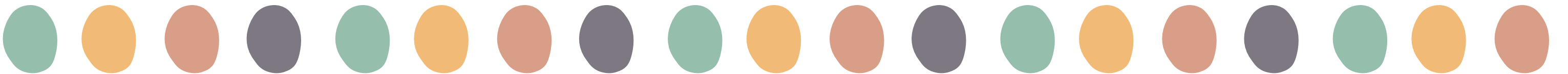


Y3- Overview

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

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

Autumn 1	Securing place value to 100 and applying to addition and subtraction (2 weeks)
Ready to progress	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non standard partitioning. 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts
NCETM documents	TEACHING POINT 1 and 2 https://www.ncetm.orguk/media/swrp35kl/ncetm_mm_sply3_sel7_teach.pdf#page=5
Small steps	To compose 100 in 10s and 1s. To compose 100 in 50s, 25s and 20s. To find multiples of 10 that total 100. To use known facts to find pairs of numbers that total 100. To use known facts to find complements to 100 efficiently. To represent 3-digit multiples of 10 in different ways. To use place value knowledge to write addition and subtraction equations. To use number facts to 20 to add multiples of 10 and bridge 100. To use number facts to 20 to subtract multiples of 10 and bridge 100. To solve problems by applying different strategies for adding and subtracting multiples of 10.
Links	NCETM to slide 79 - https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.orguk%2Fmedia%2Fvcbdy14x%2Fcp-year-3-unit-2-numbers-to-1000.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/review-strategies-for-adding-and-subtracting-across-10/lessons?sid=05a559=MlPFN6nflIt&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Autumn%20Block%201%20SOL%20Place%20value.pdf Mastery with greater depth https://www.ncetm.orguk/media/oaqfcvjq/mastery_assessment_y3.pdf
Reasoning	Spot the Mistake 60, 80, 90, 100, 105 What is wrong with this sequence of numbers? True or False? 50 + 30 = 70 and 70 + 20 = 90 So 50 + 30 + 20 = 100. True or false? What Comes Next? 180 + 10 = 190 190 + 10 = 200 200 + 10 = ? Do, Then Explain Order these numbers: 130, 310, 230, 330, 300 If you wrote them in order starting with the smallest, which number would be third? Explain how you ordered the numbers. Show the Value Show the value of the digit 3 in these numbers: 130, 230, 300 Explain how you know. Make Up an Example Create three different number pairs that total 100 using multiples of 10. E.g. ___ + ___ = 100



Securing place value to 100 and applying to addition and subtraction
(2 weeks)

Problem solving

[Click on me](#)

- Glossary
- Equivalent - When two or more things have the same value.
 - Numeral - A symbol or name that stands for a number.
 - Compose - You can compose larger numbers from smaller numbers.
 - Decompose - You can decompose whole numbers into smaller numbers.
 - Multiple - A multiple is the number you get when you multiply a certain number by an integer.
 - Total - A total is the result of adding.
 - 2-digit number - A 2-digit number refers to a value between 10 and 99. The number is made up of two digits which represent tens and ones.
 - Complement to 100 - Pairs of numbers which total 100
 - Equal - Exactly the same amount or value.
 - Part - A piece or section of the whole.
 - Whole - All of a group or number.
 - Bar model - A way to represent a problem involving parts and whole.
 - Addend - An addend means any of the numbers that are added together.
 - Bridging 100 - Bridging 100 means partitioning one addend to make a number bond to 100 then adding the remaining part.
 - Subtrahend - The number that is to be subtracted. The second number in a subtraction.
 - Minuend - The first number in a subtraction. The number from which another number is to be subtracted.
 - Add - Bringing two or more numbers or things together to make a new total.
 - Subtract - Taking one number from another.
 - Strategy - A way to solve a problem

Stem sentences

There are ten tens in one hundred.

There are one hundred ones in one hundred.

One hundred is divided into _____ equal parts; so each part/division has a value of _____

I know that ____ plus ____ is equal to ten.
'So, ____ tens plus ____ tens is equal to ten tens.'
____ plus ____ is equal to 100.'

And for subtraction:

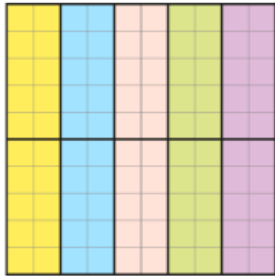
- 'I know that ten minus ____ is equal to ____'
- 'So, ten tens minus ____ tens is equal to ____ tens.'
- '100 minus ____ is equal to ____'

Finding complements to 100-
'First we make ten ones. We have one ten from the ones digits, so we need nine more tens.'

Representing one hundred as numerals:

100s	10s	1s
1	0	0

Composition of 100 – five groups of 20:



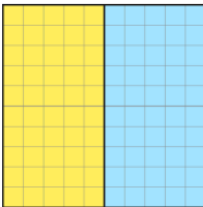
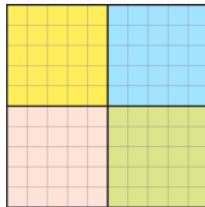
100				
20	20	20	20	20

100 = 20 + 20 + 20 + 20 + 20
100 = 5 × 20 100 ÷ 5 = 20
100 = 20 × 5 100 ÷ 20 = 5

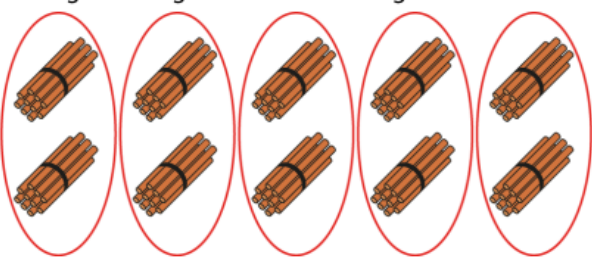
One-hundred grid:



Composition of 100:

Two groups of 50	Four groups of 25												
													
<table><tr><td colspan="2">100</td></tr><tr><td>50</td><td>50</td></tr></table>	100		50	50	<table><tr><td colspan="4">100</td></tr><tr><td>25</td><td>25</td><td>25</td><td>25</td></tr></table>	100				25	25	25	25
100													
50	50												
100													
25	25	25	25										
100 = 50 + 50	100 = 25 + 25 + 25 + 25												

Linking counting in twos to counting in 20s:



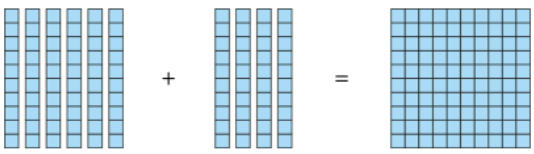
10	
7	3

7 + 3 = 10

10 tens	
7 tens	3 tens

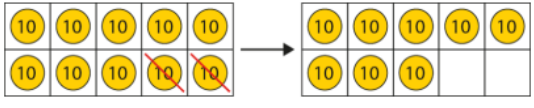
70 + 30 = 100

Dienes:



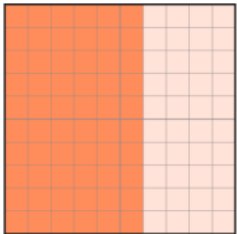
60 + 40 = 100

Tens frames:



100 – 20 = 80

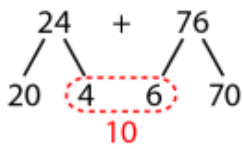
Hundred grid:



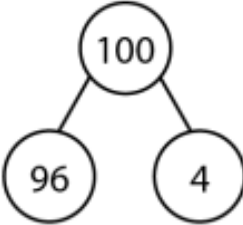
100 – 40 = 60

Partitioning both addends:

24 + 76
20 + 70 = 90
4 + 6 = 10
90 + 10 = 100

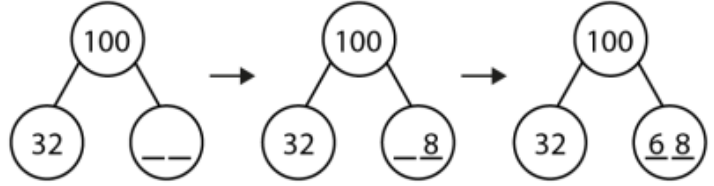


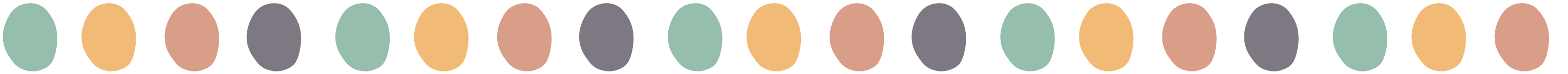
Related calculations:



96 + 4 = 100 100 – 4 = 96
4 + 96 = 100 100 – 96 = 4

Representations



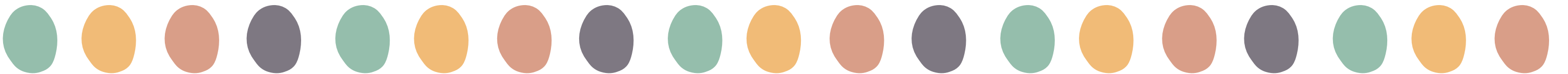


Y3- Overview

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

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

Autumn 1	Bridging 100: counting on and back in 10s, adding/subtracting multiples of 10 (1 week)
Ready to progress	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non standard partitioning. 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts
NCETM documents	TEACHING POINT 3 and 4 https://www.ncetm.org.uk/media/ijogstuu/ncetm_mm_spl_y3_sel8_teach.pdf#page=4
Small steps	To count up to, on from and across one hundred. To represent a 3-digit number up to 199. To bridge 100 by adding or subtracting a single-digit number. To find 10 more and 10 less than a number up to 200. To cross the 100s boundary when adding and subtracting multiples of ten.
Links	NCETM to slide 157- - https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fvcbdy14x%2Fcp-year-3-unit-2-numbers-to-1000.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/review-strategies-for-adding-and-subtracting-across-10/lessons?sid=05a559=MlPFN6nflIt&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Autumn%20Block%201%20SOL%20Place%20value.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcvjg/mastery_assessment_y3.pdf
Reasoning	Spot the Mistake 50, 100, 115, 200 What is wrong with this sequence of numbers? True or False? 38 is a multiple of 8? True or false? What Comes Next? 936 - 10 = 926 926 - 10 = 916 916 - 10 = 906 What comes next? Do, Then Explain 835, 535, 538, 388, 508 If you wrote these numbers in order starting with the smallest, which number would be third? Explain how you ordered the numbers. Show the Value Show the value of the digit 3 in these numbers: 341, 503, 937 Explain how you know. Make Up an Example Create numbers where the digit sum is three.



Problem solving



Glossary

- 100s boundary - The point at which the numbers change into 100s numbers or from one set of hundreds to another.
- Pattern - When objects or numbers are arranged following a rule. A pattern is a repeated set of numbers, shapes or objects.
- Representing - Showing something, or standing for something.
- 3-digit number - Represents a number of hundreds, tens and ones.
- Place value - The value of a digit in a number based on where it is placed.
- Bridging - A strategy which uses addition or subtraction to cross a number boundary.
- Partition - The act of splitting an object or value down into smaller parts.
- Multiple - The result of multiplying a number by another whole number.

Stem sentences

Over 100-
There are _____ groups of ten.
There is one group of one hundred and _____ more tens.
There are _____.

Bridging 100-
• 'I know that ____ plus ____ is equal to ____.'
• (single-digit addends)
• 'So ____ tens plus ____ tens is equal to ____ tens.'
• (multiple-of-ten addends)
• '____ plus ____ is equal to one hundred and ____.'
• (number names)

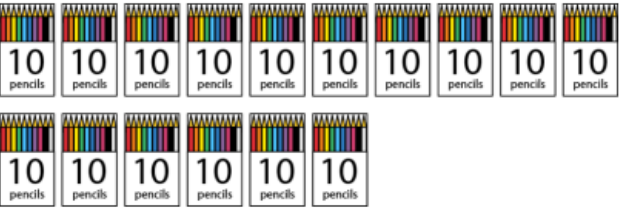
Subtraction-
• 'I know that ____ minus ____ is equal to ____.'
• (bridging ten)
• 'So ____ tens minus ____ tens is equal to ____ tens.'
• (bridging ten tens)
• 'One hundred and ____ minus ____ is equal to ____.'
• (number names)

Representations

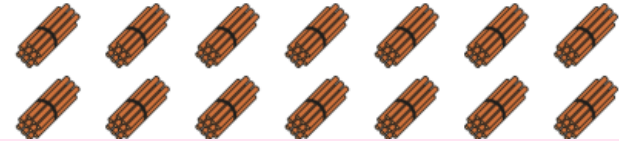
Number line:



160



140



100s	10s	1s
1	4	0

140

Subtraction across 100 in multiples of ten – method A:

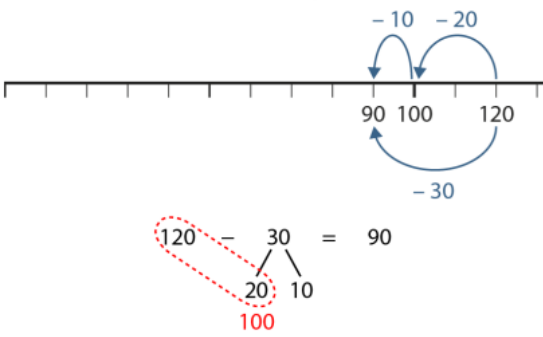
- 'I know that twelve minus three is equal to nine.'
- 'So twelve tens minus three tens is equal to nine tens.'
- 'One hundred and twenty minus thirty is equal to ninety.'

12 - 3 = 9

12 tens - 3 tens = 9 tens

120 - 30 = 90

Subtraction across 100 in multiples of ten – method B:

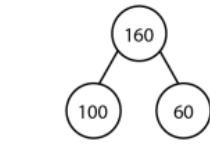
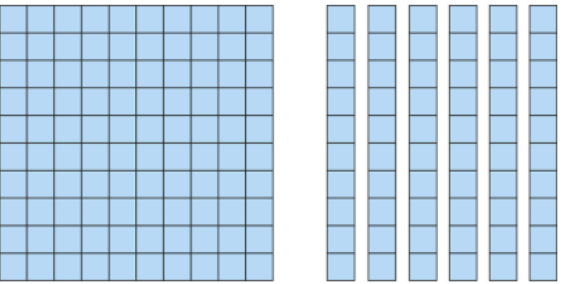


Gattegno chart:

'Show me one hundred and fifty.'

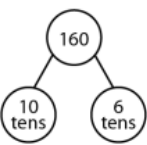
1000	2000	3000	4000	5000	6000	7000	8000	9000
1000	200	300	400	500	600	700	800	900
100	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

Dienes, part-part-whole and equations:



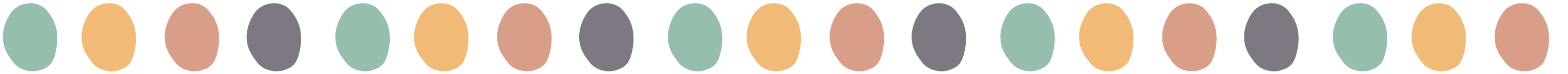
100 + 60 = 160

60 + 100 = 160



160 - 60 = 100

160 - 100 = 60



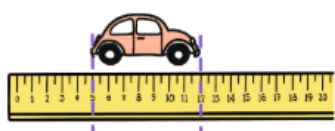
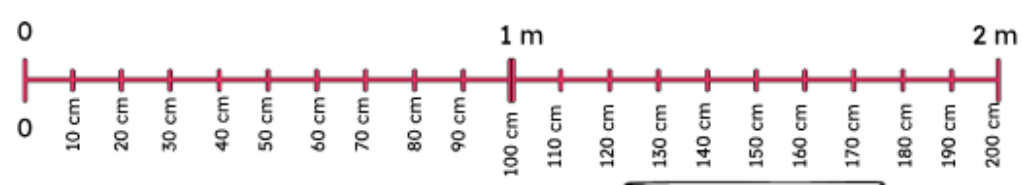
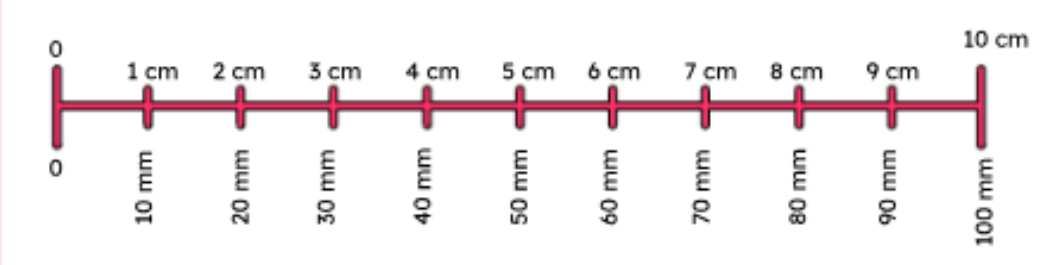
Y3- Overview

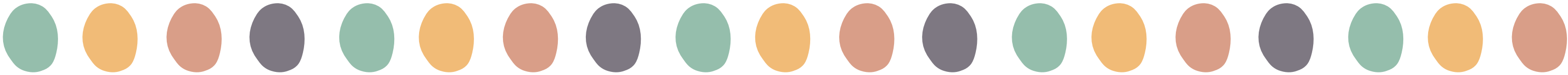
	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2			
Unit	1	2			3	4	5	6	7	8		9	10	11

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

Autumn 1	Measuring length and recording in tables (2 weeks)
Ready to progress	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non standard partitioning. 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts
NCETM documents	
Small steps	To estimate lengths and heights in metres and describe a metre in different ways. To measure length and height from zero using whole metres and centimetres. To convert between metres and centimetres. To understand millimetres as a unit of measure and describe the relationship between millimetres and centimetres. To measure length and height using millimetres or whole centimetres and millimetres. To convert between centimetres and millimetres. To estimate and measure lengths and heights and record them in a table. To represent lengths and heights on a graph and use them to solve problems. To solve problems involving length. To solve problems involving length and height.
Links	NCETM slide 158 - 170- https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Frcbdy14x%2Fcp-year-3-unit-2-numbers-to-1000.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/measuring-length-and-recording-in-tables/lessons?sid-1b05f9=VkxW7lw_XB&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Autumn%20Block%201%20SOL%20Place%20value.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcvjg/mastery_assessment_y3.pdf
Reasoning	Spot the Mistake A pencil is said to be 3 metres long. What is wrong with this measurement? True or False? There are 1000 millimetres in a metre. True or false? What Comes Next? 1 m = 100 cm 100 cm = 10 × 10 cm 10 cm = 100 mm What comes next? Do, Then Explain You have the following objects with estimated lengths: Ruler - 30 cm Desk - 1 m Notebook - 25 cm Crayon - 12 cm Chair - 90 cm If you ordered them from shortest to longest, which would be third? Explain how you worked it out. Show the Value Show the value of the digit 2 in these measurements: 23 m, 12 cm, 520 mm Explain how you know. Make Up an Example Create a real-life scenario where you have to measure two items in centimetres and add them together to find the total length. Make sure your total is more than 1 metre.



	Measuring length and recording in tables (2 weeks)
Problem solving	Click on me
Glossary	- Estimate - An estimate is a given value, number or quantity that is near to the true amount. - Metre - A metre is a standardised unit of measurement. We can abbreviate metre to m. - Centimetre - A centimetre is a standardised unit of measurement. We can abbreviate centimetre to cm. - Metre (m) - A metre is a standardised unit of measurement. We can abbreviate metre to m. - Centimetre (cm) - A centimetre is a standardised unit of measurement. We can abbreviate centimetre to cm. - Difference - The difference is the result of subtracting one number from another. - Equivalent - When something is equivalent, it is equal in value. - Convert - When we convert, we change the unit of measurement between metres and centimetres, but the value remains the same. - Millimetre - A millimetre is a standardised unit of measurement. We can abbreviate millimetre to mm. - Table - A table is data arranged in rows and columns. - Data - A collection of numbers, words, measurements and descriptions of things. - Column - A column is a vertical arrangement of objects or numbers going up and down. - Row - A row is a horizontal arrangement of objects or numbers going across. - Graph - A graph is a visual way of showing information. A Bar Graph uses bars of different lengths or heights to represent information. - Axis - An axis on a graph is a fixed measuring line that runs horizontally (left to right) and/or vertically from zero. - Interpret - When we interpret anything, including data, we explain its meaning. - Bar model - A pictorial representation of a problem where bars are used to represent the known and unknown quantities. - Part - Some but not all of something. It is an amount or section which, when combined with others, makes up the whole. - Whole - All of something. It is complete.
Stem sentences	100 centimetres is equivalent 1 metre. 10 millimetres is equivalent to 1 centimetre. - To convert metres to centimetres, I multiply by 100. - To convert centimetres to metres, I divide by 100. - To convert centimetres to millimetres, I multiply by 10. - To convert millimetres to centimetres, I divide by 10.
Representations	 12 cm - 5 cm = 7 cm 7 cm - 0 cm = 7 cm  



Y3- 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

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

Autumn 2	Representing 3-digit numbers, comparing and positioning on number lines (3 weeks)
Ready to progress	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non standard partitioning. 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts
NCETM documents	WHOLE DOCUMENT - https://www.ncetm.org.uk/media/ijogstuu/ncetm_mm_spl_y3_sse18_teach.pdf#page=4
Small steps	To represent 3-digit numbers in different ways. To count forwards and backwards using 3-digit numbers. To position 3-digit numbers on number lines. To estimate the position of 3-digit numbers on an unmarked number line. To compare and order numbers with up to 3 digits. To order a set of 3-digit numbers. To use known facts to add and subtract multiples of 100 within 1000. To write 3-digit multiples of 10 as multiplication equations. To partition 3-digit numbers into 2 or 3 parts. To use known facts to solve problems involving partitioning numbers. To add to and subtract from multiples of 100. To add and subtract to and from 3-digit numbers bridging 100. To solve problems by adding to and subtracting from 3-digit numbers. To count forwards and backwards in multiples of 2, 5, 20, 25 and 50. To solve problems by counting in multiples of 2, 5, 20, 25 and 50.
Links	NCETM to slide 170 to the end- - https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fvcbdy14x%2Fcp-year-3-unit-2-numbers-to-1000.pptx&wrdOrigin=BROWSELINK OAK https://www.withnationalacademy/teachers/programmes/maths-primary-ks2/units/representing-3-digit-numbers-comparing-and-positioning-on-number-lines/lessons?sid-f27aa3=nwSlvrz0msg&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Autumn%20Block%201%20SOL%20Place%20value.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcvjg/mastery_assessment_y3.pdf
Reasoning	Spot the Mistake A number line goes: 100, 200, 250, 400. What is wrong with this sequence of numbers? True or False? 305 is closer to 400 than to 300. True or false? What Comes Next? 700 + 100 = 800 800 + 100 = 900 900 + 100 = ? What comes next? Do, Then Explain Order these numbers from smallest to largest: 482, 248, 824, 284, 428 Which number is third in your list? Explain how you worked it out. Show the Value What is the value of the digit 7 in these numbers? 370, 703, 172 Explain how you know. Make Up an Example Create a problem where you add two 3-digit numbers and the total crosses 1,000. Make sure your example uses multiples of 100 or 10.

Representing 3-digit numbers, comparing and positioning on number lines
(3 weeks)

Problem solving

[Click on me](#)

- Glossary
- Represent - Represent means showing something, or standing for something.
 - 3-digit number - A 3-digit number represents a number of hundreds, tens and ones.
 - Place value - Place value means how much a digit is worth in a number.
 - 100s boundary - The 100s boundary is the point at which the numbers change into 100s numbers or from one set of hundreds to another.
 - Pattern - A pattern is a repeated set of numbers, shapes or objects.
 - Position - Position means where something is located.
 - Compare - You can compare numbers to find out if one is more than or less than another.
 - Order - You can order numbers from the smallest to the largest or from the largest to the smallest.
 - Known facts - A known fact is something that you already know and can use to help you.
 - Multiple - A multiple is the result of multiplying a number by another whole number.
 - Equation - An equation is used to show that one number or calculation is equal to another.
 - Partition - Partition means splitting an object or value down into smaller parts.
 - Double - Double means to become twice as many.
 - Bridging - A mental strategy which uses addition or subtraction to cross a number boundary.
 - Partition - Splitting an object or value down into smaller parts.

Stem sentences

- ‘___ is ___ ones.’
- ‘___ is ___ hundreds and ___ ones.’
- ‘___ is ___ tens and ___ ones.’
- ‘___ is ___ hundreds, ___ tens and ___ ones.’

- ‘What digit is in the ___ place?’
- ‘What is the value of the ___ digit?’
- ‘What does the ___ represent?’

next/previous multiples of 100

- ‘___ is between ___ and ___.’
- ‘___ is the previous multiple of one hundred.’
- ‘___ is the next multiple of one hundred.’

Comparing-
To compare three-digit numbers, we need to compare the hundreds digits; if the hundreds digits are the same, we need to compare the tens digits; if both the hundreds and the tens digits are the same, we need to compare the ones digits

Representations

1000	2000	3000	4000	5000	6000	7000	8000	9000
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

‘...three hundred and forty-two.’

100s	10s	1s
3	4	2

342

Part-part-part-whole representation:

Balancing equations:
‘Use symbols (< > =) to complete the equations.’

100 + 60 + 5 105 + 60

Number line with multiples of hundred labelled and multiples of ten marked:

Labelling numbers with nine tens:

Addition and subtraction of 100s:

576 + 200 = 776
776 - 200 = 576

Example description – addition:

Identifying previous and next multiple of 100 on the number line:

Flexible partitioning of three-digit multiples of ten:

576 = 500 + 70 + 6
576 = 230 + 40 + 306

Calculating to/from multiples of 100 in tens – jottings and number line:

490 + 10 = 500
500 - 10 = 490
470 + 30 = 500
500 - 30 = 470

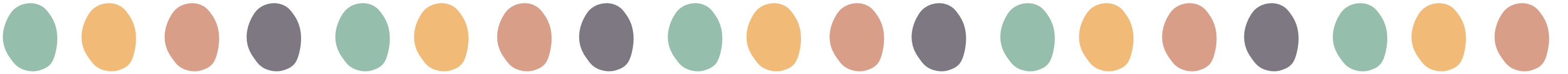
Addition and subtraction of tens:

576 + 10 = 586
586 - 10 = 576

ddition and subtraction of ones:

576 + 3 = 579
579 - 3 = 576

Calculating to/from multiples of 100 in tens – with Dienes:

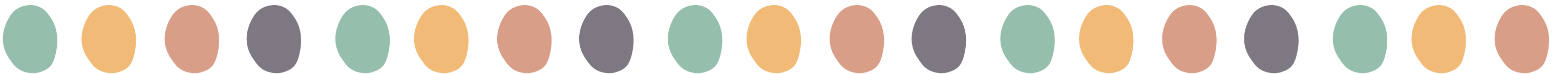


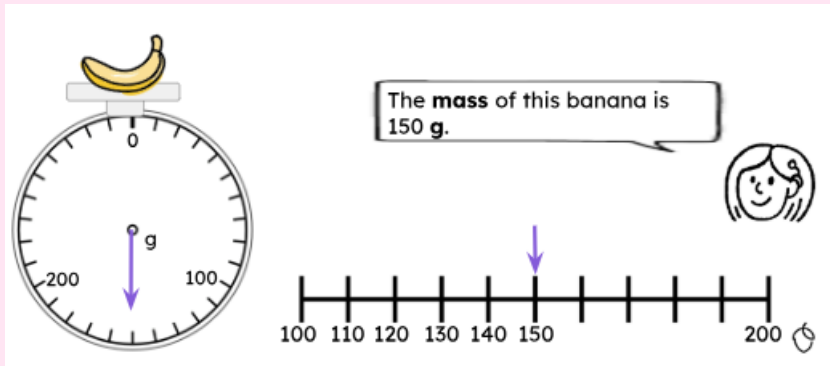
Y3- Overview

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

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

Autumn 2	Measures: mass and capacity (2 weeks)
Ready to progress	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non standard partitioning. 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts
NCETM documents	
Small steps	- To become familiar with scales with different intervals when measuring in grams. - To measure the mass of objects using grams. - To measure mass in whole kilograms and grams. - To understand and use capacity and volume. - To measure the volume of liquids using millilitres. - To measure volume in whole litres and millilitres. - To compare objects with ones I know to estimate mass and volume. - To estimate and then measure mass and volume and record in a table. - To solve problems involving mass. - To solve problems involving volume.
Links	NCETM OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/measures-mass-and-capacity/lessons?sid=57923e=zT5naCFqRY&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Spring%20Block%204%20SOL%20Mass%20and%20capacity.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcvjg/mastery_assessment_y3.pdf
Reasoning	Spot the Mistake: The scale goes: 0g, 100g, 150g, 300g. What is wrong with this scale? True or False: All scales go up in 100-gram intervals. True or false? Do, Then Explain: You weigh an apple and it reads just past the second small mark after 100g. Estimate the apple's mass and explain how you know. Show the Value: What is the value of the digit 2 in these masses? 2kg, 2,300g, 1kg 200g. Explain how you know. True or False: Volume and capacity mean exactly the same thing. True or false? Do, Then Explain: You have three containers: a mug (300ml), a bottle (1L), and a jug (750ml). Order them from least to greatest. Explain how you worked it out. Spot the Mistake: A jug shows: 0ml, 200ml, 400ml, 900ml. What is wrong with this scale? What Comes Next: 100ml, 200ml, 300ml... What comes next? Show the Value: What is the value of the digit 5 in these measurements? 1.5L, 500ml, 1L 500ml. Explain how you know. Do, Then Explain: Which is heavier: a maths book or a small bottle of water? Estimate using something you already know. Explain your thinking. Make Up an Example: Create a table with three items. Estimate their mass or volume, then record what the scale actually shows. What Comes Next: 500g + 500g = 1kg. 1kg + 250g = 1.25kg. 1.25kg + 250g = ? What comes next? Make Up an Example: Make up a problem where you buy two items with different masses in grams. Find the total mass in kilograms and grams. Spot the Mistake: A recipe says: "Use 1L of water and 250ml of oil." Someone pours both into a 1L jug. What's the problem? Make Up an Example: Create a real-life problem where you mix two liquids and need to know the total volume in millilitres.



	Representing 3-digit numbers, comparing and positioning on number lines (3 weeks)												
Problem solving	 Click on me												
Glossary	• Mass - Mass is a measure of how much matter something contains. It is measured by how much something weighs. Mass can be measured in grams. • Gram - A gram is a metric measure of mass (which we feel as weight). A paper clip weighs about 1 gram. The abbreviation is g. • Interval - Intervals are the spaces between given numbers. They include all given numbers between the numbers marked at the start and end. • Kilogram - Kilograms are use to measure the mass objects that are heavy. A pineapple has a mass of about 1 kilogram. The abbreviation is kg. • Capacity - Capacity is a measure of the maximum amount of liquid a container can hold when full. Capacity can be measured in millilitres. • Volume - Volume is the amount of space that an object takes up. In this case, the specific amount of liquid in a container. • Millilitre - The millilitre is a metric measure of capacity or volume. A millilitre is a very small amount of liquid. The abbreviation is ml. • Litre - The litre is a metric measure of capacity or volume. A litre is made up of 1,000 ml. • Estimate - An estimate is a given value, number or quantity that is near to the true amount; it is a number close enough to the right answer. • Table - A table is data (a collection of numbers, words, measurements and descriptions of things) arranged in rows and columns. • Bar model - A bar model is a pictorial representation of a problem where bars are used to represent the known and unknown quantities. • Whole - The whole is all of something. It is complete. • Part - A part is some but not all of something. It is an amount or section which, when combined with others, makes up the whole.												
Stem sentences	• We measure mass in grams (g) or kilograms (kg). • 1 kilogram is equivalent to 1,000g. • Capacity is how much a container can hold. • Volume is how much liquid is in a container right now. • We measure volume in millilitres (ml) and litres (l). • 1 litre is equivalent 1,000 millilitres. • On scales, the intervals are marked clockwise. • The size of something does not determine how much mass an object has. The _____ has more matter, so it has a greater mass.												
Representations	 pencil in the table. <table><tr><th>Object</th><th>Estimate</th><th>Mass</th></tr><tr><td>Crayons</td><td>70 g</td><td>75 g</td></tr><tr><td>Pencil</td><td>15 g</td><td>10 g</td></tr><tr><td></td><td></td><td></td></tr></table>	Object	Estimate	Mass	Crayons	70 g	75 g	Pencil	15 g	10 g			
Object	Estimate	Mass											
Crayons	70 g	75 g											
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