Hampshire County Council
Improvement and Advisory Service

HIAS MOODLE+ RESOURCE

Year 4 Unit Plan 4.1

Number and Place Value

Addition and Subtraction

Autumn Term

HIAS Maths Team
September 2026
Final version

Overview

This document contains…

Year 4 Unit Plans linked to the Hampshire Medium Term Overview

Points to consider when using this resource:

These unit plans provide an example of how medium-term planning could be developed into units of work. These unit plans will need to be adapted to meet the needs of pupils. The unit plan provides an outline of a possible learning journey with suggestions of types of tasks that could be used. They also identify required prior learning, some common misconceptions and an indication of key skills pupils need to secure competency. It is assumed that teachers will make use of appropriate mathematical representations (manipulatives, visuals and symbolic) to support conceptual understanding for pupils alongside procedural fluency.

National Curriculum Links:

Number and Place Value

- count in multiples of 6, 7, 9, 25 and 1000
- find 1000 more or less than a given number
- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- order and compare numbers beyond 1000
- identify, represent and estimate numbers using different representations
- solve number and practical problems that involve all of the above and with increasingly large positive numbers
- read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

Addition and Subtraction

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

This unit develops pupils' understanding of place value in numbers up to 10,000 and builds fluency in addition and subtraction. It revisits key Year 3 skills before progressing to recognising the value of each digit in four-digit numbers, partitioning in standard and non-standard ways, comparing and ordering numbers, reasoning about their position on number lines, and finding 10, 100 and 1,000 more or less. Pupils also practise mental strategies for adding and subtracting ones, tens and hundreds, including bridging.	**Notional Time:** **15 sessions**

Check and Refresh - *skills and knowledge that pupils need to know*	**Verbal coding-** *precise mathematical language to model during worked examples*	**Mastering Key Facts in Key Stage 2 –** developing fluency and automaticity
Recognise the place value of digits in two-digit and three-digit numbers. Compare numbers up to 100 using <, > and = Add and subtract two-digit numbers and ones/tens using concrete and pictorial representations (including bridging). 1 ten is equal to 10 ones. 1 hundred is equal to 10 tens.	__ is__ thousands, __ hundreds, __ tens and __ ones. ___ ones plus ___ ones is equal to ___ ones, ___ ten plus ___ tens is equal to ___ tens and ___ hundreds plus ___ hundreds is ___ hundreds __ ones subtract __ ones is ___ ones, ___ tens subtract ___ tens is ___ ten and ___ hundreds subtract ___ hundred is ___ hundreds	**Y2 & 3 Recap**: Recall multiples of 2, 3, 4, 5 and 10 up to 12 in any order, including missing numbers and related division facts fluently. Number bonds and deriving number bond up to 1000 Number bonds and related number bond up to 10,000
Mathematical Concepts- *important pieces of information learners should take away from the unit*	**Watch out for**	**DfE Ready -to- progress criteria**
Understand place value in four-digit numbers and how to partition and recombine numbers. Represent numbers in different ways. Compare and order numbers up to 1000, reasoning about their position on a number line. Develop fluency and flexibility in choosing efficient strategies for calculations and problem solving.	Pupils who believe that adding or subtracting 10 or 100 changes the value of the other digits (e.g. 245 + 10 affects the ones digit). Pupils who rely on counting in ones or formal written methods rather than applying place value knowledge. Pupils who have difficulty estimating positions on unmarked number lines. Pupils who incorrectly apply number bonds, or lack understanding that complements build on known facts.	**3NPV-2** **4NPV-2** **3NPV-3** **4NPV-3** **4NF-3** **Formative assessment questions** - *key questions to support pupil reasoning and teacher assessment* • What is the same and what is different? • What if I change…? • Can you give me an example of… and another…and another? • Which is harder and which is easier…? • If I know this, then what else do I know?

Visual coding: key representations

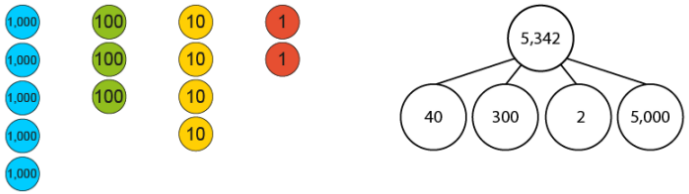
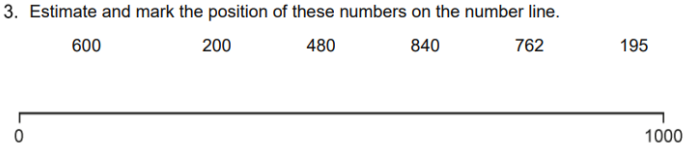
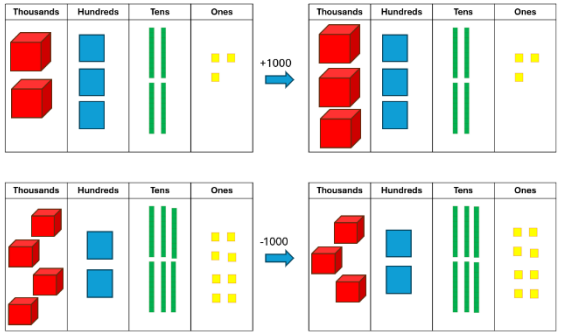
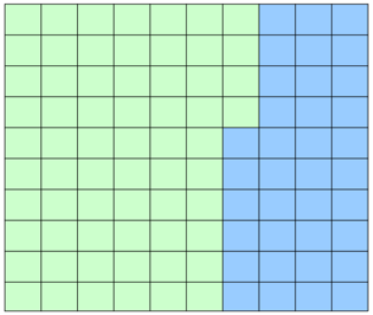


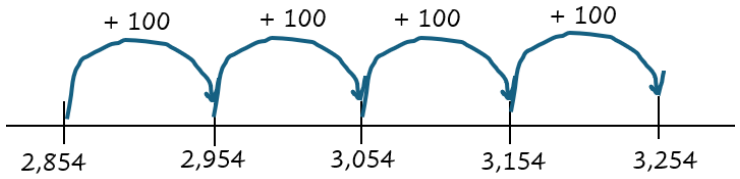
Figure 106: 2 representations of the place-value composition of 5,342

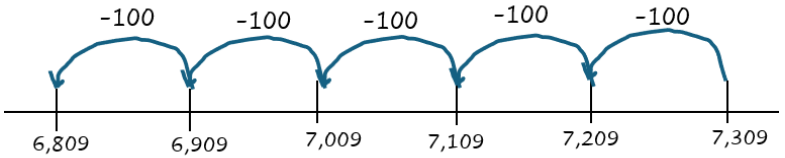






64 + 36 = 100

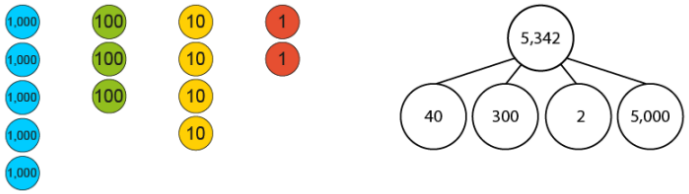
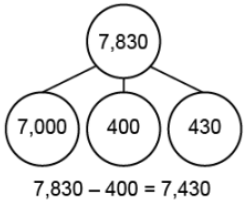
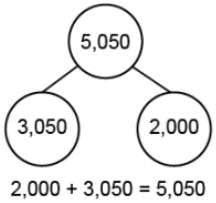
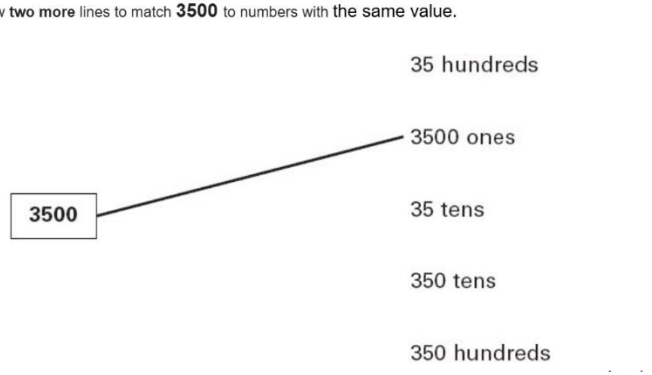


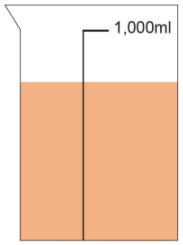


Learning Journey – Number and Place Value			
Autumn unit 4.1 (2 weeks)	**Spring unit 4.7 (1 week)**	**Spring 4.10 (1 week)**	**Summer 4.13 (1 week)**
I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value.			
I can count in multiples of 100. I can count in multiples of 1000. I can count in multiples of 6. I can recognise the place value of each digit in a three-digit number. I can recognise the place value of each digit in a four-digit number. I can identify and represent numbers using different representations. I can reason about the location of a three-digit number on a number line. I can reason about the location of a four-digit number on a number line. I can compare and order numbers up to 1000. I can compare and order numbers beyond 1000. I can find 10 or 100 more or less than a given number. I can find 1000 more or less than a given number.	I can count in multiples of 50. I can count in multiples of 25. I can count in multiples of 7 I can reason about the location of a four-digit number on a number line. I can round any number to the nearest 10. I can round any number to the nearest 100. I can round any number to the nearest 1000.	I can count in multiples of 9. I can read roman numerals to 100. I count backwards through zero to include negative numbers. I can recognise the place value of each digit in a four-digit number. I can solve number and practical problems.	I can identify, represent and estimate numbers using different representations. I can order and compare numbers beyond 1000. I can round any number to the nearest 10, 100 or 1000. I can solve number and practical problems.

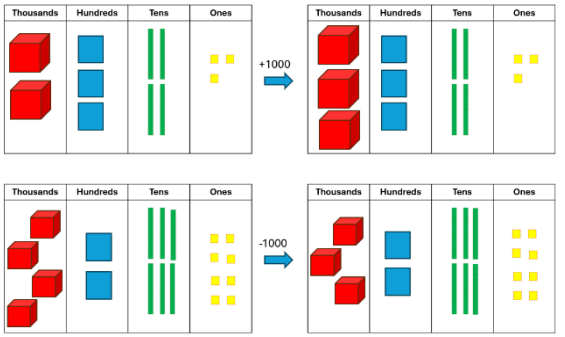
Learning Journey – Addition and Subtraction			
Autumn unit 4.1 (1 week)	**Autumn unit 4.5 (1 week)**	**Spring unit 4.7 (2 weeks)**	**Spring unit 4.13 (1 week)**
I can add and subtract mentally a three-digit number and ones. I can add and subtract mentally a four-digit number and ones. I can add and subtract mentally a three-digit number and tens. I can add and subtract mentally a four-digit number and tens. I can add and subtract mentally a three-digit number and hundreds. I can add and subtract mentally a four-digit number and hundreds. I can solve problems using number facts (complements to 100). I can solve problems using number facts (complements to 1000).	I can use inverse operations to check answers. I can add and subtract numbers with up to three-digits using formal written methods. I can add and subtract numbers with up to four-digits using formal written methods. I can solve addition and subtraction one-step problems in context, deciding which operations and methods to use and why. I can solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why.	I can estimate the answer to a calculation and use inverse operations to check answers. I can add and subtract mentally a four-digit number and ones. I can add and subtract mentally a four-digit number and tens. I can add and subtract mentally a four-digit number and hundreds. I can solve problems using number facts (complements to 1000). I can add and subtract numbers with up to four-digits using formal written methods. I can solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why	*Repeats in measurement learning journey* I can add and subtract amounts to money to give change, I can add and subtract lengths. I can add and subtract mass. I can add and subtract volume.
			Summer unit 4.15 (2 weeks)
			I can estimate and use inverse operations to check answers to a calculation. I can add and subtract with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

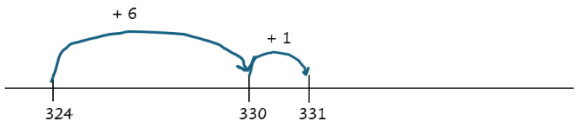
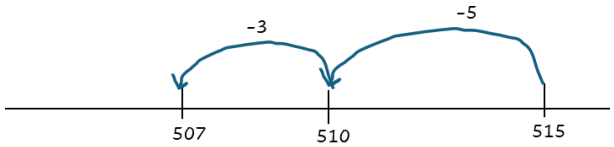
Proposed lesson sequence to support development of mathematical concepts	
Developing fluency and automaticity – ongoing daily practice	
Mastering Key Facts in Key Stage 2	**Autumn 1 Ongoing Mental Fluency Practice** • Y2 & 3 Recap: Recall multiples of 2, 3, 4, 5 and 10 up to 12 in any order, including missing numbers and related division facts fluently. • Number bonds and deriving number bonds up to 1000 • Number bonds and related number bond up to 10,000 • I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value.
Counting Fluency	• I can count in multiples of 100. • I can count in multiples of 1000. • I can count in multiples of 6. • Moodle: Primary Daily Count Resource
I can…	**Mathematical Concepts, Key Skills and Suggested Tasks**
10 sessions - NPV	
I can recognise the place value of each digit in a three-digit number.	Before introducing numbers up to 10,000, pupils must confidently identify the place value of each digit in a three-digit number, compose and partition numbers into hundreds, tens and ones, and understand that the order of presentation does not affect the total value (e.g., 40 + 300 + 2 = 342). This lesson revisits and deepens the skills taught in Year 3 to ensure readiness for progression. Some pupils may find dienes more effective than place value counters when developing secure understanding, as counters do not convey physical size. Transition to counters only when pupils can confidently partition and understand digit value.  **Figure 65: two representations of the place-value composition of 342** Fill in the missing symbols (<, > or =). $100 + 60 + 5 \bigcirc 105 + 60$ $300 + 40 + 2 \bigcirc 300 + 24$ $783 - 80 \bigcirc 783 - 3$ $839 - 9 - 30 \bigcirc 839 - 39$ Mathematics guidance: key stages 1 and 2 (covers years 1 to 6) – **3NPV-2** Contains material developed by NCETM and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

I can recognise the place value of each digit in a four-digit number.	Pupils should be able to identify the place value of each digit in a four-digit number. They must be able to combine units of ones, tens, hundreds and thousands to compose four-digit numbers, and partition four-digit numbers into these units. Pupils need to experience variation in the order of presentation of the units, so that they understand that 40 + 300 + 2 + 5000 is equal to 5,342, not 4,325.  **Figure 106: 2 representations of the place-value composition of 5,342** Mathematics guidance: key stages 1 and 2 (covers years 1 to 6) – **4NPV-2** Contains material developed by NCETM and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/
I can identify and represent numbers using different representations.	As well as being able to partition numbers in the 'standard' way (into individual place-value units), pupils must also be able to partition numbers in 'non-standard' ways, and carry out related addition and subtraction calculations, for example:  **Figure 107: partitioning 7,830 into 7,430 and 400**  **Figure 108: partitioning 5,050 into 2,000 and 3,050** Mathematics guidance: key stages 1 and 2 (covers years 1 to 6) – **4NPV-2** Contains material developed by NCETM and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/ **Suggested Tasks:** **You have a pile of 1000 place value counters and a pile of 100 place value counters.** **Make 2300.** **How many different ways can you find?**   Contains material developed by the Standards and Testing Agency for 2018 national curriculum assessments and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

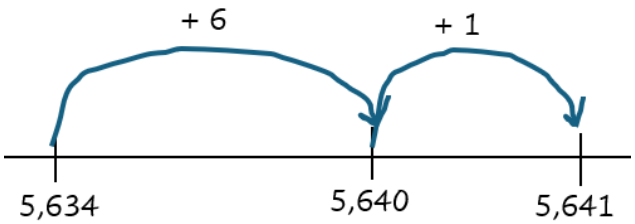
I can reason about the location of a three-digit number on a number line.	In this step, pupils should revisit and consolidate their understanding of three-digit numbers before moving on to four-digit numbers. They need to demonstrate that they can accurately reason about the position of a three-digit number on a number line, using midpoints and key markers such as multiples of 10 and 100 to support proportional reasoning. This consolidation is essential to ensure pupils have the conceptual understanding and reasoning strategies required for accurate placement and comparison when working with numbers up to 10,000. 3. Estimate and mark the position of these numbers on the number line. 600 200 480 840 762 195 0 1000 Mathematics guidance: key stages 1 and 2 (covers years 1 to 6) – **3NPV-3** Contains material developed by NCETM and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/
I can reason about the location of a four-digit number on a number line.	Pupils need to be able to identify or place four-digit numbers on marked number lines with a variety of scales. Pupils should also be able to estimate the value or position of four-digit numbers on unmarked numbers lines, using appropriate proportional reasoning. Pupils must also be able to identify which pair of multiples of 1000 or 100, a given four-digit number is between. In this example, for the number 8,681, pupils must identify the previous and next multiples of 1,000 and 100. **Sentence stems:** The previous multiple of 1000 is ____. The next multiple of 1000 is _____. **Suggested Tasks:** 2.  a. Estimate how much liquid is in the beaker. b. Estimate how much liquid needs to be added to make 1 litre. 3. Estimate and mark the position of 600g on this scale. 0g 2,000g 8,681 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 **Figure 109: using a number line to identify the previous and next multiple of 1,000** 8,681 8,000 8,100 8,200 8,300 8,400 8,500 8,600 8,700 8,800 8,900 9,000 **Figure 110: using a number line to identify the previous and next multiple of 100** Mathematics guidance: key stages 1 and 2 (covers years 1 to 6) – **4NPV-3** Contains material developed by NCETM and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

I can compare and order numbers up to 1000.	In this step, pupils should be assessed against whether they can use the language of 'less than', 'greater than' and 'equal to' when comparing and ordering numbers up to 1000. It is important that adults refrain from using informal mnemonic devices such as "smallest number eats the biggest number" when using the symbols < and >, which can hinder conceptual understanding. Pupils should use dienes, place value counters or a number line to demonstrate their mathematical thinking. Ali puts these five numbers in their correct places on a number line. 511 499 502 555 455 Write the number **closest** to 500 1 mark Write the number **furthest** from 500 1 mark Contains material developed by the Standards and Testing Agency for 2016 national curriculum assessments and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/
I can compare and order numbers beyond 1000.	Similarly to the step above, pupils should now use their knowledge of recognising place value of each digit in a four-digit number and reason about the location of a four-digit number on a number line to compare and order numbers up to 10,000. Pupils should also use the language of 'less than', 'greater than' and 'equal to' when comparing and ordering number up to 10,000. **Suggested Tasks:** A car costs **more** than **£8600** but **less** than **£9100** Tick (✓) the prices that the car could cost. £8569 ☐ £9090 ☐ £9130 ☐ £8999 ☐ **Make different four-digit numbers using the digit cards.** **Position the numbers accurately on the number line:** 9 5 7 1 0 2500 5000 7500 10,000 Contains material developed by the Standards and Testing Agency for 2016 national curriculum assessments and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

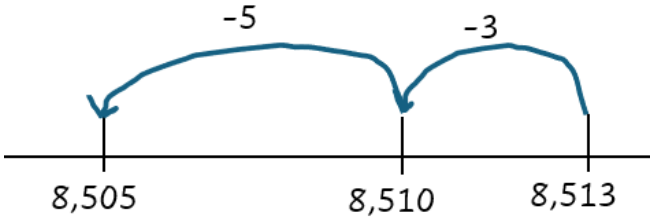
I can find 10 or 100 more or less than a given number.	Ensure pupils are fluent and confident in applying the Year 3 skills of finding 10 more or less and 100 more or less, including when crossing a hundreds boundary up to 1000. Pupils should be able to explain their reasoning using place value language and appropriate representations, such as dienes, place value counters or a number line. For example: *"245 is 2 hundreds, 4 tens and 5 ones. Adding 10 gives 2 hundreds, 5 tens and 5 ones."* Provide varied reasoning tasks to deepen understanding, such as: • **491 + 10 = ___** • **305 – 10 = ___** • **Always, sometimes, never:** Adding 10 more keeps the hundreds digit the same. Once secure, pupils should progress to finding 100 more or less, recognising that only the hundreds digit changes. This consolidation is essential for accurate reasoning and comparison when working with numbers up to 10,000. Ensure that pupils are not counting in ones when finding 10 more or 10 less, or using formal written methods to solve calculations.
I can find 1000 more or less than a given number.	Understanding how to find 1000 more or less than a given number is a critical step in developing secure place value knowledge for numbers up to 10,000. This skill underpins pupils' ability to reason about the structure of our number system and prepares them for efficient mental and written calculation strategies. Before pupils can confidently manipulate four-digit numbers, they must recognise that changing the thousands digit affects the overall value while the hundreds, tens, and ones remain unchanged. Without this conceptual understanding, pupils may rely on rote procedures and struggle with reasoning tasks. Manipulatives such as dienes or place value counters are vital because they make the abstract concept of place value visible and tangible. Seeing and physically exchanging thousands blocks helps pupils internalise the idea that 1,000 is a unit of value, not just a digit. This hands-on experience supports deeper understanding and reduces misconceptions when pupils progress to more abstract representations like number lines or written methods. Teachers should provide structured opportunities for pupils to explore this concept using concrete resources, then transition to pictorial and abstract representations. Encourage pupils to verbalise their reasoning using precise mathematical language, for example:  *"2,343 is 2 thousands, 3 hundreds, 4 tens and 3 ones. Adding 1,000 gives me 3 thousands, 3 hundreds, 4 tens and 3 ones."* *"4,268 is 4 thousands, 2 hundreds, 6 tens and 8 ones. Subtracting 1,000 gives me 3 thousands, 2 hundreds, 6 tens and 8 ones."*

5 sessions – Addition & Subtraction	
Use assessment to inform how these statements are sequenced and delivered across the five sessions. Decisions will be made about combining, regrouping, or embedding statements within arithmetic practice to ensure sufficient opportunities for practice, consolidation, and application.	
I can add and subtract mentally a three-digit number and ones.	In this step, pupils demonstrate that they can use mental strategies to add or subtract a three-digit number and a one-digit number. Some calculations will involve bridging 10, which requires more flexible thinking. Pupils should be able to identify when this happens and choose appropriate strategies. In Year 3, pupils consolidated strategies for adding and subtracting three-digit numbers and ones using number lines. Some pupils may still require the support of concrete resources such as dienes, as outlined in Unit 3.7. **Checking for understanding questions:** • How many ones are there in ___? • Will you need to bridge ten? • How did you use number bonds to help? • What do you need to add/subtract to make the next/previous ten? • What do you need to partition ___ into? For questions that do not bridge 10, pupils should be confident in using number bonds to help them solve the problem, for example: ○ 451 + 8 = ○ “1 one plus 8 ones is 9 ones, so 451 + 8 = 459” ○ 675 – 3 = ○ “5 ones subtract 3 ones is 2 ones, so 675 – 3 = 672” Provide opportunities for pupils to identify the previous and next multiple of 10 to strengthen their understanding of structure and patterns if they are not yet secure in bridging across tens.
	Addition with a number line (bridging): 324 + 7 = 331  I need to add 6 to 24 to make 10. I will partition 7 into 6 and 1. 324 + 6 = 330 330 + 1 = 331
	Subtraction with a number line (bridging): 515 – 8 = 507  I need to subtract 5 from 15 to make 10. I will partition 8 into 5 and 3. 515 – 5 = 510 510 – 3 = 507

<table>
<tr><td>I can add and subtract mentally a four-digit number and ones.</td><td colspan="2">If pupils are secure with adding and subtracting mentally three-digit number and ones, progress on to four-digit and ones.
Continue to use questions to prompt pupils to use number bonds instead of counting in ones. Place value counters and number lines can be used to represent their mathematical thinking.

Checking for understanding questions:
• How many ones are there in ___?
• Will you need to bridge ten?
• How did you use number bonds to help?
• What do you need to add/subtract to make the next/previous ten?
• What do you need to partition ___ into?</td></tr>
<tr><td></td><td>Addition with a number line (bridging):
5,634 + 7 = 5,641
 

I need to add 6 to 34 to make 10.
I will partition 7 into 6 and 1.

5,634 + 6 = 5,640
5,640 + 1 = 5,641</td><td>Subtraction with a number line (bridging):
8513 – 8 = 8,505
 

I need to subtract 3 from 13 to make 10.
I will partition 8 into 3 and 5.

8,513 – 3 = 8,510
8,510 – 5 = 8,505</td></tr>
<tr><td>I can add and subtract mentally a three-digit number and tens.</td><td colspan="2">In this step, pupils use mental strategies to add or subtract a three-digit number and a multiple of ten (e.g. 553 + 40, or 871 – 20). The emphasis is on understanding and applying place value, not just arriving at the correct answer. Some calculations will involve bridging 100, which requires more flexible thinking. Pupils should be able to identify when this happens and may be able to use complements to 100 to support with more efficient mental calculation.
Checking for understanding questions:
• How many tens are there in ___?
• Will you need to bridge hundred?
• What do you need to add/subtract to make the next/previous hundred?
• What do you need to partition ___ into?

See next page for more detail:</td></tr>
</table>

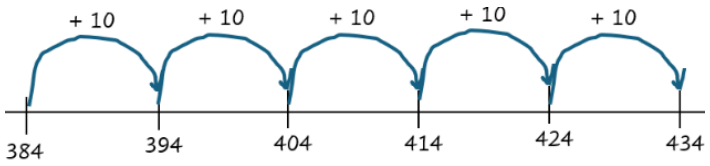
In Year 3, pupils consolidated strategies for adding and subtracting three-digit numbers and tens using number lines. Some pupils may still require the support of concrete resources such as dienes, as outlined in Unit 3.7, or place value counters.

For questions that do not bridge 100, pupils should be confident in using number bonds to help them solve the problem, for example:

- 451 + 40 =
  - "5 tens plus 4 tens is 9 tens, so 451 + 40 = 491"
- 675 – 30 =
  - "7 tens subtract 3 tens is 4 tens, so 675 – 30 = 645"

Addition with a number line (bridging):

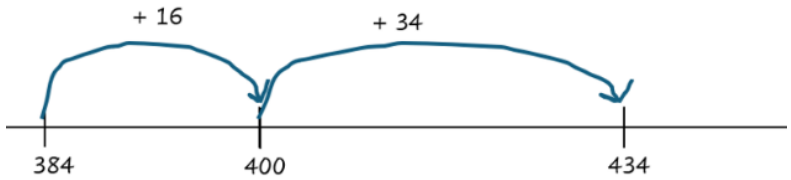
384 + 50 = 434



*Some pupils may be able to use complements to 100 to support with more efficient mental calculation

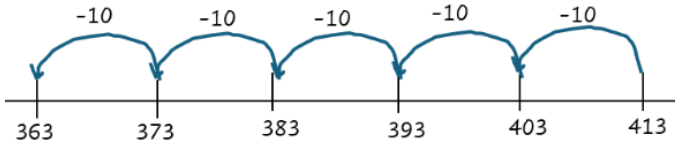
384 + 16 = 400

400 + 34 = 434



Subtraction with a number line (bridging):

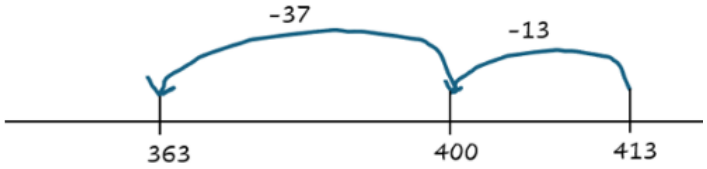
413 – 50 = 363



*Some pupils may be able to use complements to 100 to support with more efficient mental calculation

413 – 13 = 400

400 – 37 = 363



I can add and subtract mentally a four-digit number and tens.

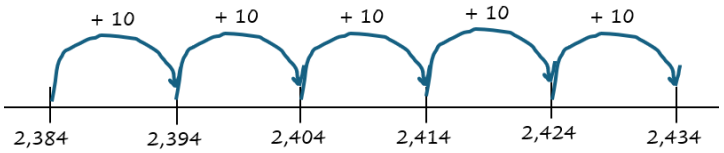
If pupils are secure with adding and subtracting mentally three-digit number and tens, progress on to four-digit and tens.
Continue to use questions to prompt pupils to use number bonds and complements to 100 to support efficient strategies. Place value counters and number lines can be used to represent their mathematical thinking.

Checking for understanding questions:

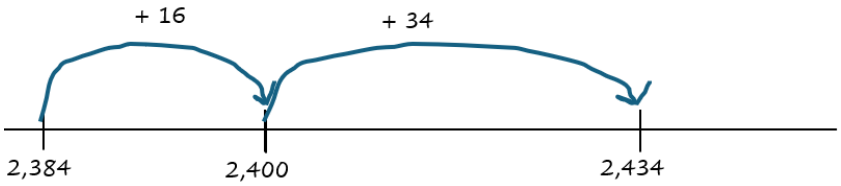
- How many ones are there in ___?
- Will you need to bridge hundred?
- What do you need to add/subtract to make the next/previous hundred?
- What do you need to partition ___ into?

Addition with a number line (bridging):

384 + 50 = 434

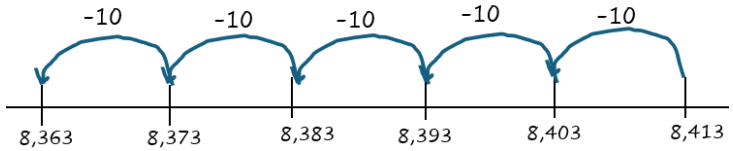


*Some pupils may be able to use complements to 100 to support with more efficient mental calculation:
2,384 + 16 = 2,400
2,400 + 34 = 2,434

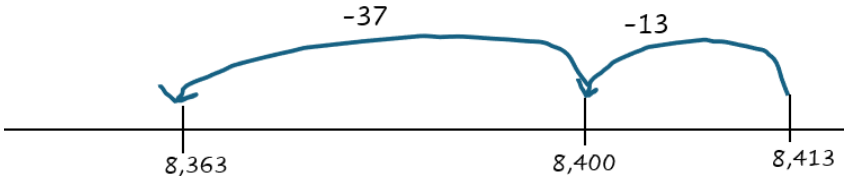


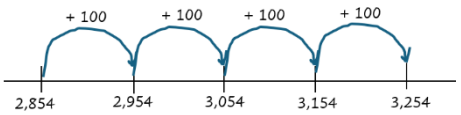
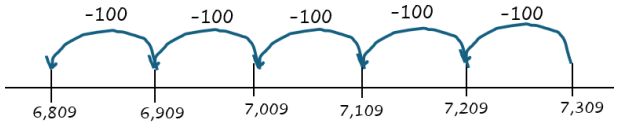
Subtraction with a number line (bridging):

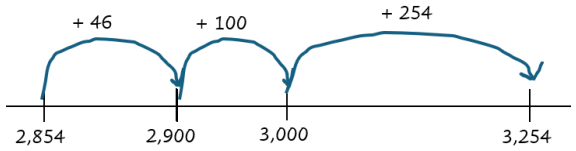
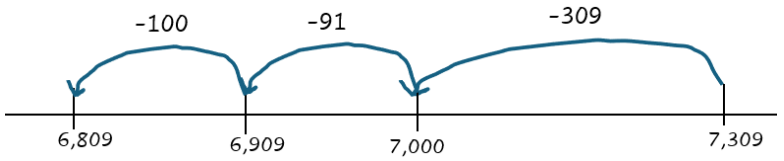
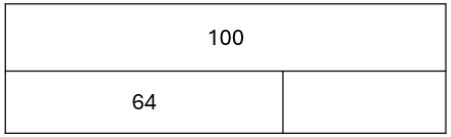
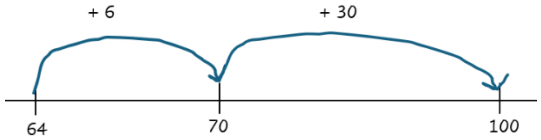
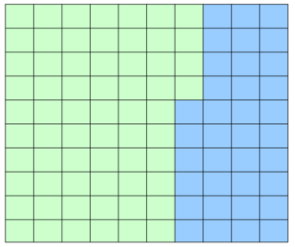
8,413 – 50 = 8,363

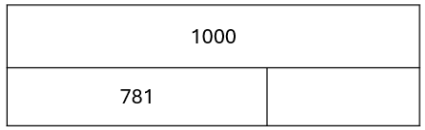
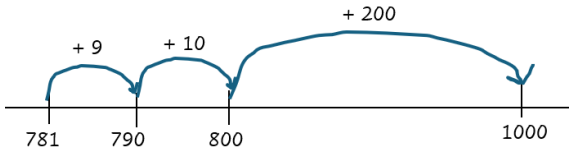


*Some pupils may be able to use complements to 100 to support with more efficient mental calculation:
8,413 – 13 = 8,400
8,400 – 37 = 8,363



I can add and subtract mentally a three-digit number and hundreds.	In this step, pupils consolidate Year 3 mental strategies to add or subtract a three-digit number and a multiple of hundred (e.g. 553 + 400, or 871 – 200) without bridging. Some pupils may still require the support of concrete resources such as Dienes, as outlined in Unit 3.7, or place value counters. Pupils should be confident in using number bonds to help them solve the problem, for example: ○ 651 + 300 = ○ "6 hundreds plus 3 hundreds is 9 hundreds, so 651 + 300 = 951" ○ 875 – 600 = ○ "8 hundreds subtract 6 hundreds is 2 hundreds, so 875 – 600 = 275"	
I can add and subtract mentally a four-digit number and hundreds.	If pupils are secure with adding and subtracting mentally three-digit number and hundreds, progress on to four-digit and hundreds. Pupils should be confident in using number bonds to help them solve problems that do not involve bridging thousand, for example: ○ 6651 + 300 = ○ "6 hundreds plus 3 hundreds is 9 hundreds, so 6651 + 300 = 6951" ○ 9875 – 600 = ○ "8 hundreds subtract 6 hundreds is 2 hundreds, so 9875 – 600 = 9275" Continue to use questions to prompt pupils to use number bonds and complements to 1000 to support efficient strategies. Place value counters and number lines can be used to represent their mathematical thinking. **Checking for understanding questions:** • How many hundreds are there in ___? • Will you need to bridge thousand? • What do you need to add/subtract to make the next/previous thousand? • What do you need to partition ___ into?	
	Addition with a number line (bridging): 2,854 + 400 = 3,254  	**Subtraction with a number line (bridging):** 7309 – 500 = 6,809 

	*Some pupils may be able to use complements to 100 and 1000 to support with more efficient mental calculation: 2,854 + 400 = 3,254 2,854 + 146 = 3,000 3,000 + 254 = 2,434 400 = 146 + 254 	*Some pupils may be able to use complements to 100 and 1000 to support with more efficient mental calculation: 7309 – 500 = 6,809 7,309 - 309 = 7,000 7,000 + 191 = 6,809 500 = 309 + 191 
I can solve problems using number facts (complements to 100).	Complements to 100 are essential for developing efficient mental strategies, particularly in contexts involving money, time, and measurement. Pupils need to understand that complements to 100 are based on known number bonds to 10. This builds fluency and flexibility in mental arithmetic. The use of hundred squares helps pupils visualise the structure and understand how complements work. Encourage pupils to use known facts, such as “If I know 7 + 3 is 10, then I know 70 + 30 is 100” first. When pupils are finding the complement to 100 for numbers such as 64, encourage them to make 10 first, and then 100: e.g. 64 + ? = 100 • 64 + 6 = 70 • 70 + 30 = 100 • 6 + 30 = 36 • So, 64 + 36 = 100   *Watch out for pupils who might think 60 + 40 = 100, then 4 + 6 = 10, so 64 + 46 = 100*. *See next page for more detail:*	 **64 + 36 = 100**

	Pupils should be able to use their knowledge of number pairs that make 100 to solve problems efficiently. These are called complements to 100. **Suggested Tasks:** • **Missing number problems**, for example: 100 - ___ = 37 • **Word problems**, for example: A shop has 100 game consoles. 42 have been sold. How many are left? • **Multi-step problems**, for example: I have £100. I spend £23 on a book and £15 on a game. How much money do I have left?
I can solve problems using number facts (complements to 1000).	Similarly to the previous step, pupils are using their knowledge of number pairs to 1000 to solve problems. These are called complements to 1000. Encourage pupils to use known facts, such as "If I know 7 + 3 is 10, then I know 700 + 300 is 1000" first. When pupils are finding the complement to 1000 for numbers such as 781, encourage them to make 10 first, then 100, and then 1000: e.g. 781 + ? = 1000 • 781 + 9 = 790 • 790 + 10 = 800 • 800 + 200 = 1000 • 9 + 10 + 200 = 219 • So, 781 + 219 = 1000   **Suggested Tasks:** • **Missing number problems,** for example: 1000 = 645 + ___ • **Word problems**, for example: A factory produces 1000 bottles in a day. By lunchtime, 462 bottles are complete. How many more bottles need to be made? • **Multi-step problems**, for example: A runner wants to run 1000km in a year. They have already run 345km in Spring and 234km in Summer. How many kilometres remain?

HIAS Resources to support:

- Reasoning and Intelligent Practice Tasks: Reasoning and Intelligent Practice Tasks
- Faded Scaffolds and Intelligent Practice: Faded Scaffolds and Intelligent Practice
- Paired Examples: Paired Examples
- Entry and Exit tickets: Entry and Exit Tickets
- Interleaving, Recall and Retrieval: Interleaving, Recall and Retrieval (hants.gov.uk)
- Connect4Maths: Connect4Maths - Primary
- Moderation Documents: Moderation Documents
- KS1 Key Facts: Key Stage 1 Key Facts Document
- Mastering Times Tables: Mastering Times Tables

NCETM Resources to support:

- Exemplification of ready -to -progress criteria (RTPS): Exemplification of ready-to-progress criteria | NCETM
- NCETM Professional Development materials spine 1: Number, Addition and Subtraction | NCETM ;
- The NCETM Mastery Task booklets can be used as a source of tasks to support end of year teacher assessment for both EXS and GDS Teaching for Mastery Booklets Yr1-6

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