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| **Year 5 - Building and assessing the conceptual understanding and learning – Addition and Subtraction** |
| **End of Year Expectations:**Pupils should be taught to: * add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
* add and subtract numbers mentally with increasingly large numbers
* use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
* solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
 | **Non-statutory guidance:**Pupils practise using the formal written methods of columnar addition and subtraction with increasingly large numbers to aid fluency (see Appendix 1 – Primary National Curriculum document). They practise mental calculations with increasingly large numbers to aid fluency (e.g. 12 462 – 2 300 = 10 162). **See NCETM “Teaching for Mastery” Year 5 book – addition and subtraction.**https://www.ncetm.org.uk/public/files/23305632/Mastery\_Assessment\_Y5\_Low\_Res.pdf  |
| **Autumn** | **Spring** | **Summer** |
| * Consolidate addition and subtraction with whole numbers up to 4 digits **in a range of contexts** (e.g. money, measures, problem-solving, investigations), including using formal written methods (columnar addition and subtraction).
* Begin to add and subtract with more than 4-digit numbers – linked to understanding of number and place value.
* Add and subtract numbers mentally with increasingly large numbers
* Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
* Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
 | * Add and subtract with more than 4-digit numbers – linked to understanding of number and place value (including using formal written methods).
* Continue to practise, refine and develop confidence with strategies for addition and subtraction in a range of contexts (e.g. money, measures, problem-solving, investigations).
* Explain and reason about which methods/ strategies could be used and which is the best in each case.
* Routinely use rounding to approximate and check answers and determine, in the context of the problem, levels of accuracy.
 | * Continue to practise and refine mental and written strategies for addition and subtraction in different contextual problems.
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| Key questions:* In the context of multi-step problems and investigations, can I confidently add together numbers with up to 4-digits, using a formal written (column) method where appropriate and explain what I have done?
* Can I use a range of strategies for addition, choosing appropriately for the numbers involved – (including mental strategies), and I can explain when it is appropriate to use different methods?
* In the context of multi-step problems and investigations, can I confidently subtract from numbers with up to 4-digits, using a formal written (column) method where appropriate and explain what I have done?
* Can I use a range of strategies for subtraction, choosing appropriately for the numbers involved – (including mental strategies), and I can explain when it is appropriate to use different methods?
* Am I routinely able to use rounding to approximate a solution or answer so that I can check accuracy?
 | Key questions: * In the context of multi-step problems and investigations, can I confidently add together numbers with more than 4 digits, using a formal written (column) method where appropriate and explain what I have done?
* In the context of multi-step problems and investigations, can I confidently subtract from numbers with more than 4-digits, using a formal written (column) method where appropriate and explain what I have done?
* Am I routinely able to use rounding to approximate a solution or answer so that I can check accuracy?
 | Key questions:* In the context of investigations and multi-step problems, can I confidently add whole numbers with more than 4 digits, including using formal written methods (columnar addition) where appropriate?
* Where appropriate, can I apply known facts and strategies to add mentally (4+ digits)?
* In the context of investigations and multi-step problems, can I confidently subtract from whole numbers with more than 4 digits, including using formal written methods (columnar addition) where appropriate?
* Where appropriate, can I apply known facts and strategies to subtract mentally (from 4+ digits)?
* Can I use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy?
* Can I solve addition and subtraction multi-step problems in a range of contexts, deciding and explaining which operations and methods to use and why?
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