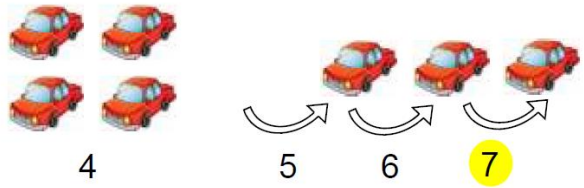
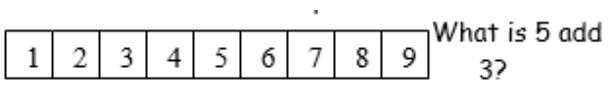
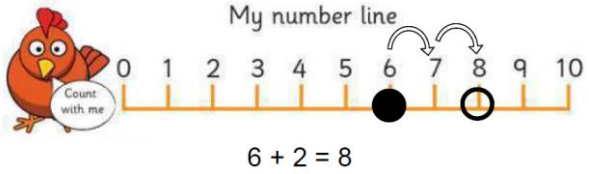
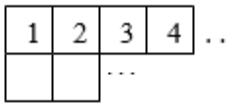
Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
1		More A lot Count on Add, Plus Put together One more than, How many altogether? And Equals	Use objects and pictures to add two single-digit numbers by counting all of them, counting on to find the answer. e.g.  4 + 3 = 7 Numicon:  *Estimate how many objects they can see and checks by counting them.*	Children will use a variety of objects to make comparisons between quantities, use language of quantities, such as 'more' and 'a lot' and knows that a group of things changes in quantity when something is added. Children recognise that a group of three or four objects can be separated in different ways, beginning to recognise that the total is still the same. Children can find one more or one less from a group of up to five objects, then ten objects. Number rhymes and songs used to develop counting skills and language of addition.	**Nursery and Reception**

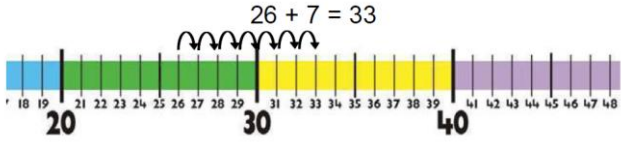
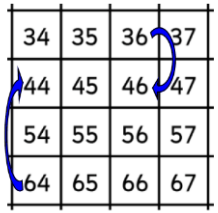
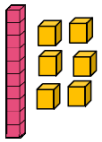
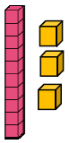
Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
2	**There are 3 people on a bus. 1 more gets on. How many on the bus now?** **Count 4 cakes. Count 3 cakes. How many altogether?**	Count on Count forwards Addition Add Plus Make More than How many Altogether Total And Equals	**Apparatus:** **e.g.**  20 = 11 + 9  5 and 2 more is **7** 1, 2, 3, 4, 5…….6, **7** **Recording through pictorial representations:** **e.g 3+2=** X X + X X = X X X X X X *Estimate how many objects they can see and check by counting them.*	Number stories should be used to set contexts for calculations. Children will mainly use concrete apparatus and practical activities to add; merging sets and then counting the total. They will also count on from a number to find the total. **Resources** Counters, Small toys, Buttons, Cubes, Pegs, Numicon, Fingers, Number tracks, Number lines, songs, whiteboards.	BM Steps 1 – 5 **Year 1**

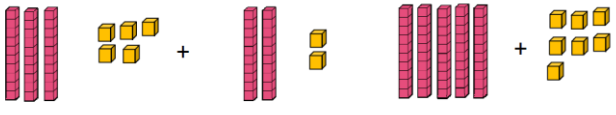
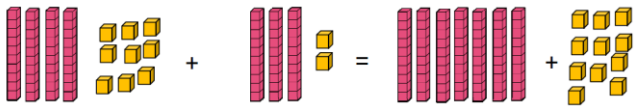
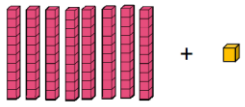
Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
3	**How many are 3 and 5 altogether?** **What must I add to 4 to make 10?**	Count on Count forwards Addition Add Plus Make More than More How many Altogether Total And Equals Double Bonds	**Simple number tracks / number lines** to count up / on: e.g. What is 2 more than 6?   **Number grids**  *Estimate how many objects they can see and check by counting them.*	Children will still be doing a lot of concrete work and may also still use pictorial representations. However, there should be a move towards number tracks / lines, grids and cards as a visual resource. **Resources** Counters, Small toys, Buttons, Cubes, Pegs, Numicon, coins, Fingers, Number tracks, Number lines, Number grids, whiteboards	BM Steps 6 – 8 **Year 1**

Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
4	**What is the sum of 19 and 4?** **Add 60 to 30?**	Count on Add Addition Make Total Altogether And Double More than Tens Ones Partition	Use addition facts to 20 to derive related facts to 100.  **Number line**  **Hundred grid** Count down the columns: 36+10 = 46  **Base 10 resources** to partition '**teen**' **numbers** into **tens** and **ones** and **recombine**. e.g. 16+13=29 10+10 = 20 6+3= 9 20+9=29 16 =  13 = 	Children are beginning 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. They should be carrying out the following calculations: **TO + T0**; **TO + O** and **1O + 1O** (teen numbers). These should be done first without crossing any boundaries. **Resources** Concrete objects if still required (as above) 100 grid (and beyond), Number lines, Number grids, Coins, Whiteboards, Place value counters, Dienes apparatus.	BM Steps 9 – 20 **Year 1 and 2**

Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
5	**70 plus 50** **How many is 21 and 35 altogether?**	Add Addition More Plus Make Sum Total Altogether More How many more … How much more … Equals Tens Ones Partition Multiple of 10 Tens boundary	**Partitioning** **Intially with apparatus (Base ten or place value counters)** For example: 35 + 22  30 + 5 + 20 + 2 = 50 + 7 **Recorded as:** 35 + 22 = 30 + 20 = 50 5 + 2 = 7 50 + 7 = 57 *Encourage children to make estimations 40+20 = 60. My answer will be about 60.* 49 + 32 = ?  40 + 9 + 30 + 2 = 70 + 11 Ten of the **units** can be exchanged for a **rod**:  80 + 1 = 81 49 + 32 = 40 + 30 = 70 9 + 2 = 11 70 + 10 + 1 = 81	Children should continue to use the number line where needed. Support could be given with the use of 100 grid ie add 10s on then ones by going down the columns and across. Children should experience adding the most and the least significant digit first. They should be carrying out the following calculations: **TO + TO**. These should be done first without crossing any boundaries. **Resources** Number lines, Number grids, Coins, Whiteboards, Place value counters, Dienes apparatus.	BM Steps 21 – 27 **Year 2 and 3**

Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
6	**What is the sum of 126 and 39?** **Increase 148 by 22.** **Add 69 to 374.**	Add Addition More Plus Make Sum Increase Total Altogether More How many more … How much more … Equals Hundreds Tens Ones Estimate Partition Recombine	**Partitioning moving into column method for recording** As above – including with 3-digt numbers. Begin to get children to add least significant digits first. (Place value resources can be used to support.) Introduce to **column** for recording: e.g. 532 + 245 **532** **+ 244** **6** **70** **700** **776** Leading to **532** **+ 244** **776** *Encourage children to make estimations first ie 500+ 200 = 700; My answer will be more than 700 because I've rounded down.*	The children should still experience adding with both most and least significant digit first. Initially with the use of place value resources to support. They should be carrying the following types of calculation: **TO + TO, HTO + TO** and **HTO + HTO**. **Resources** Whiteboards, Coins, Place value counters, Dienes apparatus.	BM Steps 28 – 30 **Year 3**

Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
7	**Increase 190 by 37.** **What is the total of 229 and 39?** **Which 3 numbers could have a total of 450?** **Can you explain the mistakes Sam made in this calculation?** 325 + 247 581	Add Addition More Plus Make Sum Increase Total Altogether More How many more … How much more … Equals Thousands Hundreds Tens Ones Estimate Inverse	**Column Method (crossing the 10s or 100s boundaries)** Model using place value counters initially e.g. 538 + 247  **Expanded** method leading to **compact** method **538** **+ 247** **15** **70** **700** **785** **538** **+ 247** **785** 1 *Encourage children to make estimations first ie 500+ 200 = 700; My answer will be more than 700 because I've rounded down.*	Calculations should involve crossing the tens, hundreds or both boundaries. Children use the same column methods as those above. However, children should now use the least significant digit first. They should be carrying the following types of calculation: **TO + TO and HTO + TO and HTO + HTO** **Resources** Whiteboards, Place value counters, Dienes apparatus	BM Steps 28 – 30 **Year 3 and 4**

Berkeley Primary School Written Calculation Policy
Addition

Stage	EXAMPLES	VOCABULARY	HOW IT WILL LOOK IN WRITTEN FORM	NOTES	Big Maths **NC 2014**
8	**Add 4250 to 3536?** **How much altogether is 855 and 622?** **Increase 250 by 420.** **Use <, > or = to make this statement correct.** $1023+24+24 \bigcirc 1023+48$	Add Addition More Plus Make Sum Increase Total Altogether More How many more … How much more … Equals Hundreds Tens Ones Estimate	**Column (expanded may be used initially)** 7648 + 1486 14 120 1000 8000 9134 7648 + 1486 9134 1 1 *Encourage children to make more sophisticated estimations first 7500 + 1500 = 9000. My answer will be slightly more than 9000.*	Children should use the same column methods as above continuing to use least significant digit first. Children should be working with **ThHTO + ThHTO**	BM Steps 31 – 39 **Year 4, 5 and 6**
9	**Can you use five of the digits 1 to 9 to make this number sentence true?** $\square\square.\square+\square.\square=31.7$	As above + Tenths Hundredths	As above but extending into decimals (including those with mixed number of decimal places) and numbers 4+ digits. *Encourage children to make estimations first ie 26.7 + 3.89; my answer will be slightly less than 27 + 4 = 31 ie 30.th*	Children should use the compact method for addition. Children should be working with **larger numbers with mixed numbers of digits e.g 10ThThHTO + ThHTO; TO.t + O.th.**	BM Steps 40 - 41 **Year 5 and 6**