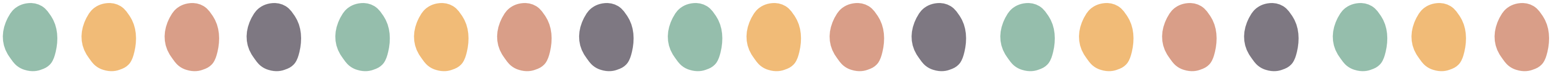


Y4- Overview

	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		
Unit	1	2	3		4	5	6	7	8	9	10	11	12

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Fractions
- Geometry
- Other

Autumn 1	Secure place value to 1000: apply to addition and subtraction: multiples of 100 (1 week)
Ready to progress	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each . 4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)
NCETM documents	TEACHING POINT 1 AND 2 https://www.ncetm.org.uk/media/dlweloso/ncetm_mm_spl_y4_se22_teach.pdf#page=15
Small steps	- To explain how many hundreds, tens, and ones make up 1,000. - To use place value to compose numbers up to 2,000 using hundreds, tens, and ones. - To apply different strategies to add multiples of 100. - To apply different strategies to subtract multiples of 100. - To use addition and subtraction strategies to solve problems involving multiples of 100.
Links	Classroom Slides to slide 77 https://www.ncetm.org.uk/media/3jqpdcw1/cp-year-4-unit-2-numbers-to-10000.ppt Oak - https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/secure-place-value-to-1000-apply-to-addition-and-subtraction-multiples-of-100/lessons WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y4%20Autumn%20Block%201%20SOL%20Place%20value.pdf Greater Depth https://www.ncetm.org.uk/media/x45na0cs/mastery_assessment_y4.pdf
Reasoning	Spot the mistake 950, 975, 1000, 1250 What is wrong with this sequence? Use what you know about adding multiples of 100. True or False? 324 is a multiple of 9. Explain how you could check using place value or known facts. What comes next? 6706 + 100 = 6806 6806 + 100 = 6906 6906 + 100 = ? Continue the pattern. What do you notice about the hundreds column? Do, then explain 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third? Explain how you used place value to decide. Show the value What is the value of the digit 4 in these numbers? 3041 4321 5497 Explain how the position of the digit changes its value. Make up an example Create four-digit numbers where the digit sum is 4 and the tens digit is 1. Can you make more than one example? Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be? Can you find the largest possible number too? What do you notice? Round 296 to the nearest 10. Round it to the nearest 100. What do you notice? Can you find other numbers that behave the same way?



Unit 2

Numbers to 10,000

Problem solving

CLICK HERE



Glossary

- Compose - Compose means to combine parts to make a given number. One hundred is composed of 10 tens.
- Thousand - A thousand is a 4-digit number equal to 10 groups of one hundred.
- Multiple - A multiple is the result of multiplying a number by another whole number.

Stem sentences

There are ten hundreds in one thousand.
There are one hundred tens in one thousand.
There are one thousand ones in one thousand.

We know there are ten hundreds in one thousand, so _____ thousand hundred is equal to _____ hundred.
_____ hundred minus _____ hundred is equal to _____ hundred.

Representations

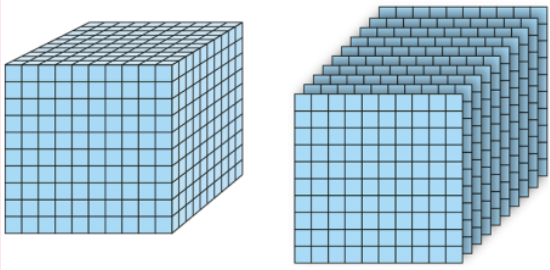
• Additive and multiplicative equations

$1,000 = 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100$ $1,000 = 10 \times 100$ $1,000 \div 100 = 10$

• Tens frame and 100 place-value counters

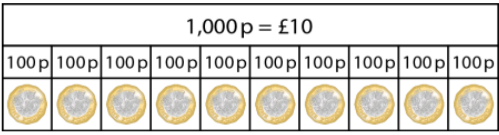


• Dienes



• Coins

1,000 p = £10

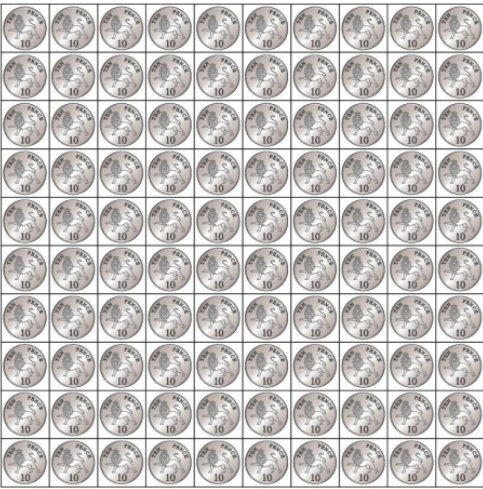


Decoding the digits in 1,000:

1,000 is **1,000** (1 thousand)
1,000 is **1,000** (10 hundreds)
1,000 is **1,000** (100 tens)
1,000 is **1,000** (1,000 ones)

Representing 100 tens in 1,000:

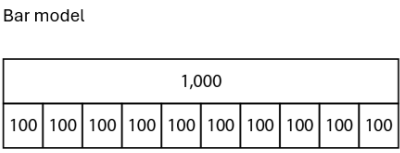
• Coins



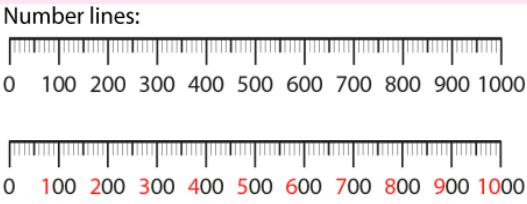
Tens frame



Bar model

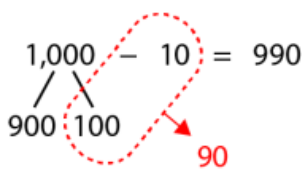


Number lines



Calculating forwards and backwards from 1,000:

$1,000 - 10 = 990$

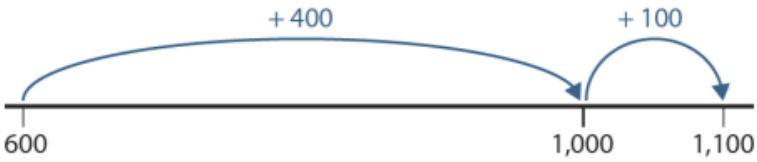


Place-value chart:

1,000s	100s	10s	1s
1	4	0	0

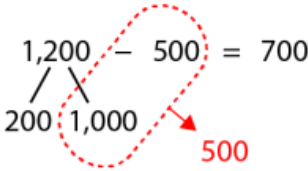
1,400

Number line:

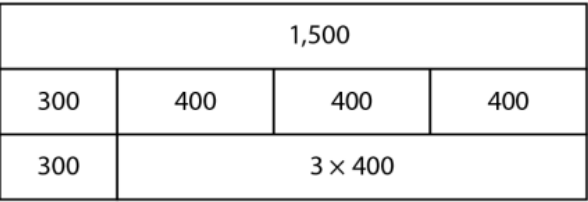


Partitioning:

$1,200 - 500 = 700$



Bar model:



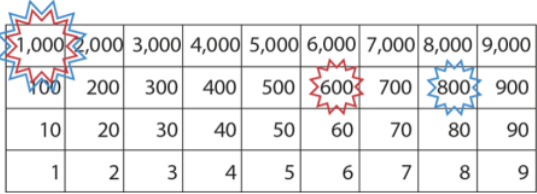
Missing-number sequences:

'Fill in the missing numbers.'

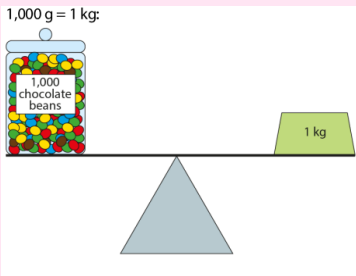
600	700		900		1,100		1,300
2,000			1,700	1,600		1,400	

Gattegno chart:

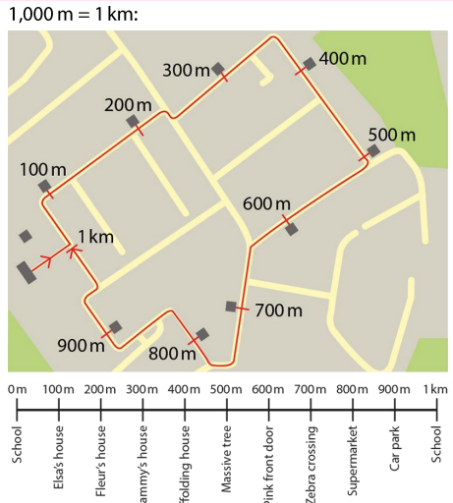
- 'Show me one thousand six hundred.'
- 'Show me eighteen hundred.'



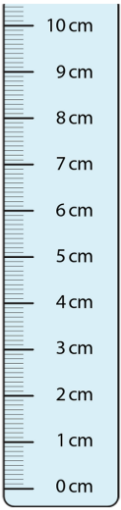
1,000 g = 1 kg:

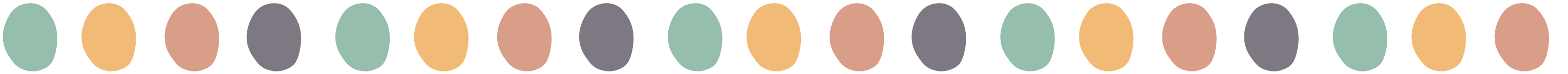


1,000 m = 1 km:



Ruler



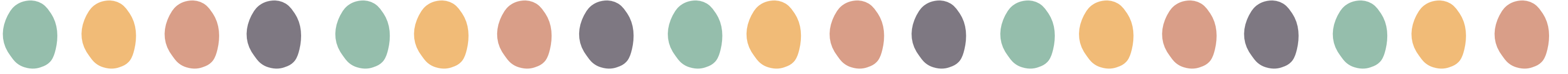


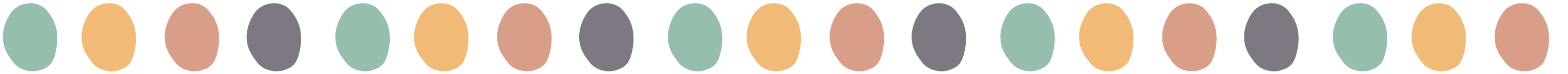
Y4- Overview

	Autumn 1			Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
Unit	1	2	3		4	5	6	7	8	9	10	11	12

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Fractions
- Geometry
- Other

Autumn 1	Calculation and conversion of measures (1 week)
Ready to progress	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each . 4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)
NCETM documents	
Small steps	- To explain how many hundreds, tens, and ones make up 1,000. - To use place value to compose numbers up to 2,000 using hundreds, tens, and ones. - To apply different strategies to add multiples of 100. - To apply different strategies to subtract multiples of 100. - To use addition and subtraction strategies to solve problems involving multiples of 100.
Links	Oak - https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/calculation-and-conversion-of-measures/lessons?sid-9c5a34=sG4BKISBkk&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y4%20Autumn%20Block%201%20SOL%20Place%20value.pdf Greater Depth https://www.ncetm.org.uk/media/x45na0cs/mastery_assessment_y4.pdf
Reasoning	Spot the mistake 950, 975, 1000, 1250 What is wrong with this sequence? Use your knowledge of adding multiples of 100. How could this mistake have happened? True or False? 324 is a multiple of 9. Use place value or another method to explain whether this is true or false. What strategies can help? What comes next? 6706 + 100 = 6806 6806 + 100 = 6906 6906 + 100 = ? What will the next number be? What happens to the hundreds digit each time? Do, then explain 5035 5053 5350 5530 5503 Put these numbers in order starting with the largest. Which number is third? Explain your method using hundreds, tens and ones. Show the value What is the value of the digit 4 in each of these numbers? 3041 4321 5497 How does the value of 4 change depending on its position in the number? Make up an example Can you create four-digit numbers where the digit sum is 4 and the tens digit is 1? Try making more than one example. What do you notice about the possible combinations? Possible answers A number rounded to the nearest ten is 540. What is the smallest number it could be? What is the largest number? How do you know? What do you notice? Round 296 to the nearest 10. Round 296 to the nearest 100. What do you notice about your answers? Can you find other numbers that work like this?



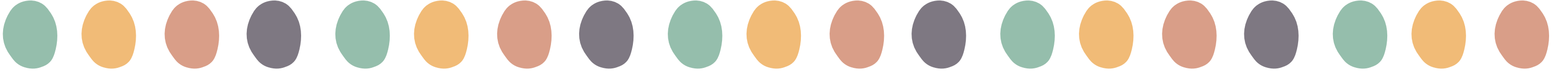


Y4- Overview

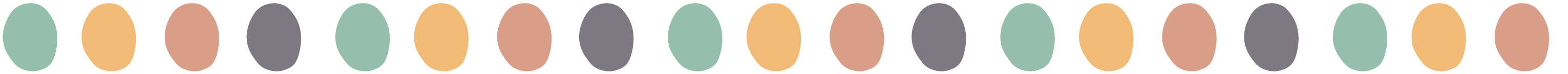
	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		
Unit	1	2	3		4	5	6	7	8	9	10	11	12

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Fractions
- Geometry
- Other

Autumn 1	Comparing, ordering and rounding 4-digit numbers (1 week)
Ready to progress	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each . 4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)
NCETM documents	TEACHING POINT 3 and 4 https://www.ncetm.org.uk/media/dlweloso/ncetm_mm_sply4_se22_teach.pdf#page=15
Small steps	- To use place value and number facts to decompose 4-digit numbers in different ways. - To use knowledge of place value to compare and order 4-digit numbers. - To explain what rounding is and round a 4-digit number to the nearest thousand. - To use place value to round a 4-digit number to the nearest hundred and nearest ten. - To use place value to round a 4-digit number to the nearest thousand, hundred, and ten.
Links	Classroom Slides 78-126 https://www.ncetm.org.uk/media/3jqpdcw1/cp-year-4-unit-2-numbers-to-10000.ppt Oak - https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/comparing-ordering-and-rounding-4-digit-numbers/lessons?sid-b25b0c=kqaBhVAomr&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y4%20Autumn%20Block%201%20SOL%20Place%20value.pdf Greater Depth https://www.ncetm.org.uk/media/x45na0cs/mastery_assessment_y4.pdf
Reasoning	Spot the mistake 950, 975, 1000, 1250 What is wrong with this sequence? Use your knowledge of adding multiples of 100 to explain what went wrong and what the correct sequence should be. True or False? 324 is a multiple of 9. Explain how you can use place value or known facts to check if this statement is true or false. What comes next? 6706 + 100 = 6806 6806 + 100 = 6906 6906 + 100 = ? What is the next number in this sequence? What do you notice about the hundreds column each time? Do, then explain 5035 5053 5350 5530 5503 If you arrange these numbers starting with the largest, which number would be third? Explain how you used place value to determine the order. Show the value What is the value of the digit 4 in these numbers? 3041 4321 5497 How does the position of the digit 4 affect its value in each number? Make up an example Create four-digit numbers where the digit sum equals 4 and the tens digit is 1. Can you make more than one example? What do you notice about the possible combinations? Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be? What is the largest number it could be? How do you know? What do you notice? Round 296 to the nearest ten. Round 296 to the nearest hundred. What do you notice about these two rounded values? Can you find other numbers that behave the same way?



Unit 2	Comparing, ordering and rounding 4-digit numbers (1 week)																																																																																																																																								
Problem solving	CLICK HERE																																																																																																																																								
Glossary	• Partition - The act of splitting an object or value down into smaller parts • Order - Put a set of numbers into their correct place following a rule; for example, from lowest to highest. • Compare - You can compare to find out what is the same and what is different. • Greater than - Bigger or larger in value or size. This can be shown using the symbol > • Less than - Smaller in value or size, referring to abstract or continuous number. This can be shown using the symbol < • Rounding - Making a number simpler but keeping its value close to what it was.																																																																																																																																								
Stem sentences	a is between _____ and _____ The previous multiple of one thousand is _____. The next multiple of one thousand is _____ a is nearest to _____ thousand. a is _____ when rounded to the nearest thousand. When rounding to the nearest thousand, if the hundreds digit is four or less we round down. If the hundreds digit is five or more we round up. When rounding to the nearest ten, the ones digit is the digit to consider. If it is four or less we round down. If it is five or more we round up.' 'When rounding to the nearest hundred, the tens digit is the digit to consider. If it is four or less we round down. If it is five or more we round up.' 'When rounding to the nearest thousand, the hundreds digit is the digit to consider. If it is four or less we round down. If it is five or more we round up.'																																																																																																																																								
Representations	Number line: Place-value counters: Part-part-whole model*: Place-value chart: <table><tr><th>1,000s</th><th>100s</th><th>10s</th><th>1s</th></tr><tr><td>5</td><td>3</td><td>4</td><td>2</td></tr></table> 5,342 • The "5" represents five thousands.' • The "3" represents three hundreds.' • The "4" represents four tens.' • The "2" represents two ones.' Gattegno chart: 'What number is shown?' <table><tr><td>1,000</td><td>2,000</td><td>3,000</td><td>4,000</td><td>5,000</td><td>6,000</td><td>7,000</td><td>8,000</td><td>9,000</td></tr><tr><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td></tr><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr></table> 2.000 + 100 + 40 + 3 = 2.143 Part-part-whole model: Place-value chart: <table><tr><th>1,000s</th><th>100s</th><th>10s</th><th>1s</th></tr><tr><td>5</td><td>7</td><td>2</td><td>5</td></tr><tr><td>5</td><td>7</td><td>3</td><td>0</td></tr><tr><td>5</td><td>7</td><td>0</td><td>0</td></tr><tr><td>6</td><td>0</td><td>0</td><td>0</td></tr></table> 5,725 nearest 10 nearest 100 nearest 1,000 Redistributing strategy: 5,004 - 4,997 = 7 5,007 - 5,000 = 7 6,004 + 2,997 = 9,001 6,001 + 3,000 = 9,001 7,012 - 3,991 = 3,021 7,021 - 4,000 = 3,021 5,012 + 2,991 = 8,003 5,003 + 3,000 = 8,003 Place-value charts: 'Compare 2,048 and 2,408.' <table><tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr><tr><td>2,000</td><td>10</td><td>1</td><td>1</td></tr><tr><td>2,000</td><td>10</td><td>1</td><td>1</td></tr><tr><td></td><td>10</td><td>1</td><td>1</td></tr><tr><td></td><td>10</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr></table><table><tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr><tr><td>2,000</td><td>100</td><td>1</td><td>1</td></tr><tr><td>2,000</td><td>100</td><td>1</td><td>1</td></tr><tr><td></td><td>100</td><td>1</td><td>1</td></tr><tr><td></td><td>100</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr><tr><td></td><td></td><td>1</td><td>1</td></tr></table> previous multiple of 1,000 1,000 < a < 2,000 next multiple of 1,000	1,000s	100s	10s	1s	5	3	4	2	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	100	200	300	400	500	600	700	800	900	10	20	30	40	50	60	70	80	90	1	2	3	4	5	6	7	8	9	1,000s	100s	10s	1s	5	7	2	5	5	7	3	0	5	7	0	0	6	0	0	0	Th	H	T	O	2,000	10	1	1	2,000	10	1	1		10	1	1		10	1	1			1	1			1	1			1	1			1	1	Th	H	T	O	2,000	100	1	1	2,000	100	1	1		100	1	1		100	1	1			1	1			1	1			1	1			1	1
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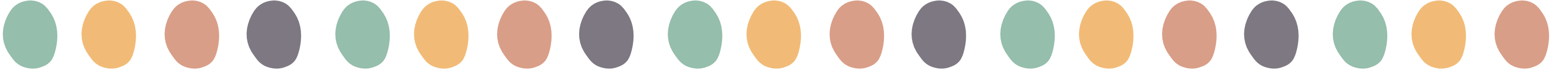


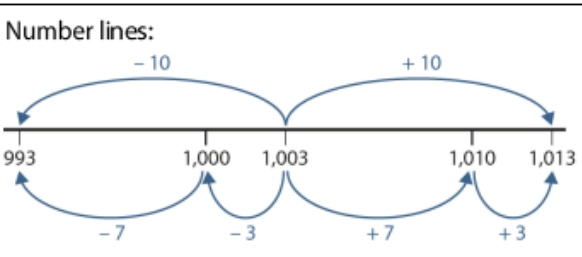
Y4 - Overview

	Autumn 1			Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2			
Unit	1	2	3		4	5	6	7		8	9	10	11	12	

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Fractions
- Geometry
- Other

Autumn 1	Column addition and subtraction with 4-digit numbers (1 week)														
Ready to progress	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each 4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)														
NCETM documents	TEACHING POINT 5 and 6 https://www.ncetm.org.uk/media/dlweloso/ncetm_mm_spl_y4_se22_teach.pdf#page=15														
Small steps	- To add up to three 4-digit numbers using column addition, involving regrouping. - To subtract two 4-digit numbers using column subtraction, with regrouping for hundreds, tens, and ones. - To use strategies to make solving calculations more efficient. - To explain how many '500s' and '250s' make up 1,000. - To explain how many '100s' and '200s' make up 1,000.														
Links	Classroom Slides 137 to the end https://www.ncetm.org.uk/media/3jqpdcw1/cp-year-4-unit-2-numbers-to-10000.ppt Oak - https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/column-addition-and-subtraction-with-4-digit-numbers/lessons?sid-bald38=KFjM-4nlql&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y4%20Autumn%20Block%202%20SOL%20Addition%20and%20subtraction.pdf Greater Depth https://www.ncetm.org.uk/media/x45na0cs/mastery_assessment_y4.pdf														
Reasoning	True or False? Are these number sentences true or false? 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2 Give your reasons for why you think each statement is true or false. Hard and Easy Questions Which questions are easy or hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 = Explain why you think some of these questions are harder than others, particularly focusing on strategies for adding or subtracting large numbers. Convince Me 666 = 8 5 What is the largest possible number that can go in the rectangular box? What is the smallest possible number? Convince me by explaining how you determined your answer using place value. Making an Estimate Which of these number sentences has the answer that is between 550 and 600? 1174 - 611 3330 - 2779 9326 - 8777 Explain how you estimated each answer and why it fits within the given range. Always, Sometimes, Never Is it always, sometimes, or never true that the difference between two odd numbers is odd? Provide reasoning for your answer.														



Unit 2	Column addition and subtraction with 4-digit numbers (1 week)
Problem solving	CLICK HERE 
Glossary	• Partition - The act of splitting an object or value down into smaller parts • Order - Put a set of numbers into their correct place following a rule: for example, from lowest to highest. • Compare - You can compare to find out what is the same and what is different. • Greater than - Bigger or larger in value or size. This can be shown using the symbol > • Less than - Smaller in value or size, referring to abstract or continuous number. This can be shown using the symbol < • Rounding - Making a number simpler but keeping its value close to what it was • Equal divisions refer to equal spacing on a number line or scale
Stem sentences	a is between _____ and _____ The previous multiple of one thousand is _____. The next multiple of one thousand is _____ a is nearest to _____ thousand. a is _____ when rounded to the nearest thousand. When rounding to the nearest thousand, if the hundreds digit is four or less we round down. If the hundreds digit is five or more we round up. When rounding to the nearest ten, the ones digit is the digit to consider. If it is four or less we round down. If it is five or more we round up.' 'When rounding to the nearest hundred, the tens digit is the digit to consider. If it is four or less we round down. If it is five or more we round up.' 'When rounding to the nearest thousand, the hundreds digit is the digit to consider. If it is four or less we round down. If it is five or more we round up.'
Representations	Column additions: $\begin{array}{r} 6,584 \\ + 2,739 \\ \hline 9,323 \\ 1\ 1\ 1 \end{array}$ Column subtractions: $\begin{array}{r} \overset{5}{\cancel{6}}, \overset{14}{\cancel{5}}, \overset{12}{\cancel{3}}8 \\ - 2,789 \\ \hline 3,749 \end{array}$ Number lines:  Graphing context: 