taking away ones	Use physical objects, counters, cubes etc to show how objects can be taken away.  $6 - 2 = 4$ 	Cross out drawn objects to show what has been taken away.  $15 - 3 = 12$	$18 - 3 = 15$ $8 - 2 = 6$
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  Start at the bigger number and count back the smaller number showing the jumps on the number line.  This can progress all the way to counting back using two 2 digit numbers.	Put 13 in your head, count back 4. What number are you at? Use your fingers to help.

Find the 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 Lisa is 13 years old. Her sister is 22 years old. Find the difference in age between them. 	Hannah has 23 sandwiches, Helen has 15 sandwiches. Find the difference between the number of sandwiches.
----------------------------	--	---	--

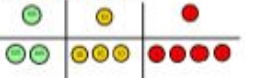
Objective and Strategies	Concrete	Pictorial	Abstract
Part Part Whole Model	 <p>Link to addition- use the part whole model to help explain the inverse between addition and subtraction.</p> <p>If 10 is the whole and 6 is one of the parts. What is the other part?</p> <p style="text-align: center;">$10 - 6 =$</p>	<p>Use a pictorial representation of objects to show the part part whole model.</p> 	 <p>Move to using numbers within the part whole model.</p>
Make 10	<p>$14 - 5 =$</p>  <p>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.</p>	<p>$13 - 7 = 6$</p>  <p>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.</p>	<p>$16 - 8 =$</p> <p>How many do we take off to reach the next 10?</p> <p>How many do we have left to take off?</p>
Column method without regrouping	<p>Use Base 10 to make the bigger number then take the smaller number away.</p>  <p>Show how you partition numbers to subtract. Again make the larger number first.</p> 	 <p>Draw the Base 10 or place value counters alongside the written calculation to help to show working.</p>	<p>$47 - 24 = 23$</p> $\begin{array}{r} 40 + 7 \\ - 20 + 4 \\ \hline 20 + 3 \end{array}$ <p>This will lead to a clear written column subtraction.</p> 

Objective and Strategies	Concrete	Pictorial	Abstract
--------------------------	----------	-----------	----------

Column method with 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.

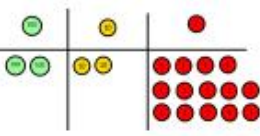
Make the larger number with the place value counters



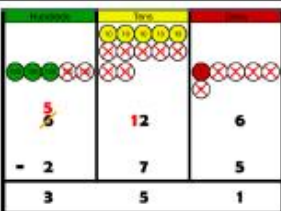
Calculations

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


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



Calculations


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


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.



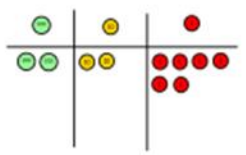
Children can start their formal written method by partitioning the number into clear place value columns.



Moving forward the children use a more compact method.

Column method with regrouping

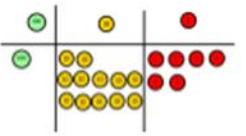
Now I can subtract my ones.



Calculations

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

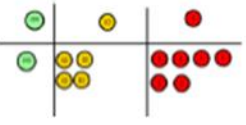
Now look at the tens, can I take away 8 tens easily? I need to exchange one hundred for ten tens.



Calculations

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

Now I can take away eight tens and complete my subtraction



Calculations

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

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.

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.

This will lead to an understanding of subtracting any number including decimals.

