Calculation guidance to develop Subtraction

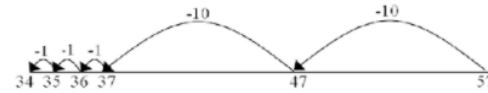| Progression in the Teaching of Calculations			
SUBTRACT IT!			
Objective/ strategy	**Concrete - build it/ use it!**	**Pictorial - draw it!**	**Abstract - solve it!**
Taking away ones	Use real life physical objects and take away an amount from a given group. How many are left? $6 - 2 = 4$	Cross out drawn objects to show what has been taken away. $5 - 2 = 3$	$4 = 6 - 2$ $18 - 3 = 15$ $8 - 2 = 6$
Counting backwards	Use counters and move away counters while counting backwards. Use cubes while counting backwards	Count back on a number track. 9 10 11 12 13 14 15 Count backwards on a number track starting from the greatest value, showing the jumps of partitioned tens and ones.	13 - 4 = 9 Put 13 in your head and count back 4. Use your fingers and number bonds to help when you cross the tens.

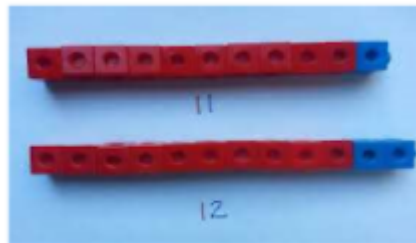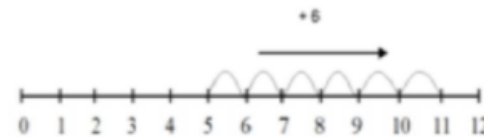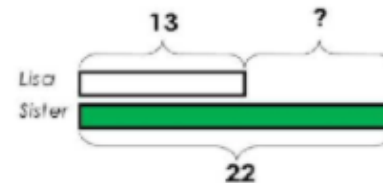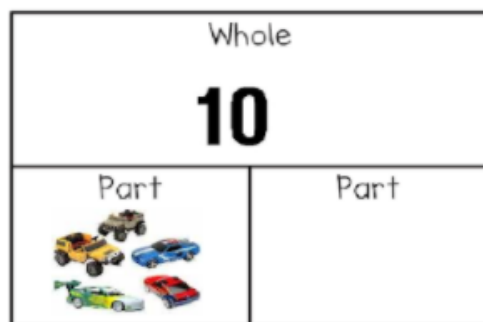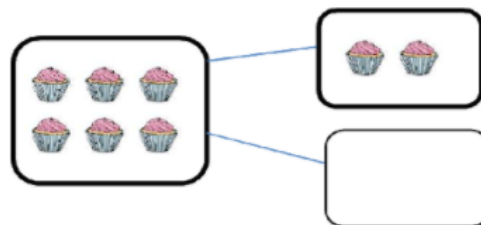|			
	to take away an amount. Find the greatest number in the calculation and start with it. Then, count backwards with the subtrahend from the minuend. $13 - 4$		
Find the difference	Compare amounts and objects to find the difference. Use cubes to make bars or towers to see the difference between numbers. Use simple comparative bar models and physical objects to spot the difference.	Count on to find the difference. 11 - 6 = 5. Use comparison bar models to show the difference between values. *Lisa is 13 years old. Her sister is 22 years old. Find the difference in age between them.* Draw bars to show the difference.	Hannah has 23 pencils and Helen has 15 pencils. What is the difference between the number of pencils that the girls have?
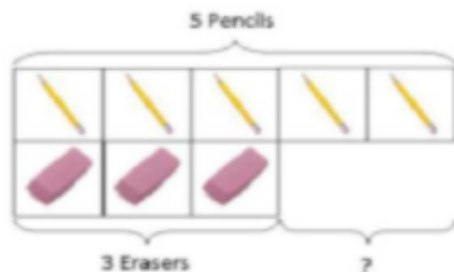
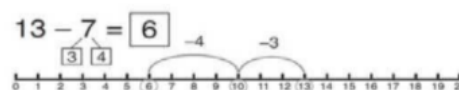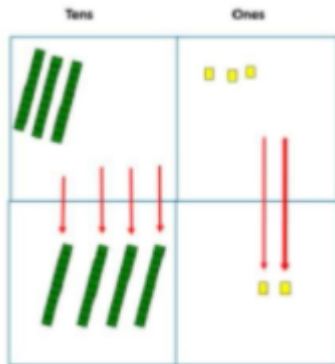|			
	5 Pencils 3 Erasers　?		
Part-whole model for subtraction	Link to addition and use the part whole model to show the inverse. Whole **10** Part　Part If 10 is the whole and 5 is the part, what is the other part? 10 - 5 = ? or 10 - ? = 5	Use pictorial representations to show the part-whole model with objects and drawings. 6 - 2 = ?	Write the equations to match the part whole models. 5 10 10 - 5 = 5 5 = 10 - 5
Make 10	Make 14 on the tens frame then take away the four fist so you have 10. Then takeaway one more so you have taken away 5 altogether. You are left with 9.	$13 - 7 = \boxed{6}$ -4 -3 [3] [4] 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Start at 13. Take away 3 to reach 10. Then take away the remaining 4 so you have taken away 7 altogether.	16 - 8 = ? How much do we need to take away until we reach 10? Then, take away the rest.

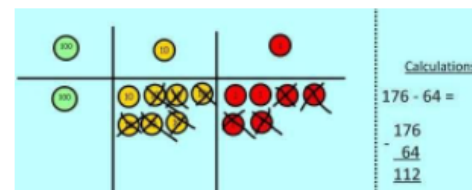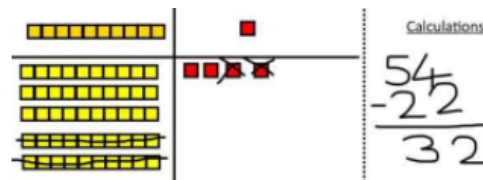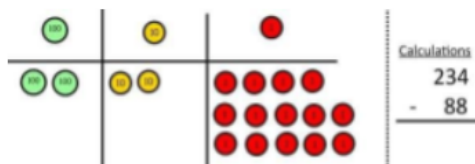|			
	14 - 5 = 14 - 4 = 10 10 - 1 = 9	Draw the number line and count the jumps back. Create one jump to get to 10. Then take away the rest.	
Column method without regrouping - expanded into compact method	75- 42 = Use Dienes to make the greatest number then take the smaller number away. Show how your partition numbers to subtract in their place value columns.	Draw the Dienes or place value counters alongside the written calculation to help to show working. 	Layout the column method as shown below. Align the digits in the correct place value columns.
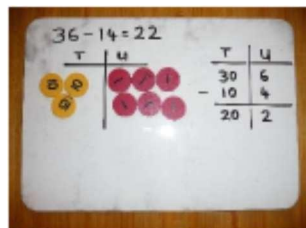
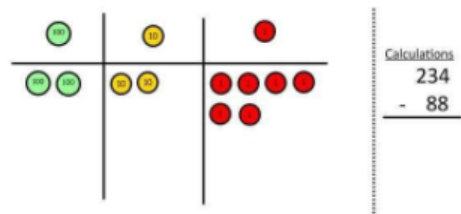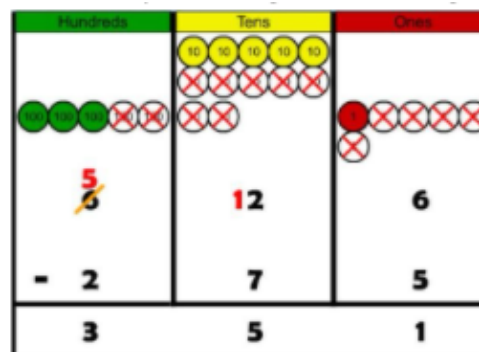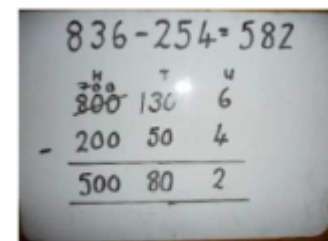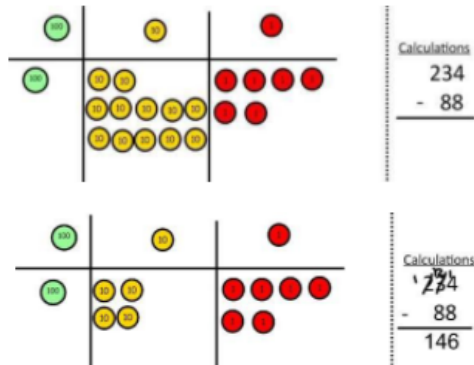|			
	36 − 14 = 22 		
Column method with regrouping - expanded into compact method	Make the greatest number with the Dienes or place value counters. Start with the ones, can I take 8 ones away from 4 ones in this method? I need to exchange one of my tens for ten ones and regroup it in the ones column. Calculations 234 − 88 Use a ten and regroup it for ten ones. Then take 8 ones away from 14 ones. Calculations 234 − 88 Now you have 2 tens left. We need to regroup 1 hundred for 10 tens so that we can take 8 tens away from 12	 Draw the counters onto a place value grid and show what has been taken away by crossing the counters out as well as clearly showing the regrouping made.	Start by using the expanded column method where the parts of the number are shown fully (and not just as digits). 836 − 254 = 582 Then, align the digits and take away in the compact column method. 728 − 582 = 146 Then, take away decimal numbers with the same amount of decimal
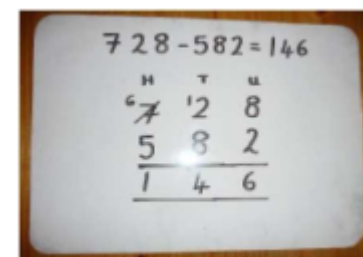
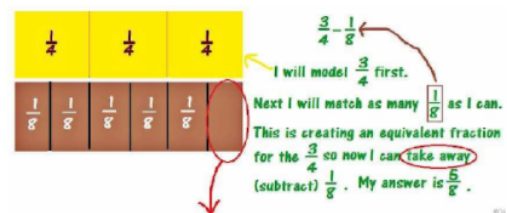|			
	tens. Then, we can complete the calculation. 234 - 88 Calculations ²2³³4 - 88 146		places. Finally, move on to subtracting decimals with different decimal places. 5 12 1 2 6 3 . 0 - 2 6 . 5 2 3 6 . 5
Subtracting fractions	Use real life objects to show fractions, such as 5/5 of the cake = 1 whole of the cake. If I have 5/5 and I take away 2/5 , how many fifths do I have left?	Draw bar models to represent an amount. 5/5 - ⅕ = ⅘ Cross out the fraction that you need to take away when subtracting fractions with the same denominator. Then, find equivalent fractions by drawing bars and finding the equal parts below it.	Encourage children to spot the relationships between equivalent fractions in order to find a common denominator.

		$\frac{3}{4} - \frac{1}{8}$ I will model $\frac{3}{4}$ first. Next I will match as many $\frac{1}{8}$ as I can. This is creating an equivalent fraction for the $\frac{3}{4}$ so now I can take away (subtract) $\frac{1}{8}$. My answer is $\frac{5}{8}$.	$\dfrac{3}{4} - \dfrac{1}{8} =$ $\dfrac{3\times2}{4\times2} - \dfrac{1}{8}$ $\dfrac{6}{8} - \dfrac{1}{8} = \dfrac{5}{8}$