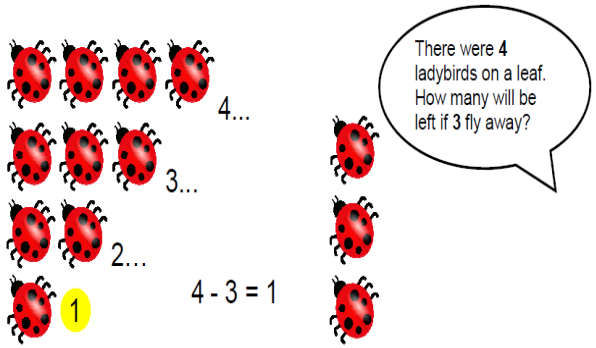
Berkeley Primary School Written Calculation Policy
Subtraction

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
1	**Songs:** **10 little monkeys jumping on a bed, 5 little speckled frog.** **There are 10 children. One goes out. How many are left?** **We made 6 mince pies. We ate 2. How many mince pies are left?**	Subtract Subtraction Take away count back (from, to), How many are left? One less Two less... Most least	**Mostly concrete representations:** Concrete apparatus models one less  **Counting backwards to find the answer:** 	Children will begin to use the vocabulary involved in adding and subtracting in practical activities. Children will say a number which is 1 more or one less than a given number. Using quantities and objects, they will add and subtract 2 single digit numbers. They will count on and back to find the answer when they adding and subtracting 2 single digit numbers. Children will mainly use concrete apparatus to take a smaller number away from a larger one, then count what is left. Oral countdowns and songs will also be used to aid counting back skills and develop language. **Resources** Counters, Small Toys, Buttons, Cubes, Counters, Numicon, Number tracks, songs and rhymes etc	BM Steps 1 - 5 **Nursery** **Reception**

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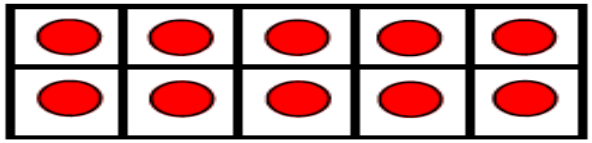
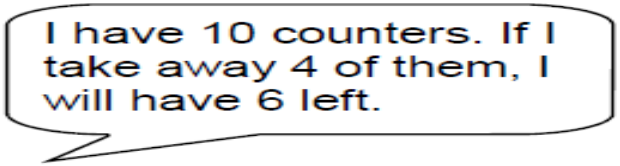
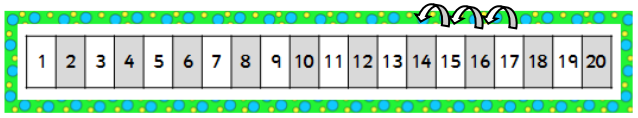
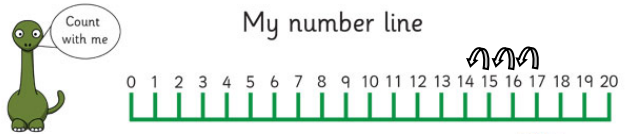
2	**There are 8 ducks in a lake. Three swans fly away. How many are left?** **I need 12 eggs to bake my buns. I only have 4. How many more do I need?** **4 take away 2.** **Take 2 from 7.** **7 subtract 3.** **8 less than 9.** **Missing number problems** □ - 3 = 11	Subtract Subtraction Take away Minus count back (from, to), How many are left? One less Two less Most Least	**Ten frame** Pictorial representation enable children to visualise the calculations.   10 – 6 = 4 **Number Tracks moving to Number Lines (up to 20)**   17 – 3 = 14	Number stories should be used to set contexts for calculations. Children will mainly use concrete apparatus and practical activities to subtract. They will also count backwards to find the answers to problems using number tracks and hundred grids. Problems will be presented in a variety of contexts including word and missing number problems. **Resources** Counters, Small Toys, Buttons, Cubes, Counters, Coins, Numicon, Number tracks, Base 10 Number grids etc	BM Steps 6 - 9 **Year 1**

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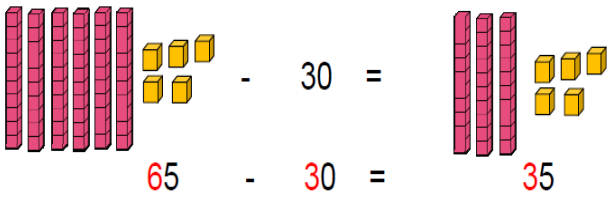
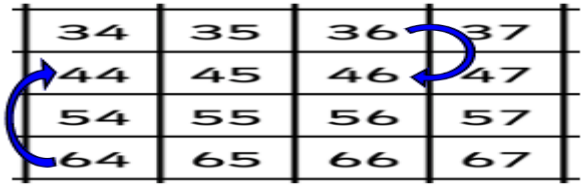
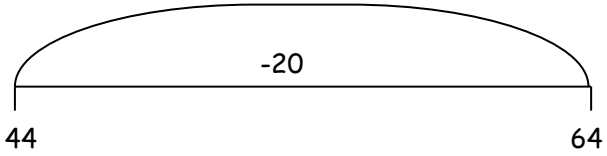
Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
3	**Take 30 from 70.** **How many less is 7 than 18?** **8 added to a number is 18. What is the number?**	Subtract Subtraction Take away Minus count back (from, to), How many are left? One less Two less Most Least Estimate	Base 10:  **Hundred grid** This is a useful tool for enabling the children to add and subtract 10's from any number.  **Recording on a number line**  64 – 20 = 44	Children need to develop their instant recall of addition and subtraction number facts and use these to answer simple problems. Practical resources should still be used to embed knowledge and provide visual representations. Children will begin to move on to using simple number tracks and hundred grids once they are confident with using concrete resources. Problems will now include crossing the tens boundaries. Calculations should involve: **TO – O, TO – TO and TO - TO** **Resources** Counters, Small Toys, Buttons, Cubes, Counters, Coins, Numicon, base 10, Number lines, grids etc	BM Steps 10 - 15 **Year 2**

Berkeley Primary School Written Calculation Policy
Subtraction

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
4	**Take 30 from 70.** **How many less is 7 than 18?** **8 added to a number is 18. What is the number?**	Subtract Subtraction Take away Minus Difference Difference between Less than … many are left? … left over? less than	**Number lines**: 22 – 7 Counting back  15 20 22 Children should also be shown that finding the difference (ie counting on) gives the same answer and understand why. Counting on  15 20 22	Children will still use many ideas from above but should begin to move on to using simple number lines which allow the children to record their working. These should include calculations where tens boundaries need to be crossed. Calculations should involve: **TO – O, TO – T0 and TO - TO** **Resources** Counters, Small Toys, Buttons, Cubes, Counters, Coins, Numicon, Number lines, grids etc	BM Steps 10 - 15 **Year 2**

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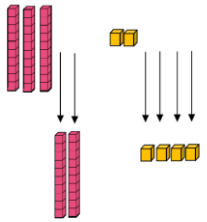
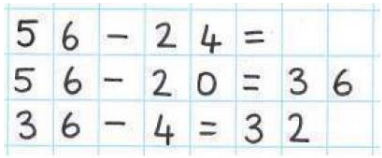
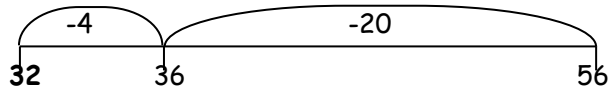
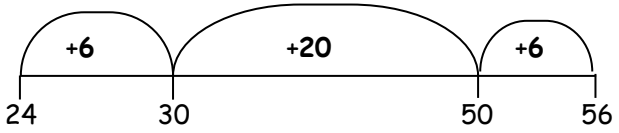
Subtraction

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
5	**63 subtract 40.** **10 less than 43. 100 less than 437.** **How many less than 28 is 12?**	Subtract Subtraction Take away Minus Difference Difference between Less than … many are left? … left over? less than	**Use of place value resources (Dienes or counters) to illustrate place value and effect on digits:**   56 – 24 = 56 – 20 = 36 36 – 4 = 32 **Number lines** (Hundred square could also be used to support this method of recording. 56 – 24 = **32**  Children should also be shown that finding the difference (ie counting on) gives the same answer and understand why.  *Encourage children to make estimations first using rounding ie 50 – 20 = 30; My answer will be about 20.*	Children can continue to use the horizontal number line. Need to start to be aware of place value so can move onto vertical methods so towards. They should be carrying out the following calculations: **TO – TO**. These should be done without crossing any boundaries. **Resources** Number lines Number grids Coins Place value counters Dienes apparatus	BM Steps 16 – 27 **Year 2 / 3**

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Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
6	**93 take away 8.** **63 subtract 46.** **Decrease 72 by 34.** **How many less than 68 is 42?**	Subtract Subtraction Take away Minus Difference Difference between Less than Fewer than Decrease … many are left? … left over? less than estimate, partition, recombine, column exchange.	**Number lines** As above but larger numbers e.g. 754 – 86 **Expanded method** – no exchanging. Can be supported with place value counters or Dienes. 754-233=**521** 700 50 4 - 200 30 3 500 20 1 = **521** Leading to: **Column**: (no exchanging) 754 - 233 521 *Encourage children to make estimations first using rounding ie 700 – 200 = 500. My answer will be in the 500s.*	Children can continue to use the horizontal number line until place value is secure for them to be able to move into the expanded and vertical method. They should be carrying the following types of calculation: **TO–TO, HTO–TO** and **HTO–HTO.** **Resources** Number lines, Number grids, Dienes, place value counters.	BM Steps 28 - 33 **Year 3**

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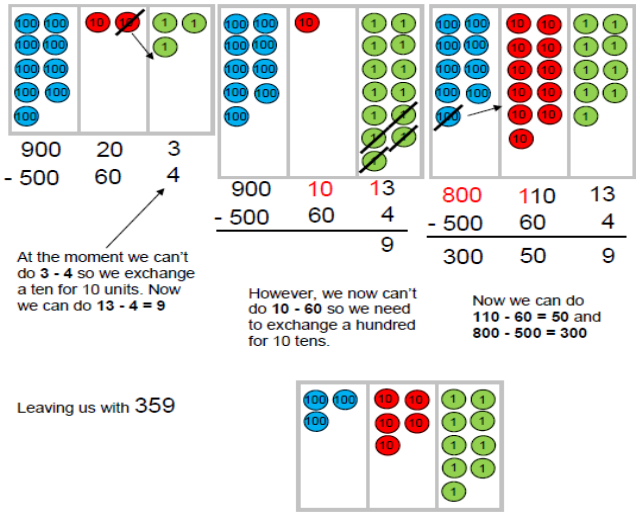
Subtraction

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
7	**750 take 255.** **350 subtract 205.** **Sam has completed this calculation** 355 – 247 112 **Explain why he is incorrect.**	Subtract Subtraction Take away Minus Difference Difference between Less than Fewer than Decrease … many are left? … left over? less than estimate, partition, recombine, column exchange.	**Expanded method** – Building on understanding of place value and partitioning and in conjunction with the use of place value resources. E.g. 923 – 564 = **359**  Leading to just recording the steps: 900 20 3 = 900 10 13 = 800 110 13 - 500 60 4 - 500 60 4 - 500 60 4 300 50 9 Then to: 800 110 ~~900~~ ~~20~~ 13 500 60 4 300 50 9 = 359 *Encourage children to make estimations first using rounding ie 900 – 600 = 300. My answer will be in the 300s.*	They should be carrying out the following types of calculation: **HTU–TU** and **HTU–HTU**. Moving into **THHTO-HTO** and **ThHTO-ThHTO** in Year 4. The column method should be introduced towards the end of this stage where appropriate. **Resources** Dienes, place value counters.	BM Steps 28 - 33 **Year 3 / 4**

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Subtraction

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
8	**750 take 255.** **3500 subtract 2050.** **Write <, > or = in the circle to make this correct.** $1232-232 \bigcirc 1355-252$	As above	**Compact column method** 5 13 1 ~~6~~ ~~4~~ 6 7 - 2 6 8 4 3 7 8 3 *Encourage children to make estimations first using rounding and knowledge of numbers ie 6500 – 2500 = 4000 so my answer will be about 200 less than this.*	Children should be working with **ThHTU – ThHTU** and extend these ideas to working with **decimals.** **Resources** Dienes, place value counters.	BM Steps 34 - 36 **Year 4 / 5 / 6**
9	**25678 – 7967** **Decrease 5.2 by 1.9.** **How much less than 13.2 is 5.83?** **Two numbers have a difference of 2·3. To the nearest 10, they are both 10.** **What could the numbers be?**	As above	As above but extending into decimals (including those with mixed number of decimal places) and numbers 4+ digits. *Encourage children to make estimations first using rounding and knowledge of numbers ie 75.7 – 9. 67 will be slightly more than 76 – 10 = 66 ie 66.th*	Children encouraged to use the compact method of decomposition. Children should be working with **numbers with mixed numbers of digits etc 10ThThHTU – ThHTU; TU.t – U.th.** **Resources** Dienes, place value counters.	BM Steps 37 **Year 5 / 6**

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