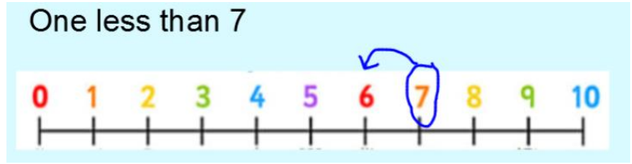
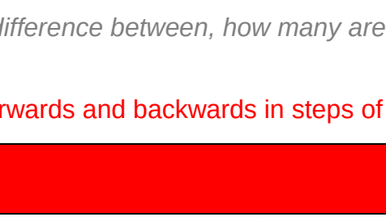
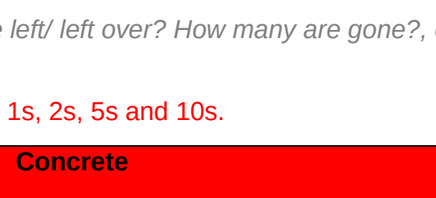
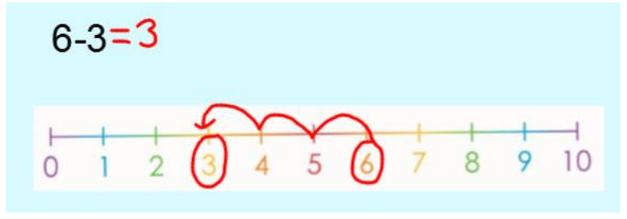
Cottingham Cof E Primary School Calculation Policy- Subtraction

Foundation Stage

Key Vocabulary: *take away, difference between, how many are left/ left over? How many are gone?, one less, two less, ten less. How many fewer is…than…? How much less is…? minuend, subtrahend, difference.*

Counting fluency: To count forwards and backwards in steps of 1s, 2s, 5s and 10s.

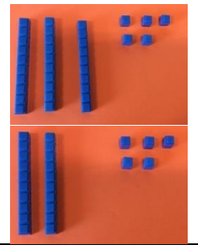
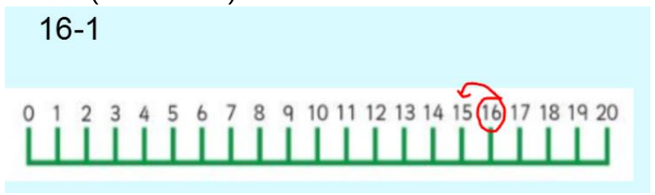
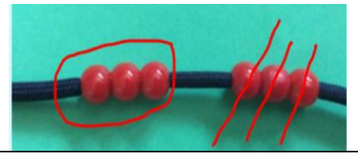
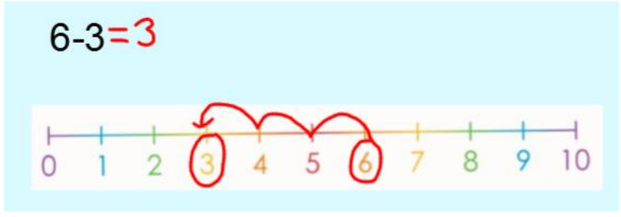
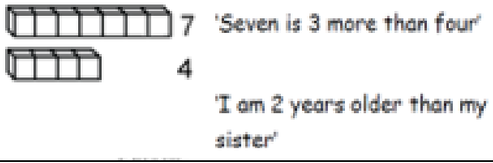
Objective & Strategy	Concrete	Pictorial	Abstract
To find one less than a number.	Use physical objects to find the solution by taking away one object from the whole. **Can you find one less than the number?**  	**Can you find one less than the number?** **Modelled on a number line** Circle the biggest number in the number sentence and count back one on the number line to find the solution. 	Record as a written calculation. 7 – 1 = 6
Subtract two single digit numbers.	Use a range of physical objects, including number beads. Children will find the solution by making the number first then removing several objects from the whole. **6 - 3 = 3**   	**Modelled on a number line** Circle the biggest number in the number sentence and count back in ones on the number line to find the solution. 	Record as a written calculation. 6 – 3 = 3

Cottingham Cof E Primary School Calculation Policy- Subtraction

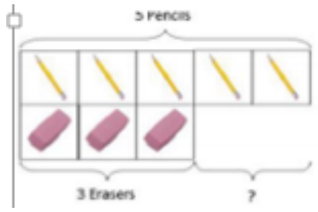
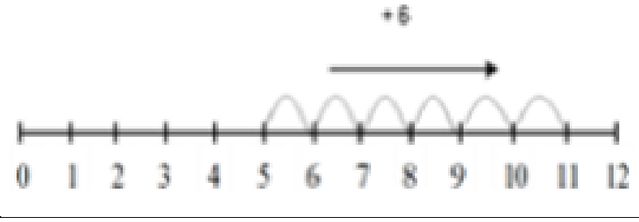
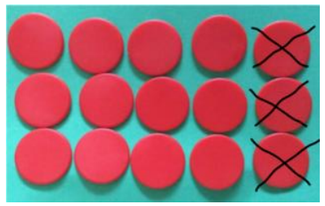
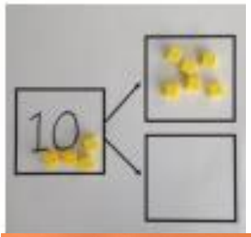
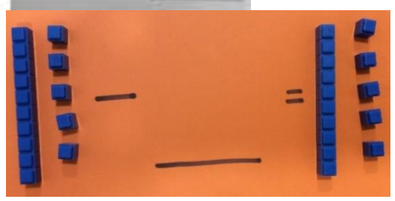
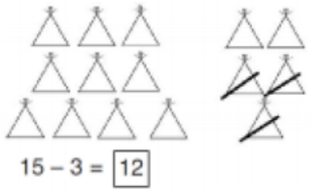
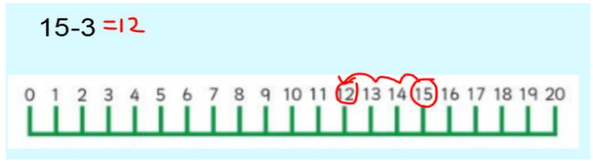
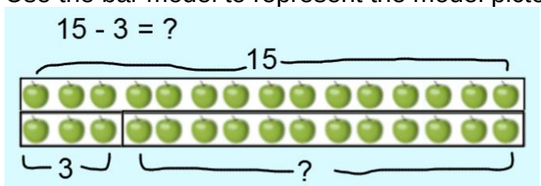
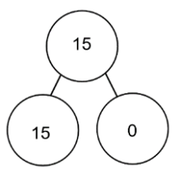
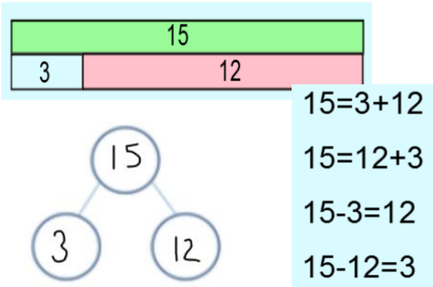
Year 1

Key Vocabulary: *subtract, take away, difference between, how many are left/ left over? How many are gone? One less, two less, ten less. How many fewer is…than…? How much less is…? minuend, subtrahend, difference.*

Counting fluency: To count forwards and backwards in steps of 1s, 2s, 5s and 10s.

Objective & Strategy	Concrete	Pictorial	Abstract
To find one less than a number. To find ten less than a number.	**Modelled using counters** **One less than 16** Use physical objects and find the solution (difference) by taking away one object from the group (minuend), counting backwards.  **Modelled using Base 10** **Ten less than 35**  **Step 1-** Make the number (minuend) using base 10 or concrete resources. **Step 2-** Take 10 (subtrahend) away. **Step 3-** Calculate the final answer by counting how many are left (difference).	**Number line** Circle the biggest number (minuend) in the number sentence and count back one (subtrahend) on the number line to find the solution (difference).  **Modelled using 100 square** **35 – 10 = 25** **Step 1-** Circle the number you are starting at (minuend) e.g. 35 **Step 2-** Count back 10 (subtrahend). **Step 3-** The tenth number you land on is your answer (difference) e.g. 25 	Record as a written calculation. 16-1=15 35 – 10 = 25
Subtract two single digit numbers.	Use a range of physical objects, including number beads. Children will find the solution (difference) by making the number (minuend) first then removing several objects from the whole. **6 - 3 = 3**   	**Modelled on a number line** Circle the biggest number (minuend) in the number sentence and count back in ones (subtrahend) on the number line to find the solution (difference). 	Record as a written calculation. 6 – 3 = 3
To find the difference between two numbers	Children begin to compare amounts by representing with objects. 	Number line- counting on Find the difference by counting on from the smaller number (subtrahend) to the bigger number (minuend).	Children apply to word problems. **Hannah has 12 sweets and her sister has 5 sweets. How many more sweets does Hannah have than her sister?**

Cottingham Cof E Primary School Calculation Policy- Subtraction

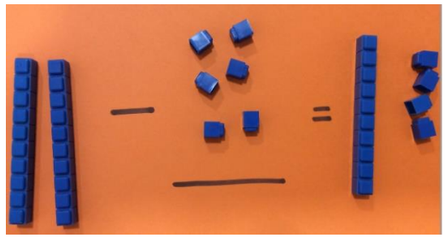
	Children use objects to represent problems using the bar model. 	**11 – 5 = 6** 	
To subtract one digit and two digits numbers to 20, including zero	Use a range of phsical objects (counters, bead strings) and find a solution (difference) by removing several objects from the group (minuend), counting backwards. **15 – 3 = 12**  Use of physical objects to subtract numbers using the part whole model to model. **10 – 6 = 4**  **15 – 0 = 15** 	**15 – 3 = 12** Children represent pictorially by drawing objects and crossing out to show what has been taken away.  <u>Number line- counting back</u> Circle the biggest number (minuend) in the number sentence and count back in ones on the number line to find the difference.  <u>Bar model</u> Use the bar model to represent the model pictorially.  <u>Part-Whole Model</u> **15-0=15** 	Record as a written calculation. **15-3=12** Understand subtraction verbally. ***Put 15 in your head, count back 3, what number are you at?*** Use the bar model or part whole model to find all related addition and subtraction facts  Record as a written calculation. **15 – 0 = 15**
To subtract ones from 10 or 20	**<u>Modelled using uni-fix cubes</u>** **10 - 3 = 7**  **Step 1-** Make the bigger number (minuend). **Step 2-** take away the smaller number (subtrahend).	**<u>Modelled using the tens frame</u>** Using a tens frame or pictorial representations, children will count out 10 or 20 counters/pictorial representations and either take them away or cross them out.	Record as a written calculation. **10 – 3 = 7** **20 – 6 = 14**

Cottingham Cof E Primary School Calculation Policy- Subtraction

Step 3- count how many are left to find out the difference.

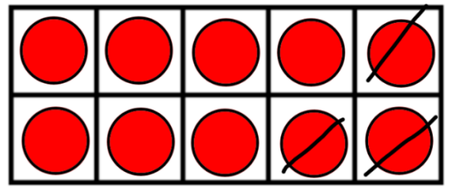
Modelled using Base 10

20-6= 14



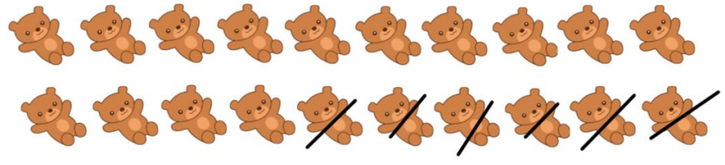
Make the number sentence using Base 10. To find the difference, exchange one ten for 10 ones and subtract the smaller number (subtrahend). Add up how much is left to find the difference.

10 – 3 = 7



Modelled using a pixctorial representation

20 – 6 = 14



Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 2

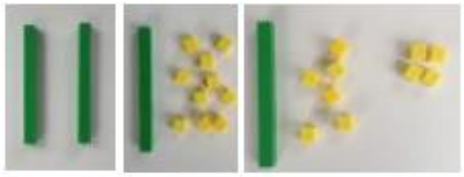
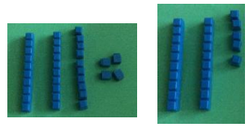
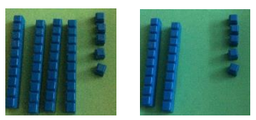
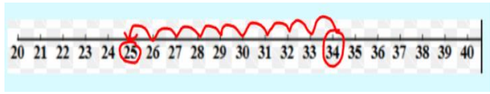
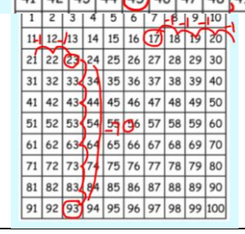
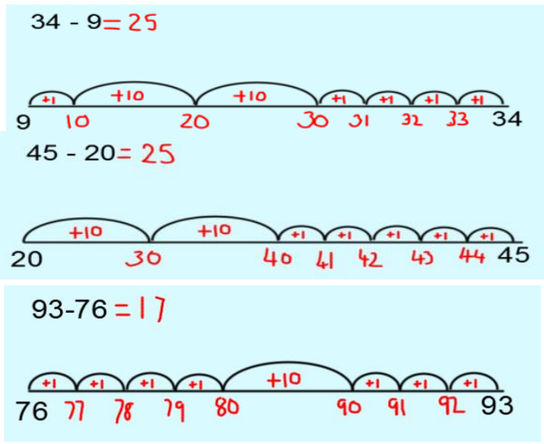
Key Vocabulary: *subtract, take away, difference between, how many are left/ left over? How many are gone? one less, two less, ten less, hundred less. How many fewer is…than…? How much less is…? tens boundary, minuend, subtrahend, difference.*

Counting fluency: To count forwards and backwards in steps of 2s, 3s, 4s, 5s and 10s.

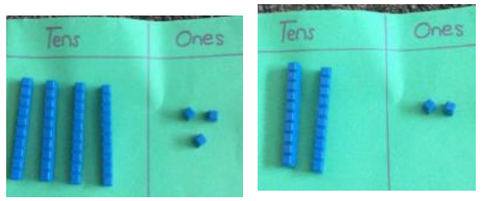
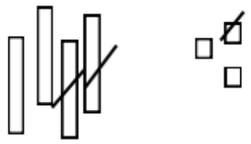
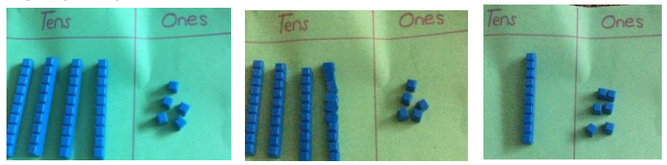
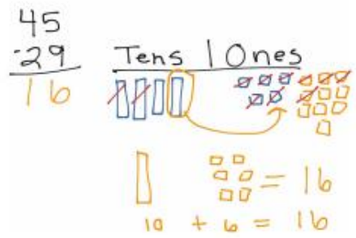
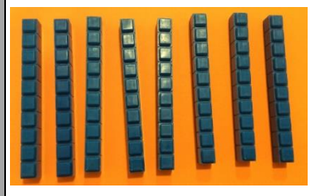
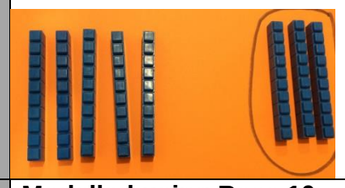
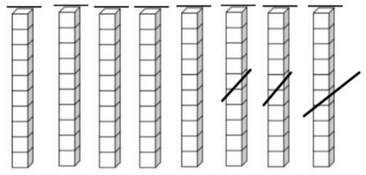
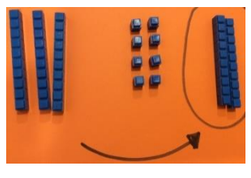
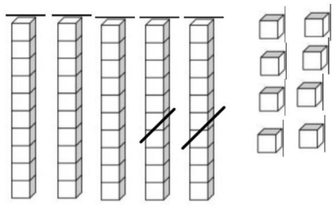
Mental strategies

Skill	Strategy
To subtract 9 to a 2-digit number by adjusting.	**54-9** Make the number with base ten equipment, then subtract 10. You then need to add 1 because 9 is actually one less than 10. Children will begin to do this mentally without equipment. For 54-9 you would first subtract 10 54-10 = 44 then add 1, 44+1=45 so 54-9=45.

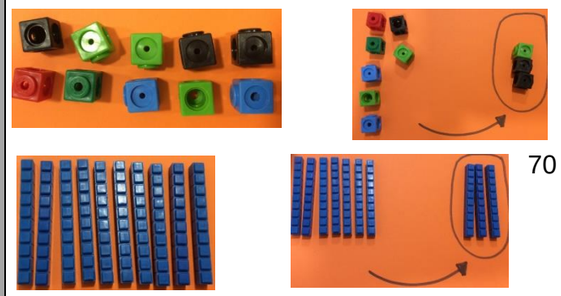
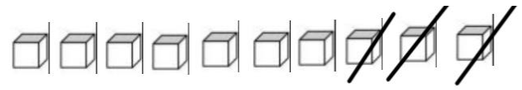
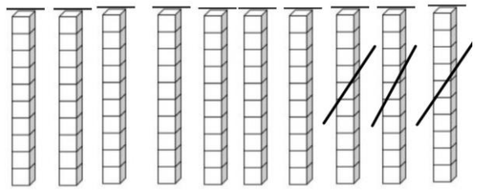
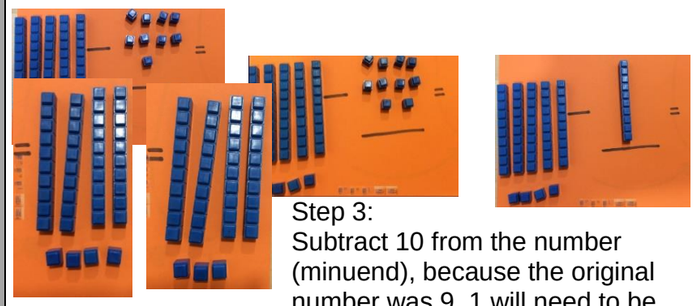
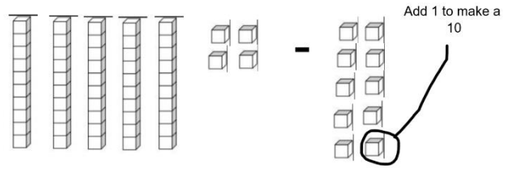
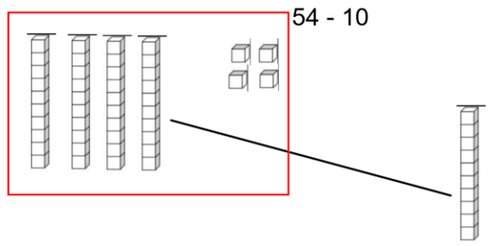
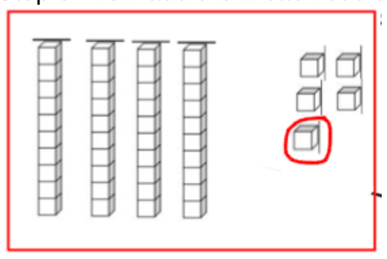
Year 2 Calculation Methods

Objective & Strategy	Concrete	Pictorial	Abstract
To regroup a ten in to ten ones.	Use base 10 to show how to exchange a ten into ten ones in order to subtract the ones. **20 - 4= 16** 	Children represent pictorially by drawing objects in groups of ten and crossing out to show what has been taken away. **20 – 4 = 16** 	Record as a written calculation. **20-4=16**
To subtract numbers using objects, pictures and mentally including: -a 2-digit number and ones -a 2-digit number and tens -two 2-digit numbers	Use the base ten to represent the numbers (minuend) then use knowledge of exchanging tens for ten ones to subtract the subtrahend. **34-9= 25**  **45-20= 25**  **93-76= 17** 	**Modelled using a number line or 100 square** Count back from largest (minuend) to smallest (subtrahend) number to find the difference. **34-9=25**  **45-20=25**  **93-76=17** 	Use of a written method Record by drawing their own number line. Children count up from the smallest (subtrahend) to largest (minuend) number. Children would first count on to the next ten and then the rest. 

Cottingham Cof E Primary School Calculation Policy- Subtraction

To use partitioning to subtract two digit numbers.	Use base 10 to make the number (minuend). Take away the ones then the tens to find the difference. **43 – 21 = 22** 	Children draw pictorial representations and cross off the ones then the tens. **43-21 = 22** 	<u>Formal Written Method</u> Partition each number then subtract the bottom number (subtrahend) from the top number (minuend), starting with the ones. **43- 21 = 22** 43 = 40 + 3 21 = 20 + 1 20 +2 = 22
To use partitioning to subtract two digit numbers with regrouping.	Use base 10 to make the number (minuend) then regroup by exchanging a ten for ten ones where necessary so that you can subtract the subtrahend. **45-29= 16** 	Children draw pictorial representations to show the regrouping in order to find how many are left. **45 - 29 = 16** 	<u>Formal Written Method</u> Partition each number then subtract the bottom number (subtrahend) from the top number (minuend), starting with the ones. Exchange tens for ones then recombine to find the solution. **45 – 29 = 16** 45 = 40 + 5 (30, 15) 29 = 20 + 9 10 +6 =16
To subtract tens from the tens number up to 100.	**<u>Modelled using Base 10</u>**  **80 – 30 = 50** Use Base 10 to make the number (minuend). Then take away the number of tens (subtrahend) required and regroup to find the difference. 	**<u>Modelled using pictorial representations of Base 10</u>** **80 – 30 = 50**  Children would cross out how many tens they are subtracting and count how many they have left to find the difference.	Record as a written calculation. **80 – 30 = 50**
To subtract tens from a 2-digit number	**<u>Modelled using Base 10</u>** **58 – 20 = 28**   Use Base 10 to make the number (minuend). Then take away the number of tens (subtrahend) required and regroup to find the difference.	**<u>Modelled using pictorial representations of Base 10</u>** **58 – 20 = 28**  Children would cross out how many tens they are subtracting and count how many they have left to find the difference.	Record as a written calculation. **58 – 20 = 28**

Cottingham Cof E Primary School Calculation Policy- Subtraction

To derive related facts up to 100.	**Modelled using Base 10** 10 – 3 = 7  100 – 30 = 70	**Modelled using pictorial representations of Base 10** **10 – 3 = 7**  **100 – 30 = 70.** 	Record as a written calculation. **10 – 3 = 7** **10 – 30 = 70.**
To subtract 9 from a 2-digit number by adjusting	**Modelled using Base 10** 54 – 9 = 63 Step 1: Make the number sentence Step 2: If the number needed to subtract is 9, make this a ten by adding one more. This will be exchanged for 1 ten.  Step 3: Subtract 10 from the number (minuend), because the original number was 9, 1 will need to be subtracted from the difference.	**Modelled using pictorial representations of Base 10** **54 – 9 = 45** Step 1- Add 1 to the 9 to make 10.  Step 2- Subtract 10 from the minuend.  Step 3- Now add the 1 back odd to find the difference.  **54-9 = 45**	Record as a written calculation. **54 – 9 = 45**

Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 3

Key Vocabulary: *subtract, take away, difference between, how many are left/ left over? How many are gone?, one less, two less, ten less, hundred less. How many fewer is…than…? How much less is…? tens boundary, hundreds boundary,* m*inuend, subtrahend, difference.*

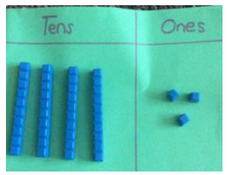
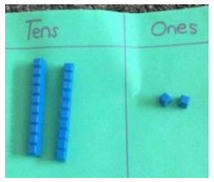
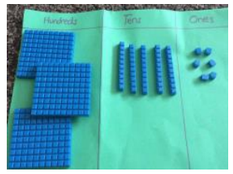
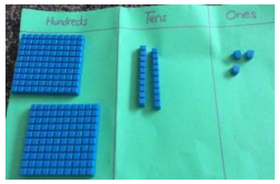
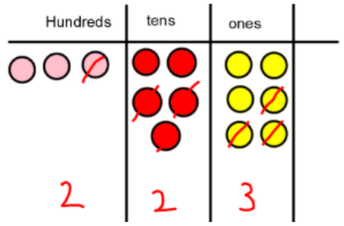
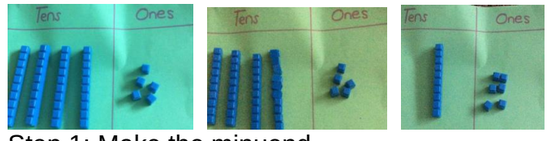
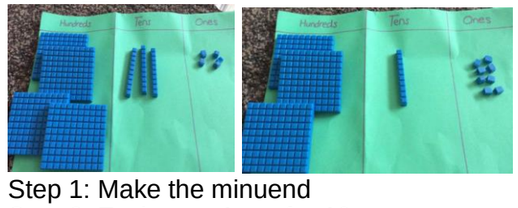
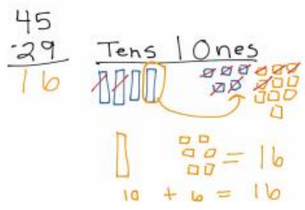
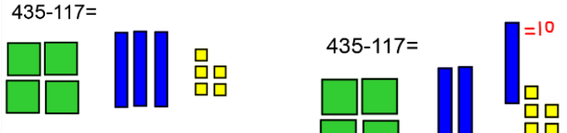
Counting fluency: To count forwards and backwards in steps of 2s, 3s, 4s, 5s, 6s, 8s, 10s and 100s from any given number.

Mental strategies

Skill	Strategy
*Subtract a 3-digit number and ones, including crossing boundaries.	**345-3** If the ones in the second number (subtrahend) can be taken from the first number (minuend) then subtract the ones only 345-3= 342. **432-8** If the ones in the subtrahend are more than the minuend then use partitioning to solve. For 432-8 you would partition 8 into 2 and 6 then 432 – 2= 430-6 = 424.
*Subtract a 3- digit number and tens including crossing boundaries.	**554-40** If the tens in the second number (subtrahend) can be taken from the first number (minuend) then subtract the tens 554-40= 514 **543-70** If the tens in the subtrahend are more than the minuend then use partitioning to solve. For 543-70 you would partition 70 into 40 and 30 and then 543 - 40 = 503 -30 =473. Alternatively you could count back in steps of ten from the minuend.
*Subtract a 3-digit number and hundreds including crossing boundaries.	**754-400** If the hundreds in the second number (subtrahend) can be taken from the first number (minuend) then subtract the hundreds 754-400= 354 Alternatively you could count back in steps of one hundred from the minuend.
*Subtract ones from a 3-digit tens number.	**340-7** Use knowledge of place value to solve. 10-3= 7 so 40-7= 33 then add on the 300. 340-7=333
* Subtract a 2-digit number from a multiple of 10 including crossing boundaries	**90-27** Use knowledge of place value and partitioning to solve. Partition 27 into 20 and 7 and subtract each part from 90. 90- 20= 70 and use knowledge of number bonds that 10-7= 3 so 70-7= 63 Or use the counting on method to find the difference. If I start with 27 and add 3 I get to 30 then I need to add 60 more to get to 90 so 90-27= 63
Subtract a 2-digit number from a 2-digit number, including crossing boundaries.	**56-32** If the ones and tens can be subtracted without exchange then subtract by partitioning. 56-32 would be 50-30 = 20 and 6 – 2 = 4 then recombine 20 and 4 to make 24 so 56-32=24. **45-27** If the ones in the second number (subtrahend) is more than the first number (minuend) then use partitioning to solve. For 45-27 you could partition 27 into 20 and 7 first. Then subtract from the minuend. 45-20= 25 then 25-7=18 so 45-27=18 Or use the counting on method to find the difference. If I start with 27 and add 3 I get to 30 then I need to add 10 more to get to 40 then another 5 more to get to 45. I then recombine 3 with 10 with 5 so 45-27= 18
*Subtract near multiples of 10 and 100 and adjust .	**43-9** When subtracting 9 you would subtract 10 (1 more than 9) from the minuend then add 1 because 10 is actually one more than 9. For 43-9, you would do 43-10=33 +1 = 44. **543- 99** When subtracting 99 you would subtract 100 (1 more than 99) from the minuend then add 1 because 100 is actually one more than 99. For 543-99, you would do 543-100=443 +1 = 444.

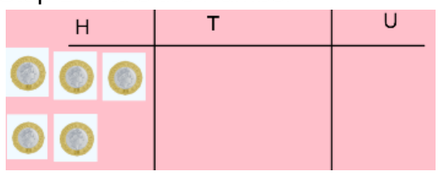
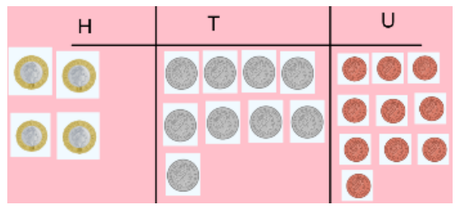
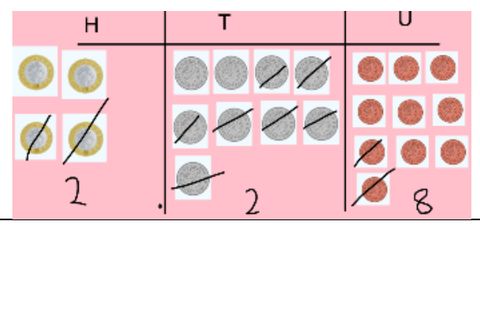
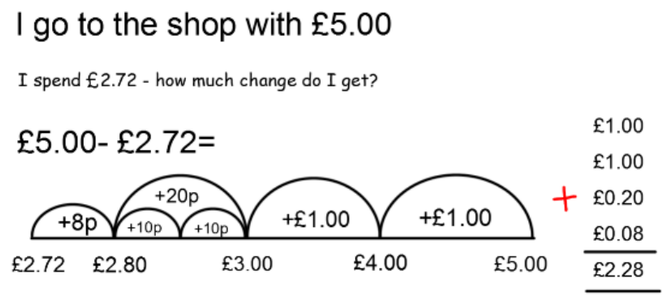
Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 3 Calculation Methods

Objective & Strategy	Concrete	Pictorial	Abstract
To subtract 2 and 3 digit numbers without exchange.	Use base 10 to make the number (minuend) then take away the ones, tens then the hundreds to find the difference. **43 – 21 = 22**   **356 - 133= 223**  	Children draw pictorial representations to show the regrouping in order to find how many are left. **43-21=22**  **56 - 133= 223** 	Written Method (expanded method) Partition each number then subtract the bottom number (minuend) from the top number (subtrahend), starting with the ones. **43- 21 = 22** 43 = 40 + 3 21 = 20 + 1 20 +2 = 22 **356 - 133= 223** 356 = 300 + 50 + 6 133= 100 + 30 + 3 200+20 +3 =223 Formal Written Method (condensed method) Children begin to use a condensed columnar method of subtraction. 43 - 21 = 22 365 - 133 = 232
To subtract 2 and 3 digit numbers with exchange.	Use base 10 to make the number (minuend) then regroup by exchanging a ten for ten ones and a hundred for ten tens where necessary so that you can subtract the subtrahend. **45-29=16**  Step 1: Make the minuend Step 2: Exchange 1 ten for 10 ones. Step 3: Subtract two tens and 9 ones. **435 – 117 = 318**  Step 1: Make the minuend Step 2: Exchange 1 ten for 10 ones. Step 3: Subtract one hundred,1 ten and 7 ones.	Children draw pictorial representations to show the regrouping in order to find the difference. **45 - 29 = 16**  **435-117= 318** Step 1: Step 2: 435-117=  Step 3: 	Written Method (expanded) Partition each number then subtract the bottom number from the top, starting with the ones. Exchange tens for ones then recombine to find the solution. **45 – 29** 45 = 30 + 15 29 = 20 + 9 10 +6 =16 **435-117=318** 435 = 400 + 20 + 15 117 = 100 + 10 + 7 300+10+ 8 =318 Formal Written Method (condensed method) Children begin to use a condensed columnar method of subtraction with exchange in one column. 31 45 - 29 = 16 231 435 - 117 = 318
	Use base money to make the number (minuend) then regroup by exchanging a ten for ten ones and a hundred for ten tens where necessary so that you can subtract to find the difference.	Children draw pictorial representations to show the regrouping in order to find how many are left, this can be in the form of a number line.	Formal written method

44 - 27 = 17

Cottingham Cof E Primary School Calculation Policy- Subtraction

To subtract amounts of money to give change.	**£5-2.72** Step 1: Make the Number  Step 2: Exchange  Step 3: Subtract to solve  	**<u>Modelled using a number line.</u>** Children start with the smallest number (subtrahend) and add to the nearest tenth, then nearest 1, until you reach the biggest number (minuend). Children will then need to add the jumps to calculate the change.  	Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other. 

44 - 27 = 17

Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 4

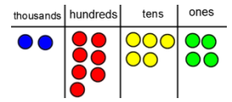
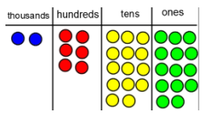
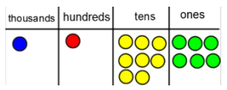
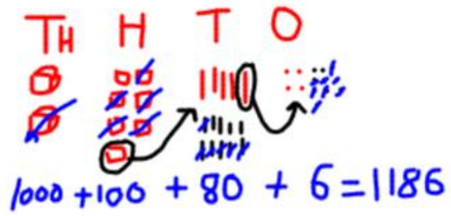
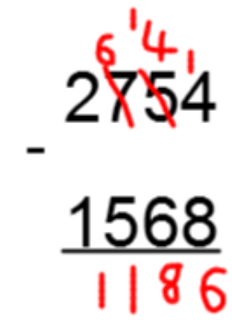
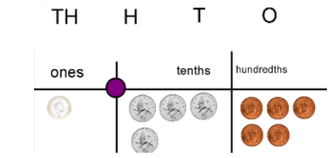
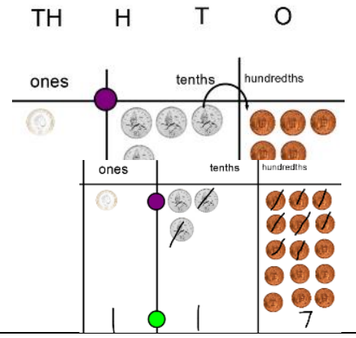
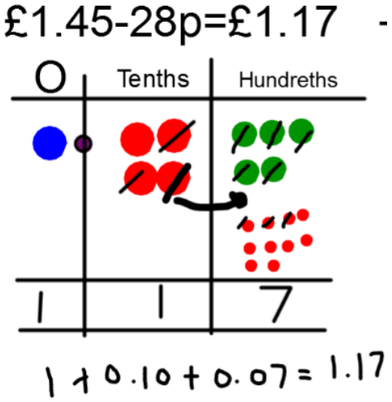
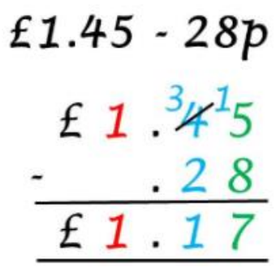
Key Vocabulary: *subtract, take away, difference between, how many are left/ left over? How many are gone? One less, two less, ten less, hundred less. How many fewer is…than…? How much less is…? tens boundary, hundreds boundary, inverse, minuend, subtrahend, difference.*

Counting fluency: To count backwards and forwards in steps of 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s, 11s, 12s, 100s and 1000s from any given starting number.

Mental strategies

Skill	Strategy
*Subtract a 4-digit number and ones, including crossing boundaries.	**3345-3** If the ones in the second number (subtrahend) can be taken from the first number (minuend) then subtract the ones only 3345-3= 3342. **2432-8** If the ones in the subtrahend are more than the minuend then use partitioning to solve. For 2432-8 you would partition 8 into 2 and 6 then 2432 – 2= 430-6 = 2424.
*Subtract a 4- digit number and tens including crossing boundaries.	**5554-40** If the tens in the second number (subtrahend) can be taken from the first number (minuend) then subtract the tens 5554-40= 5514 **2543-70** If the tens in the subtrahend are more than the minuend then use partitioning to solve. For 2543-70 you would partition 70 into 40 and 30 and then 2543 - 40 = 2503 -30 =2473. Alternatively you could count back in steps of ten from the minuend.
*Subtract a 4-digit number and hundreds including crossing boundaries.	**8754-400** If the hundreds in the second number (subtrahend) can be taken from the first number (minuend) then subtract the hundreds 8754-400= 8354 **2543-700** If the hundreds in the subtrahend are more than the minuend then use partitioning to solve. For 2543-700 you would partition 700 into 500 and 200 and then 2543 - 500 = 2043 -200 =1843. Alternatively you could count back in steps of one hundred from the minuend.
*Subtract a 4-digit number and thousands including crossing boundaries.	**4527- 2000** If the thousands in the second number (subtrahend) can be taken from the first number (minuend) then subtract the thousands 4527-2000=2527 Alternatively you could count back in steps of one thousand from the minuend.
*Subtract a 3-digit multiple of 10 from a 3-digit number.	**345-130** If all the digits on the second number (subtrahend) can be subtracted then solve by portioning. For 345-130, you would do 300-100=200, 40-30=10 and 5-0=5 then recombine 200+10+5=215 **546-270** If all or some of the digits in the subtrahend are more than the minuend then use partitioning to solve. For 546-270, you would partition 270 in 200 and 70 and so 546- 200= 346 then subtract 70 to get 276. OR using the counting up method. For 546-270, start with 270, add 30 to get to 300 then add 200 to get to 500 then add 46 to get to 546. Then recombine 30+200+46= 276.
*Subtract a 3-digit multiple of 10 from a 4 or 4-digit number e.g. 4000-340.	**200-27** Use knowledge of place value and partitioning to solve. Partition 27 into 20 and 7 and subtract each part from 200. 200- 20= 180 and use knowledge of number bonds that 10-7= 3 so 180-7= 173. Or use the counting on method to find the difference. If I start with 27 and add 3, I get to 30 then I need to add 70 more to get to 100 then another 100 more to get to 200. I then recombine 3 and 70 and 100 so 200-27=173.
* Subtract a 2/3-digit number from a 3/2-digit number, including crossing boundaries.	**237-24** If the ones and tens can be subtracted without exchange then subtract by partitioning. 237-24 would be 237-20=217 and then subtract 4 = 213. **432-171** If the ones or tens in the second number (subtrahend) is more than the first number (minuend) then use partitioning to solve. For 242-171 you could partition 171 into 100, 70 and 1 first. Then subtract from the minuend. 432-100= 332 then 332-70=262 then 263-1=261 so 432-171=261 Or use the counting on method to find the difference. If I start with 171 and add 29 I get to 200 then I need to add 200 more to get to 400 then another 32 more to get to 432. I then recombine 29 with 200 with 32 to get 261 so 432-171=261
*Subtract near multiples of 10, 100 and 100 then adjust.	**543-29** When subtracting 29 you would subtract 30 (1 more than 29) from the minuend then add 1 because 30 is actually one more than 29. For 543-29, you would do 543-30=513+1 = 514 **543- 299** When subtracting 299 you would subtract 300 (1 more than 299) from the minuend then add 1 because 300 is actually one more than 299. For 543-299, you would do 543-300=243 +1 = 244. **5437- 3999** When subtracting 3999 you would subtract 4000 (1 more than 3999) from the minuend then add 1 because 4000 is actually one more than 3999. For 5437-3999, you would do 5437-4000=1437+1= 1438

Cottingham Cof E Primary School Calculation Policy- Subtraction

Objective & Strategy	Concrete	Pictorial	Abstract
To subtract numbers with up to 4 digits using a formal written method.	Use base 10 to make the number (minuend) then regroup by exchanging a ten for ten ones, a hundred for ten tens or a thousands for ten hundreds where necessary so that you can subtract the subtrahend. **2754-1568=1186**  Step 1: Make the minuend.  Step 2: Exchange 1 ten for 10 ones.  Step 3: Subtract one hundred,1 ten and 7 ones.	Children draw pictorial representations to show the regrouping in order to find the difference. **2754 - 1568= 1186**  	<u>Formal written method</u> Children use a condensed method of subtraction, including examples with multiples exchanges. **2754 – 1568 = 1186** 
To subtract numbers with up to 4 digits using a formal written method, including decimals to two decimal places. To subtract amounts of money to give change- adapted from year 3	Use the place value counters to make the number (minuend) then regroup by exchanging, where necessary: a thousand for ten hundreds, a hundred for ten tens, a ten for ten ones, a one for ten tenths and ten tenths for a hundredth so that you can subtract. **<u>£1.45-28p=£1.17</u>** Step 1: Make the number  Step 2: Exchange *because you can't subtract 8 from 5. Children will need to exchange 10p for 10x1p.  Step 3: Subtract to solve	Children draw pictorial representations to show the regrouping in order to find the difference. £1.45-28p=£1.17  	<u>Formal written method</u> Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other. **Bella spends 28p in the shop.** **She spends £1.45 of her pocket money. How much change will she receive?** 

44 - 27 = 17

Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 5

Key Vocabulary: *subtract, take away, difference between, how many are left/ left over? How many are gone? One less, two less, ten less, hundred less. How many fewer is…than…? How much less is…? tens boundary, hundreds boundary, one boundary, tenths boundary, inverse, minuend, subtrahend, difference.*

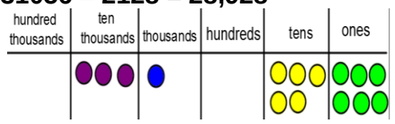
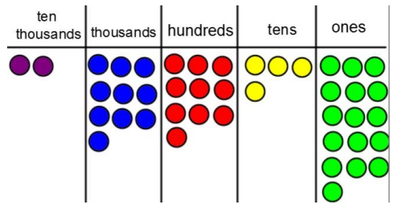
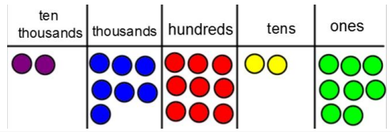
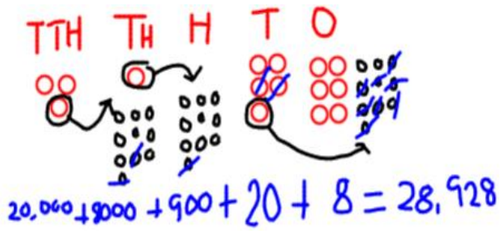
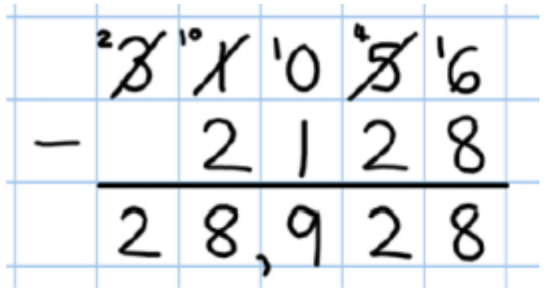
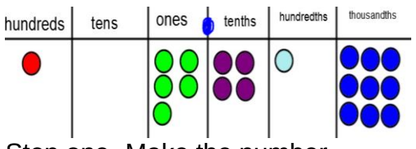
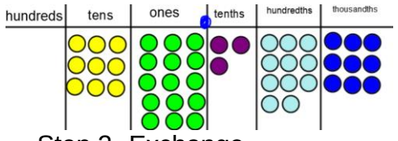
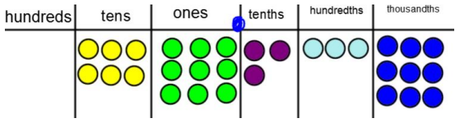
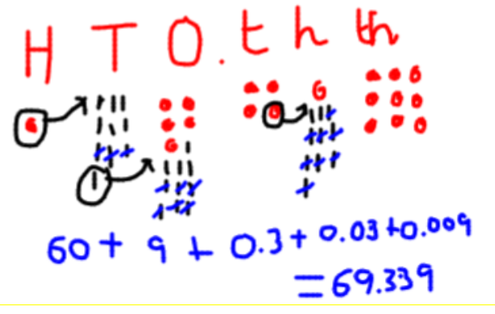
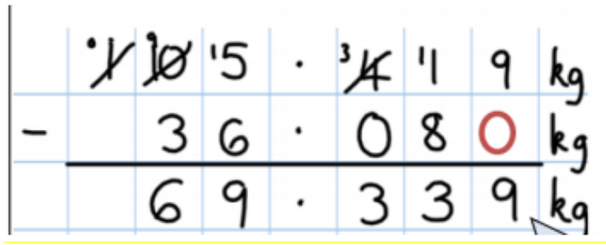
Counting Fluency: To count backwards and forwards in steps of 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s, 11s, 12s, 100s and 1000s from any given starting number.

Mental Strategies

Skill	Strategy
*Subtract a 4/5-digit multiple of 100.	**5400-3900** For large numbers use knowledge of place value to solve. For 5400-3900, make each number 100 times smaller and do 54-39=15 then make the solution 100 times bigger. 15x100=1500 so 5400-3900=1500. Or use the counting on method. For 5400-3900, start with 3900, add 100 to get to 4000 the another 1000 to get to 5000 then another 400 to get to 5400. Next recombine 100+1000+400= 1500 so 5400-3900=1500
*Subtract near multiples of 10, 100, 1000, 10,000 then adjust, including crossing boundaries.	**2335-58** Subtract the nearest multiple of 10 (60) then add 2 because 58 is two more than 60 2335-60= 2275-+2= 2277 **2345-297** Subtract the nearest multiple of 100 (300) then add 3 because 300 is three more than 297 2345-300= 2045+3= 2048 **5438- 3995** Add the nearest multiple of 1000 (4000) then add 5 because 4000 is five more than 3995 5438-4000= 1438+5= 1443
*Subtract tenths from a 1-digit whole number and tenths.	**5.7-0.4** If the tenths in the second number (subtrahend) are smaller than the tenths in the first number (minuend) then subtract the tenths and ones separately 5.7 - 0.4= 5.3 **6.5-0.7** If the tenths in the second number (subtrahend) are larger than the tenths in the first number (minuend) then use your knowledge of number bonds to partition. For 6.5- 0.7, partition 0.7 into 0.5 and 0.2. Then subtract 0.5 from 6.5 to get 6 then subtract 0.2 = 5.8 so 6.5-0.7= 5.8
*Subtract two 1-digit whole numbers and tenths.	**4.7- 2.5** If the ones and tenths in the second number (subtrahend) are smaller than the ones and tenths in the first number (minuend) then subtract the tenths and ones separately. For 4.7-2.5, subtract the ones 4-2= 2 and then the tenths 0.7-0.5=0.2 then recombine. 4.7-2.5=2.2 **6.4 – 3.7** If the tenths in the second number (subtrahend) are larger than the tenths in the first number (minuend) use your knowledge of place value to solve. Make both numbers ten times bigger then calculate 64-37= 27. To adjust make your answer 10 times smaller 27 ÷ 10 = 2.7 so 6.4-3.7= 2.7
*Subtract 2-digit numbers with tenths and hundredths.	**0.46-0.23** If the ones, tenths and hundredths in the second number (subtrahend) are smaller than the ones and tenths in the first number (minuend) then subtract the hundredths, tenths and ones separately. For 0.46-0.23 subtract the ones 0-0=0, subtract the tenths 0.4-0.2=0.2 then subtract the hundredths 0.06-0.03=0.03 then recombine 0+0.2+0.03= 0.23 **0.76-0.59** If the tenths/ hundredths in the second number (subtrahend) are larger than the tenths/ hundredths in the first number (minuend) use your knowledge of place value to solve. Make both numbers 100 times bigger then calculate 76-59=17 To adjust make your answer 100 times smaller 17 ÷ 100 = 0.17 so 0.76-0.59=0.17
*Subtract a 1-digit whole number and tenths from a whole number.	**8-5.6** Use the counting on method to find the difference. If I start with 5.6 and add 0.4, I get to 6 then I need to add 2 more to get to 8. I then recombine 0.4 and 2 so 8-5.6=2.4

Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 5 Calculation Methods

Objective & Strategy	Concrete	Pictorial	Abstract
To subtract numbers with more than 4 digits.	Use the place value counters to make the number (minuend) then regroup by exchanging, where necessary: a thousand for ten hundreds, a hundred for ten tens, a ten for ten ones, a one for ten tenths and ten tenths for a hundredth so that you can subtract. **31056 – 2128 = 28,928**  Step 1- Make the number.  Step 2- Exchange.  Step 3- Subtract to solve.	Children draw pictorial representations to show the regrouping in order to find how many are left. **31056 – 2128 = 28,928**  	Formal written method Children use a condensed method of subtraction including those with different numbers of digits. **31056 – 2128 = 28,928** 
To solve problems involving measure using decimal notation up to three decimal places.	Use the place value counters to make the number then regroup by exchanging, where necessary: a thousand for ten hundreds, a hundred for ten tens, a ten for ten ones, a one for ten tenths, a hundredths for ten tenths and a thousandth for ten hundredths. **105.419kg – 36.080kg**  Step one- Make the number.  Step 2- Exchange.  Step 3- Subtract to solve.	Children draw pictorial representations to show the regrouping in order to find the difference. **105.419kg – 36.080kg**  	Formal written method Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other. **105.419kg – 36.080kg** 

Cottingham Cof E Primary School Calculation Policy- Subtraction

Year 6

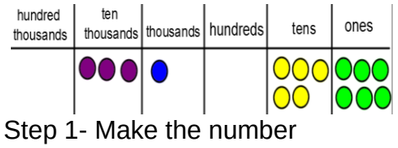
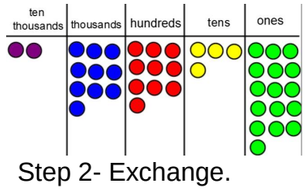
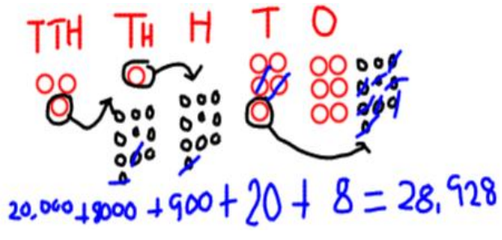
Key Vocabulary: *subtract, take away, difference between, how many are left/ left over? How many are gone?, one less, two less, ten less, hundred less. How many fewer is…than…? How much less is…? tens boundary, hundreds boundary, one boundary, tenths boundary, inverse, minuend, subtrahend, difference.*

Counting Fluency: To consolidate counting backwards and forwards in steps of 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s, 11s, 12s, 100s, 1000s and 10,000s from any starting number.

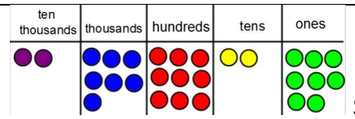
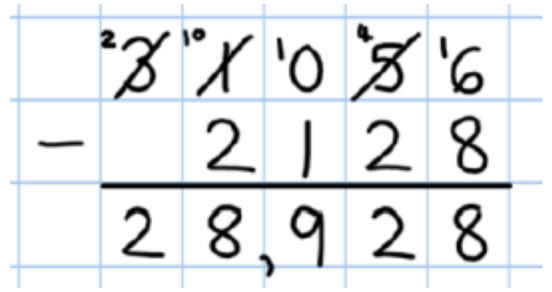
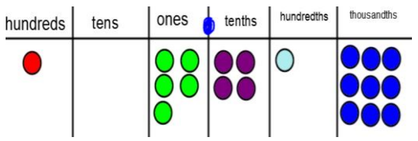
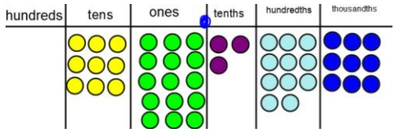
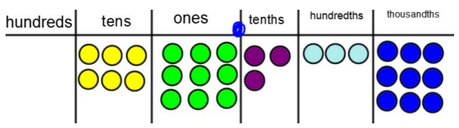
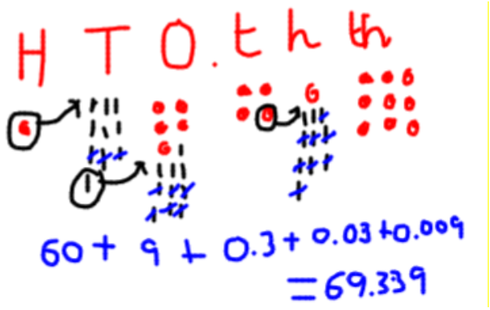
Mental Strategies

Skill	Strategy
	Reconsolidate all strategies from Y4 and 5.
*Subtract large numbers.	**53,765-3330** For large numbers use partitioning to solve. For 53,765-3330, partition the subtrahend into 3000 and 300 and 30 and subtract each part. 53,765-3000=50,765 then subtract 300 = 50, 465 the subtract 30= 50,435
*Subtract near multiples of 0.01, 0.1, 10, 100, 1000 then adjust, including crossing boundaries.	**6.7 – 3.8** Subtract the nearest whole number (4) then add 0.2 because 4 is actually 0.2 more than 3.8 so 6.7- 4=2.7 +0.2= 2.9 **4.92- 2.96** Subtract the nearest whole number (3) then add 0.04 because 3 is actually 0.04 more than 2.96 so 4.92-3= 1.92+0.04= 1.96
*Subtract decimals with different numbers of places.	**0.45-0.3** Subtract by partitioning using your knowledge of place value. First subtract the ones 0 - 0 = 0, then the tenths 0.4 - 0.3 = 0.1 then the hundredths 0.05-0.00=0.05 Then recombine 0 + 0.1 + 0.05= 0.15 or use knowledge of place value to solve. Make each number 100 times bigger and subtract. 45-30=15 then make the solution 100 times smaller. 15÷100=1.5 so 0.45-0.3=1.5
*Subtract any number with up to three decimal places from a whole number.	**4-0.34** Use the counting on method and knowledge of place value to find the difference. If I start with 0.34 and add 0.66, I get to 1 then I need to add 3 more to get to 4. I then recombine 0.66 and 3 so 4-0.34=3.66 **14-0.432** Use the counting on method and knowledge of place value to find the difference. If I start with 0.432 and add 0.568, I get to 1 then need to add 13 more to get to 14. I then recombine 0.568 and 13 so 14-0.432=13.568

Year 6 Calculation Methods

Objective & Strategy	Concrete	Pictorial	Abstract
To subtract numbers with increasingly large and complex numbers.	Use the place value counters to make the number (minuend) then regroup by exchanging, where necessary: a thousand for ten hundreds, a hundred for ten tens, a ten for ten ones, a one for ten tenths and ten tenths for a hundredth so that you can subtract. **31056 – 2128 = 28,928**  Step 1- Make the number  Step 2- Exchange.	Children draw pictorial representations to show the regrouping in order to find how many are left. **31056 – 2128 = 28,928**  	Formal written method Children use a condensed method of subtraction including those with different numbers of digits. **31056 – 2128 = 28,928**

Cottingham Cof E Primary School Calculation Policy- Subtraction

	 Step 3- Subtract to solve.		
To solve problems involving the conversion of units of measure, using decimal notation up to 3 decimal places.	Use the place value counters to make the number then regroup by exchanging, where necessary: a thousand for ten hundreds, a hundred for ten tens, a ten for ten ones, a one for ten tenths, a hundredths for ten tenths and a thousandth for ten hundredths. **105.419 kg - 36080g** As this is a mixed measure problem, children would first convert so they are working with the same unit. **105.419kg – 36.080kg**  Step one- Make the number.  Step 2- Exchange.  Step 3- Subtract to solve.	Children draw pictorial representations to show the regrouping in order to find the difference. **105.419kg – 36.080kg** 	<u>Formal written method</u> Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other. They convert measures so that they are working with the same unit. **105.419 kg - 36080g** would convert into **105.419kg – 36.080kg**