Subtraction KS1

EYFS	**Reception: ELG 2018** Numbers to 20: place them in order and say which number is one more or one less than a given number Using quantities and objects, they add and **subtract two single-digit numbers and count on or back to find the answer** They solve problems, including doubling, halving and sharing. **Exceeding:** Estimation and checking quantities by counting up to 20 Combining groups of 2, 5 or 10 or sharing into equal groups.	
Year	**1**	**2**
Layers of vocabulary **Appendix 1a** Beck's Tiers of Vocabulary **Appendix 1b:** Vocabulary book	**Basic to subject specific (Beck's Tiers):** take away, distance between, difference between, less than. How many more? How much greater? How many fewer? how much more is…? – subtract, take (away), minus, leave, how many are left/left over? how many have gone? one less, two less, ten less… how many fewer is… than…? how much less is…? difference between half, halve = equals, sign, is the same as **Instructional vocabulary:** start from, start with, start at look at point, to show me	**Basic to subject specific (Beck's Tiers):** subtract, subtraction, take (away), minus leave, how many are left/left over? one less, two less… ten less… one hundred less how many fewer is… than…? how much less is…? difference between half, halve = equals, sign, is the same as tens boundary difference, partition, rearrange, inverse, place value **Instructional vocabulary:** tell me, describe, name, pick out, discuss, talk about, explain, explain your method, explain how you got your answer, give an example of… show how you…
NC 2014	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	Recording subtraction in columns supports place value and prepares for formal written methods with larger numbers.
	Concrete, pictorial, abstract	Concrete, pictorial, abstract

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Developing Conceptual/ Procedural Understanding						
Number bonds $5 + ? = 10$ $10 - 5 = ?$ $6 + ? = 10$ $7 + 6 = 10$ $10 - 6 = ?$ $10 - 4 = 6$ $9 + ? = 10$ $7 + 9 = 10$ $10 - 9 = ?$ $10 - ? = 9$ **Ten Frames** **Difference between 7 and 10.** $2 + \square = 10$ $10 - \square = 3$ $5 + \square = 10$ $10 - \square = 9$ $\square + 4 = 10$ $10 - 0 = \square$ **Use the pattern to complete the number sentences.** 10 / 6 4 / 3 7 / 5 5 / 2 8 **6 less than 10 is 4.** **Count out, then count how many are left. Remove from the set.** $7 - 4 = 3$	**Count back on a number track.** $15 - 6 = 9$ 7 8 9 10 11 12 13 14 15 16 **Difference between.** $13 - 8 = \_\_$ $8 + \_\_ = 13$ **Subtraction-take away** Before / Then / Now 4 / 1 / ? At first / Go away $4 - 1 = 3$ Jenny's cakes Cakes left ? / Cakes eaten $8 - 3 = ?$ **Subtraction-finding the difference** Peter / Jenny How many more cakes does Peter have than Jenny? $8 - 3 = ?$	**Develop knowledge of fact families.** $7 = 5 + 2$ $2 + 5 = 7$ $7 - 2 = 5$ $7 - 5 = 2$ **Whole-part model** 10 / 6 / ? 10 / 6 / ? **Fill in the missing numbers** **Whole part model-EXCEL ADDITION AND SUBTRACTION TRIOS** **Fill in the missing numbers** **Whole part model-EXCEL ADDITION AND SUBTRACTION TRIOS**	**Whole-part model** 27 / 100 15 / ? / 77 / ? 27 / 15 / ? / 77 / ? **Fill in the missing numbers** **Whole part model-EXCEL ADDITION AND SUBTRACTION TRIOS** **All answers to be recorded in a number sentence following any informal recording.** **Adjustment strategy** $77 - 9 =$ $77 - 10 + 1 = 67 + 1$ $= 68$ $+1$ -10 67 68 77 **(Round and adjust)** What is the nearest 10? $55 - 27 =$ $55 - 30 + 3 = 25 + 3$ $= 28$ $91 - 48 =$ $91 - 50 + 2 = 41 + 2$ $= 43$	**Re-arranging** $35 - 8 =$ Tell me what you know about 8, e.g. $2 + 6$, $5 + 3$ $35 - 8 =$ Rearrange the 8 into $5 + 3$ So $35 - 5 - 3 = 30 - 3 = 27$ $55 - 27 =$ Partition the 27 into $20 + 7$ and rearrange the 7 into $5 + 2$. So $55 - 27 = 55 - 20 - 5 - 2$ $= 35 - 5 - 2$ $= 28$ **Taking away and exchanging** $73 - 46 =$ What do we know about 76? / Exchange to make '60 and 13'. $73 - 46 = 27$ / Now take away the 46.	**Subtract mentally pairs of multiples of 10 using known facts** $60 - 20 = 40$ because $6 - 2 = 4$ **Partitioning of the second number strategy** $74 - 47$ $74 - 40 = 34$ $34 - 4 - 3 = 27$ **Introducing columns without crossing the boundary** 47 = 40 7 - 23 = - 20 3 24 = 20 4 "7 subtract 3 equals 4 and 40 subtract 20 equals 20. 20 and 4 make 24" **Balance in the equation** $35 - \square = 31$ $\square - 12 = 34$ $20 - \square = 14 - 3$ **(Open-ended)** $18 - \square = 15 - \square$ **Decision making** $27 - \square = 12$ Sam works out $27 - 15 = 12$. How could he have done this?

With jottings… or in your head	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as: $7 = \square - 9$	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Add and subtract numbers using concrete objects, pictorial representations and mentally, including: a 2 digit number and ones; a 2 digit number and tens; two 2 digit numbers; adding three 1 digit numbers.
Known facts	Represent & use number bonds and related subtraction facts within 20. Add and subtract 1 digit and 2 digit numbers to 20, including zero	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
Checking strategies	Know that the number gets smaller because objects have been removed from the set. Use number tracks to develop counting skills, forwards and backwards. To have experience of '=' sign as last stage in calculation.	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. To know that '=' means 'the same as' and can appear in a different place within a calculation

Essential knowledge	1 less	Number bonds: subtraction 5 and 6	10 less	Number bonds: subtraction 20,12 and 13
	Count back	Number bonds: subtraction 7 and	Subtract 1 digit from 2 digit by	Number bonds: subtraction 14

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		8	bridging	and 15
	Subtract 10.	Number bonds: subtraction 9 and 10	Partition second number and count back in tens then ones.	Number bonds: subtraction 16 and 17
	Teens subtract 10	Difference between	Subtract 10 and multiples of 10.	Number bonds: subtraction 18 and 19
			Subtract near multiples of 10.	Difference between
			Add near multiples of 10.	