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| **Year 3 - Building and assessing the conceptual understanding and learning – Addition and Subtraction** |
| **End of Year Expectations:**Pupils should be taught to:* add and subtract numbers mentally, including

 a three digit number and ones a three digit number and tens a three digit number and hundreds* add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
* estimate the answer to a calculation and use inverse operations to check answers
* solve problems, including missing number problems, using facts, place value and more complex addition and subtraction
 | **Non-statutory guidance:**Pupils practise solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100. Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent (see Appendix 1). **See NCETM “Teaching for Mastery” Year 3 book – addition and subtraction**https://www.ncetm.org.uk/public/files/23305581/Mastery\_Assessment\_Y3\_Low\_Res.pdf.   |
| **Autumn** | **Spring** | **Summer** |
| **Objectives below to be applied within a context:*** **using number bonds to support adding and subtracting multiples of 10 and 100)**
* **consolidate and refine mental strategies using number line jottings (jumps of 10 and 1, 41+13 then multiples of 10 and 1 41+33 and bridging through 10 49+33)**
* **begin to move towards partitioning method involving jottings (based on secure mental methods) – modelling with dienes (alongside).**
* **partition 3 digit numbers in different ways**
* **add 1’s to any three digit numbers.**
* **add 10 or 100 to any three digit number**
* **understand the relationship between addition and subtraction**
* **use understanding of inverse operations to check calculations (including missing number problems).**
* **introduce rounding to approximate mentally**
* **Solve a range of addition and subtraction problems, choosing an appropriate strategy for the numbers involved.**
 | **Objectives below to be applied within a context:*** continue to refine and develop mental strategies for addition and subtraction
* **Consolidate addition and subtraction - partitioning method (based on secure mental methods) – modelling with dienes/place value counters (alongside). (refer to calculation policy)**
* **Secure understanding of place value and partitioning 3 digit numbers in different ways in readiness to begin to develop understanding of columnar addition and subtraction (practical – with resources)**
* **develop rounding to estimate and check calculations**
* **Solve a range of addition and subtraction problems, choosing an appropriate strategy (mental/ with jottings / written) for the numbers involved.**
 | * continue to refine and develop mental strategies for addition and subtraction
* **continue with partitioning method and expanded column method onto informal methods (alongside concrete)**
* **estimating and checking using rounding**
* **Solve a range of addition and subtraction problems, choosing an appropriate strategy (mental / with jottings / written) for the numbers involved.**
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| **Key questions:*** Can I use and apply my knowledge of known facts e.g. 7+3=10 to solve 37+3 =40?
* Can I use number line jottings to support mental calculations involving 2 two digit numbers?

(jumps of 10 and 1, bridging 10, multiples)* Can I use a partitioning method to add and subtract (based on secure mental methods) – modelling with dienes (alongside).
* Can I partition 3 digit numbers in different ways?
* Can I confidently add/subtract any single digit number to a three digit number? 279 + 9, 257 - 9
* Can I confidently add/subtract any 10 and 100 to a three digit number? 279 + 60 279 + 200 257-20 257 -200
* Can I show my understanding of the relationship between addition and subtraction and use this as a checking strategy? (inverse operations)
* Can i use rounding as a mental strategy to help me approximate?
 | **Key questions:*** Can I confidently use a partitioning method (based on secure mental methods) to solve problems involving addition and subtraction?
* Can I use my understanding of place value and partitioning of 3 digit numbers in different ways to solve problems?
* Can I use my knowledge of number bonds to support adding and subtracting multiples of 10 and 100)?
* Can I use rounding to estimate and check calculations?
 | **Key questions:*** Can I confidently solve addition and subtraction problems with 2 and 3 digit numbers using mental methods with jottings and informal written methods?
* Can I use rounding as a strategy to help me estimate solutions?
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