Year 3

Mathematics

Non-Negotiables

- Compare and order numbers up to 1000.
- Read and write all numbers to 1000 in digits and words.
- Find 10 or 100 more/less than a given number.
- Count from 0 in multiples of 4, 8, 50 & 100.
- Recall and use multiplication & division facts for 3, 4, 8 tables.
- Recognise place value of any 3-digit number.

Add and subtract:
- 3-digit numbers and ones
- 3-digit numbers and tens
- 3-digit numbers and hundreds

Add and subtract:
- Numbers with up to 3-digits using efficient written method (column).

- Use inverse to check.

Multiply:
- 2-digit by 1-digit

- Count up/down in tenths.
- Compare and order fractions with same denominator.
- Addition and subtraction of fractions with same denominator with whole.
- Know pairs of fractions that total 1.
- Tell time using 12 and 24 hour clocks; and using Roman numerals.
- Tell time to nearest minute.
- Know number of days in each month.

The following 3 pages suggest a planning outline for delivering the non-negotiables in classrooms..
There should be some element of teaching of these each day.

Year 3 Arithmetic Non-Negotiables	
Autumn Term	
1st Half Term	**2nd Half Term**
• Count on/back in steps of 2s, 5s, 10s, 3s to 100 and beyond from 0 and any given number- **16/4** • Count on/back in 4s from 0 to 100- **17/4** • Count on/back in 50s and 100s from 0 to 1000- **18/4, 19/4** • Find 10/100 more or less than a given number up to 500- **20/4** • Read and write all numbers to 1000 in numerals and write all numbers in words to 200 and over • Order a set of numbers (4 and/or 5) to at least 1000 in increasing and decreasing value • Compare numbers up to 200 using =, <, > symbols • Round numbers to the nearest 10 to at least 200 • Partition 3 digit numbers (hundreds, tens and ones) • Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20 to begin to become fluent in deriving facts (e.g. 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 -3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30 and 300 + 700 = 1000; 1000 – 700 = 300 and 700 = 1000 – 300) • Add/subtract: 2-digit and 1-digit numbers, a 2-digit number and tens, two 2- digit numbers and add 3 one digit numbers • Recall the 2, 5 and 10 times tables and the derived division facts and begin to learn the 4 and 3 times tables • Double any number up to 50 and halve any even 2-digit number up to 10	• Count on/back in steps of 2s, 5s, 10s, 3s to 100 and beyond, from 0 and any given number • Count on/back in multiples of 4 and 8 from 0 • Count on/back in 50s, 100s from 0 to 1000 • Find 10/100 more or less than a given number up to 500 • Count on/back in tenths • Read and write all numbers to 1000 in numerals and write all numbers in words to 400 and over • Order a set of numbers (4 and/or 5) to at least 1000 in increasing and decreasing value • Compare numbers up to 200 and beyond using =, <, > symbols • Round numbers to the nearest 10 to at least 500 and to the nearest 100 to 500 • Partition 3 digit numbers (hundreds, tens and ones) • Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20 to begin to become fluent in deriving facts (e.g. 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 -3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30 and 300 + 700 = 1000; 1000 – 700 = 300 and 700 = 1000 – 300) • Add/subtract: 3-digit and 1-digit numbers, a 3-digit number and tens and a 3-digit number and hundreds • Count on/back in ½s , ¼s and 1/3s including on a number line • Recall the 2, 3, 4, 5 and 10 times tables and the derived division facts • Double any number up to 50 and halve any even 2-digit number up to 100

Year 3. Arithmetic Non-Negotiables

Spring Term

1st Half Term	2nd Half Term
• Count on/back in steps of 2s,5s, 10s, 3s to 100 and beyond, from 0 and any given number	• Count on/back in steps of 2s, 5s, 10s, 3s to 100 and beyond, from 0 and any given number
• Count on/back in multiples of 4 and 8 from 0	• Count on/back in multiples of 4 and 8 from 0
• Count on/back in 50s, 100s from 0 to 1000	• Count on/back in 50s, 100s from 0 to 1000
• Find 10/100 more or less than a given number up to 500 and more	• Find 10/100 more or less than a given number up to 500 and more
• Read and write all numbers to 1000 in numerals and write all numbers in words to 500	• Read and write all numbers to 1000 in numerals and write all numbers in words to 500 and over
• Order a set of numbers (4 and/or 5) to at least 1000 in increasing and decreasing value	• Order a set of numbers (4 and/or 5) to at least 1000 in increasing and decreasing value
• Compare numbers up to 500 using =, <, > symbols	• Compare numbers up to 500 and beyond using =, <, > symbols
• Round numbers to the nearest 10 to at least 1000 and to the nearest 100 to 1000	• Round numbers to the nearest 10 to at least 1000 and to the nearest 100 to 1000
• Recognise the place value of each digit (hundreds, tens and ones)	• Partition 3 digit numbers (hundreds, tens and ones) and partition numbers in different ways
• Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20 to begin to become fluent in deriving facts (e.g. 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 -3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30 and 300 + 700 = 1000; 1000 – 700 = 300 and 700 = 1000 – 300)	• Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20 to begin to become fluent in deriving facts (e.g. 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 -3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30 and 300 + 700 = 1000; 1000 – 700 = 300 and 700 = 1000 – 300)
• Add/subtract: 3-digit and 1-digit numbers, a 3-digit number and tens and a 3-digit number and hundreds	• Add/subtract: 3-digit and 1-digit numbers, a 3-digit number and tens and a 3-digit number and hundreds
• Recall the 2, 3, 4, 5 and 10 times tables and the derived division facts	• Count on/back in $\frac{1}{2}$s , $\frac{1}{4}$s and 1/3s including on a number line
• Double any number up to 100; double any multiple of 50 up to 500 and halve any number up to 100	• Recall the 2, 3, 4, 5, and 10 times tables and the derived division facts
• Find complements to 100 and recall addition and subtraction facts for 100 (e.g. 37 + 63 = 100, 63 + 37 = 100, 100 – 37 = 63, 100 – 63 = 37)	• Double any number up to 100; double any multiple of 50 up to 500 and halve any number up to 100
	• Find complements to 100 and recall addition and subtraction facts for 100 (e.g. 37 + 63 = 100, 63 + 37 = 100, 100 – 37 = 63, 100 – 63 = 37)

Year 3
Arithmetic
Non-Negotiables

Summer Term	
1st Half Term	**2nd Half Term**
• Count on/back in steps of 1s, 10s, or 100 from any 2/3 digit numbers- • Count on/back in 50s, 100s from 0 to 1000 • Find 10/100 more or less than a given number up to 1000 • Read and write all numbers to 1000 in numerals and write all numbers in words to at least 1000 • Order a set of numbers (4 and/or 5) to at least 1000 in increasing and decreasing value • Compare numbers up to 1000 using =, <, > symbols • Round numbers to the nearest 10 to 1000 and beyond and to the nearest 100 to 1000 and beyond • Partition 3 digit numbers (hundreds, tens and ones) and partition numbers in different ways • Count in tenths, read and write numbers with 1 decimal place and compare numbers with one decimal place • Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20 to begin to become fluent in deriving facts (e.g. 3 + 7 = 10; 10 - 7 = 3 and 7 = 10 -3 to calculate 30 + 70 = 100; 100 - 70 = 30 and 70 = 100 - 30 and 300 + 700 = 1000; 1000 - 700 = 300 and 700 = 1000 - 300) • Find complements to 100 and recall addition and subtraction facts for 100 (e.g. 37 + 63 = 100, 63 + 37 = 100, 100 - 37 = 63, 100 - 63 = 37) • Add/subtract: 3-digit and 1-digit numbers, a 3-digit number and tens and a 3-digit number and hundreds • Recall the 2, 3, 4, 5, 8 and 10 times tables and the derived division facts • Double any number up to 100; double any multiple of 50 up to 500 and halve any number up to 200	• Count on/back in steps of 2s,5s, 10s, 3s to 100 and beyond, from 0 and any given number • Count on/back in multiples of 4 and 8 from 0 • Count on/back in 50s, 100s from 0 to 1000 • Find 10/100 more or less than a given number up to 1000 and more • Read and write all numbers to 1000 in numerals and write all numbers in words to at least 1000 • Order a set of numbers (4 and/or 5) to 1000 and beyond in increasing and decreasing value • Compare numbers up to 1000 and beyond using =, <, > symbols • Round numbers to the nearest 10 to 1000 and beyond and to the nearest 100 to 1000 and beyond • Begin to partition 4 digit numbers (thousands, hundreds, tens and ones) • Count in tenths, read and write numbers with 1 decimal place and compare numbers with one decimal place • Add/subtract: 3-digit and 1-digit numbers, a 3-digit number and tens and a 3-digit number and hundreds • Count on/back in $\frac{1}{2}$s , $\frac{1}{4}$s , 1/3s and 1/10s including on a number line • Find complements to 100 and recall addition and subtraction facts for 100 (e.g. 37 + 63 = 100, 63 + 37 = 100, 100 - 37 = 63, 100 - 63 = 37) • Recall the 2, 3, 4, 5, 8 and 10 times tables and the derived division facts • Double any number up to 100; double any multiple of 50 up to 500 and halve any number up to 200

YEAR 3 : AUTUMN 1

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Place Value	**2 Place Value**	**1 Measures Perimeter**	**1 Statistics**	**1 Addition and Subtraction**	**2 Addition and Subtraction**
Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number.	Read and write numbers to 1,000 in numerals and words	Measure the perimeter of simple 2D shapes.	Interpret and present data using: - bar charts - pictograms - tables	Add and subtract numbers mentally, including: - 3-digit number & ones - 3-digit numbers & tens - 3-digit numbers & hundreds	Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.
➢ Count on and back in 10s from 0 to 1000 ➢ Count on and back in 100s from 0 to 1000 ➢ Count on and back in 50s from 0 to 1000 ➢ Count on and back in 4s from 0 to 1000 ➢ Count on and back in 8s from 0 to 1000 ➢ Find 10 more than a given number between 0 and 1000 ➢ Find 10 less than a given number between 0 and 1000 ➢ Find 100 more than a given number between 0 and 1000 ➢ Find 100 less than a given number between 0 and 1000	➢ Read all numbers from 100 to 1000 in numerals ➢ Write all numbers from 100 to 1000 in numerals ➢ Read all numbers from 100 to 1000 in words ➢ Write all numbers from 100 to 1000 in words	➢ Know the term 'perimeter' ➢ Know that the perimeter is the distance around the sides of a shape ➢ Understand that the perimeter refers to distance in real life contexts, e.g. football pitch ➢ Measure accurately each side of 2D shapes and add lengths to find the perimeter	➢ Read information set out in a bar chart ➢ Read information set out in a pictogram ➢ Read information set out in a table ➢ Read information from a bar chart that has a scale on the vertical axis ➢ Present information in a table ➢ Present information in a bar chart ➢ Present information in a pictogram ➢ Present information in a bar chart where there is a scale on the vertical axis	Mentally: ➢ Subtract any 1-digit number from a greater 1–digit number ➢ Add any 3-digit number to a 1-digit number ➢ Subtract a 1-digit number from a 3-digit number ➢ Add any 3-digit number to a 10s number ➢ Subtract a 10s number from any 3-digit number ➢ Add any 3-digit number to any 100s number. ➢ Subtract any 100s number from a 3-digit number	➢ Add two 2-digit numbers using columnar addition without exchanging. ➢ Subtract a 2-digit number from a 2-digit number without exchanging. ➢ Add two 3-digit numbers using columnar addition without exchanging. ➢ Subtract a 2 or 3-digit number from a 3-digit number without exchanging. ➢ Add two 2-digit numbers where the units make more than 10 ➢ Add two 3-digit numbers where the units and/or tens make more than 10 ➢ Subtract a 2-digit number from a 2-digit number where exchanging is required ➢ Subtract a 2-digit number from a 3-digit number where exchanging is required

YEAR 3 : AUTUMN 2

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Multiplication & Division	**2 Multiplication & Division**	**3 Multiplication & Division**	**2 Measures Time**	**1 Geometry 3D Shape**	**Consolidate and Assess**
Recall and use the multiplication and division facts for the 3, 4 and 8 tables.	Write and calculate mathematical statements for multiplication using known multiplication tables, including 2-digit x 1-digit, using mental and progressing to formal written methods.	Write and calculate mathematical statements for division using known multiplication tables, including 2-digit x 1-digit, using mental and progressing to formal written methods.	Estimate and read time with increasing accuracy to the nearest minute; Tell and write the time from an analogue clock, including using Roman numerals from I to XII	Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them	Start this week by using the warm ups outlined in the 'Upside down and Inside out' section of this publication so as to ensure pupils are fluent and secure with their basic skills.

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
➤ Count in 3s; forward and backwards. ➤ Recite the x3 table up to x12, without error. ➤ Answer any calculation involving x3, out of order. ➤ Know that 2x3 is the same as 3x2 etc.. ➤ Answer any calculation involving ÷3, out of order. ➤ Count in 4s; forward and backwards. ➤ Recite the x4 table up to x12, without error. ➤ Answer any calculation involving x4, out of order. ➤ Know that 3x4 is the same as 4x3 etc.. ➤ Answer any calculation involving ÷4, out of order. ➤ Count in 8s; forward and backwards. ➤ Recite the x8 table up to x12, without error. ➤ Answer any calculation involving x8, out of order. ➤ Know that 4x8 is the same as 8x4 etc.. ➤ Answer any calculation involving ÷8, out of order.	➤ Multiply a multiple of ten by a single digit mentally, using 2, 3, 4, 5, 8 and 10x. ➤ Multiply a 2-digit number by a single digit using 2, 3, 4, 5, 8 and 10x.	➤ Divide 2, 3, 4, 5, 8 into any multiple of ten with no remainder. ➤ Divide 2, 3, 4, 5, 8 into any 2-digit number with no remainder.	➤ Read the time to one minute intervals. ➤ Estimate the time to the nearest five minute interval, e.g. it is nearly ten past four. ➤ Recognise the Roman numerals from I to XII. ➤ Place I – XII on a clock face in correct place ➤ Read time on clock with Roman numerals ➤ Show equivalent time from Roman numeral clock face on regular analogue face and vice versa	➤ Make 3D shapes from a range of materials (including modelling materials and construction) ➤ Accurately describe the properties of 3D shapes	Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn term.

YEAR 3 : AUTUMN 1

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Place Value	**2 Place Value**	**1 Measures Perimeter**	**1 Statistics**	**1 Addition and Subtraction**	**2 Addition and Subtraction**
Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number.	Read and write numbers to 1,000 in numerals and words	Measure the perimeter of simple 2D shapes.	Interpret and present data using: - bar charts - pictograms - tables	Add and subtract numbers mentally, including: - 3-digit number & ones - 3-digit numbers & tens - 3-digit numbers & hundreds	Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.
➢ Count on and back in 10s from 0 to 1000 ➢ Count on and back in 100s from 0 to 1000 ➢ Count on and back in 50s from 0 to 1000 ➢ Count on and back in 4s from 0 to 1000 ➢ Count on and back in 8s from 0 to 1000 ➢ Find 10 more than a given number between 0 and 1000 ➢ Find 10 less than a given number between 0 and 1000 ➢ Find 100 more than a given number between 0 and 1000 ➢ Find 100 less than a given number between 0 and 1000	➢ Read all numbers from 100 to 1000 in numerals ➢ Write all numbers from 100 to 1000 in numerals ➢ Read all numbers from 100 to 1000 in words ➢ Write all numbers from 100 to 1000 in words	➢ Know the term 'perimeter' ➢ Know that the perimeter is the distance around the sides of a shape ➢ Understand that the perimeter refers to distance in real life contexts, e.g. football pitch ➢ Measure accurately each side of 2D shapes and add lengths to find the perimeter	➢ Read information set out in a bar chart ➢ Read information set out in a pictogram ➢ Read information set out in a table ➢ Read information from a bar chart that has a scale on the vertical axis ➢ Present information in a table ➢ Present information in a bar chart ➢ Present information in a pictogram ➢ Present information in a bar chart where there is a scale on the vertical axis	Mentally: ➢ Subtract any 1-digit number from a greater 1–digit number ➢ Add any 3-digit number to a 1-digit number ➢ Subtract a 1-digit number from a 3-digit number ➢ Add any 3-digit number to a 10s number ➢ Subtract a 10s number from any 3-digit number ➢ Add any 3-digit number to any 100s number. ➢ Subtract any 100s number from a 3-digit number	➢ Add two 2-digit numbers using columnar addition without exchanging. ➢ Subtract a 2-digit number from a 2-digit number without exchanging. ➢ Add two 3-digit numbers using columnar addition without exchanging. ➢ Subtract a 2 or 3-digit number from a 3-digit number without exchanging. ➢ Add two 2-digit numbers where the units make more than 10 ➢ Add two 3-digit numbers where the units and/or tens make more than 10 ➢ Subtract a 2-digit number from a 2-digit number where exchanging is required ➢ Subtract a 2-digit number from a 3-digit number where exchanging is required

YEAR 3 : AUTUMN 2

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Multiplication & Division	**2 Multiplication & Division**	**3 Multiplication & Division**	**2 Measures Time**	**1 Geometry 3D Shape**	**Consolidate and Assess**
Recall and use the multiplication and division facts for the 3, 4 and 8 tables.	Write and calculate mathematical statements for multiplication using known multiplication tables, including 2-digit x 1-digit, using mental and progressing to formal written methods.	Write and calculate mathematical statements for division using known multiplication tables, including 2-digit x 1-digit, using mental and progressing to formal written methods.	Estimate and read time with increasing accuracy to the nearest minute; Tell and write the time from an analogue clock, including using Roman numerals from I to XII	Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them	Start this week by using the warm ups outlined in the 'Upside down and Inside out' section of this publication so as to ensure pupils are fluent and secure with their basic skills. Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn term.
➤ Count in 3s; forward and backwards. ➤ Recite the x3 table up to x12, without error. ➤ Answer any calculation involving x3, out of order. ➤ Know that 2x3 is the same as 3x2 etc.. ➤ Answer any calculation involving ÷3, out of order. ➤ Count in 4s; forward and backwards. ➤ Recite the x4 table up to x12, without error. ➤ Answer any calculation involving x4, out of order. ➤ Know that 3x4 is the same as 4x3 etc.. ➤ Answer any calculation involving ÷4, out of order. ➤ Count in 8s; forward and backwards. ➤ Recite the x8 table up to x12, without error. ➤ Answer any calculation involving x8, out of order. ➤ Know that 4x8 is the same as 8x4 etc.. ➤ Answer any calculation involving ÷8, out of order.	➤ Multiply a multiple of ten by a single digit mentally, using 2, 3, 4, 5, 8 and 10x. ➤ Multiply a 2-digit number by a single digit using 2, 3, 4, 5, 8 and 10x.	➤ Divide 2, 3, 4, 5, 8 into any multiple of ten with no remainder. ➤ Divide 2, 3, 4, 5, 8 into any 2-digit number with no remainder.	➤ Read the time to one minute intervals. ➤ Estimate the time to the nearest five minute interval, e.g. it is nearly ten past four. ➤ Recognise the Roman numerals from I to XII. ➤ Place I – XII on a clock face in correct place ➤ Read time on clock with Roman numerals ➤ Show equivalent time from Roman numeral clock face on regular analogue face and vice versa	➤ Make 3D shapes from a range of materials (including modelling materials and construction) ➤ Accurately describe the properties of 3D shapes	

Year 3: Spring 1

Week 1: Place Value

Compare and order numbers up to 1000.
Recognise the place value of each digit in a 3 digit number.

YEAR 3 : SPRING 2

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
2 Geometry 2D/3D Shape	**3 Addition & Subtraction**	**3 Fractions**	**3 Geometry Angles**	**4 Measures Time**	**Consolidate and Assess**
Draw 2D shapes	Estimate the answer to a calculation and use the inverse operations to check answers.	Add and subtract fractions with the same denominator within one whole.	Recognise angles are a property of shape or a description of a turn. Identify right angles; recognise that two right angles make a half-turn, three make three quarters & four a complete turn Identify whether angles are greater than or less than a right angle	12-hour & 24-hour clocks Record and compare time in terms of seconds, minutes, hours. Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.	Start this week by revising the learning covered in the Autumn and Spring terms so as to ensure pupils are fluent and secure with their basic skills.
➤ Accurately draw 2D shapes and name them, e.g. squares, rectangles and triangles.	➤ Use estimation to check the reasonableness of an answer, e.g. Why can't 65+32 = 89? ➤ Use inverse operations involving + and – to check answers.	➤ Add two fractions with the same denominator that add up to no more than one whole. ➤ Subtract one fraction from another with the same denominator (below one whole).	➤ Know that the space between two lines joined at a point is known as an angle and can be measured in degree ➤ Know that the measurement in degrees is greater when the space is wider ➤ Understand that angle can be used to describe a turn ➤ Be able to identify right angles in the environment ➤ Know a right angle as having 90° and use the degrees symbol ➤ Know that two right angles effectively make a straight line and is equivalent to 180° ➤ Know that two right angles make a half turn ➤ Know that three right angles make a three-quarter turn ➤ Know that four right angles make a complete turn ➤ Identify angles smaller than a right angle ➤ Identify angles larger than a right angle	➤ Read 24 hour clock and show time on analogue clock face, e.g. 18:30 is half past 6 in the evening. ➤ Be able to tell whether a time is am or pm on a 24 hour clock ➤ Know that 60 seconds is one minute. ➤ Know that 60 minutes is one hour. ➤ Show understanding of equivalence, e.g. 90 secs = 1 minute and a half; 75 minutes = 1 hour and a quarter. ➤ Order amounts of time using different units of measurement, e.g. 90 secs; 2 minutes; 120 minutes; 1.5 hours etc. ➤ Know that am represents time from midnight to noon. ➤ Know that pm represents time from noon to midnight.	Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn and Spring terms. Analyse the results and use information to help focus the intervention sessions, as needed, for the following term.

YEAR 3 : SUMMER 1

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
6 Multiplication & Division	**4 Addition & Subtraction Decimals**	**5 Addition & Subtraction (using measures)**	**7 Multiplication & Division (using measures)**	**5 Measures Time**	**5 Geometry Properties**
Additional practise for formal methods of multiplication and division, including a high focus on reasoning	Count up and down in tenths; recognise that tenths arise from dividing an object into ten equal parts and in dividing numbers or quantities by 10.	Add and subtract measures (length, weight and volume) with up to 3 digits, using formal written methods of columnar addition and subtraction.	Write and calculate measures for multiplication and division using known multiplication tables, including 2-digit x 1-digit, using mental and progressing to formal written methods.	Know the numbers of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events, for example to calculate time taken by particular events or tasks.	Identify horizontal and vertical lines and pairs of perpendicular & parallel lines.
➢ Multiply a multiple of ten by a single digit mentally, using 2, 3, 4, 5, 8 and 10x; Setting everything out in formal method ➢ Multiply a 2-digit number by a single digit using 2, 3, 4, 5, 8 and 10x, setting everything out using a formal method ➢ Divide 2, 3, 4, 5, 8 into any multiple of ten with no remainder, setting everything out using a formal method ➢ Divide 2, 3, 4, 5, 8 into any 2-digit number with no remainder, setting everything out using a formal method	➢ Count up in tenths starting at zero ➢ Count back in tenths to zero ➢ Count up in tenths starting at any 'tenth number' ➢ Count back in tenths starting at any 'tenth number' ➢ Know that tenths arise from dividing an object, quantity or number into 10 equal parts ➢ Place factions (tenths) in order – ascending and descending.	➢ Add two 2-digit numbers using columnar addition without exchanging. ➢ Subtract a 2-digit number from a 2-digit number without exchanging. ➢ Add two 3-digit numbers using columnar addition without exchanging. ➢ Subtract a 2 or 3-digit number from a 3-digit number without exchanging. ➢ Add two 2-digit numbers where the units make more than 10 ➢ Add two 3-digit numbers where the units and/or tens make more than 10 ➢ Subtract a 2-digit number from a 2-digit number where exchanging is required ➢ Subtract a 2-digit number from a 3-digit number where exchanging is required	➢ Multiply a measure with a multiple of ten by a single digit mentally, using 2, 3, 4, 5, 8 and 10x. ➢ Multiply a measure with a 2-digit number by a single digit using 2, 3, 4, 5, 8 and 10x. ➢ Divide 2, 3, 4, 5, 8 into any measure of ten with no remainder. ➢ Divide 2, 3, 4, 5, 8 into any measure with 2-digit number with no remainder.	➢ Know 60 minutes = 1 hour ➢ Know 60 seconds = 1 minute ➢ Know the number of days per month varies from 28-31 ➢ State how many days in each month ➢ Know the number of days in a year varies between 365 and 366 ➢ Know that there are 366 days in a leap year ➢ Find the time difference between two events by counting on	➢ Know and be able to accurately use: horizontal and vertical ➢ Recognise horizontal and vertical in everyday situations ➢ Know the relationship between horizontal and vertical ➢ Know and be able to accurately use: parallel and perpendicular ➢ Accurately draw a line that is parallel or perpendicular to a given line

YEAR 3 : SUMMER 2

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
4 Place Value	**6 Addition and Subtraction Problems**	**4 Fractions**	**6 Measures Money**	**2 Statistics**	**Consolidate and Assess**
Revise all Year 3 activities associated with place value, including additional reasoning activities.	Solve word problems including missing number problems, number facts, place value and more complex addition and subtraction.	Revise all Year 3 activities associated with fractions and decimals.	Consolidate: Adding and subtracting amounts of money to give change, using both £ and p in practical contexts.	Solve 1-step and 2-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts pictograms and other graphs	Start this week by revising the learning covered in Year 3 so as to ensure pupils are fluent and secure with their basic skills.

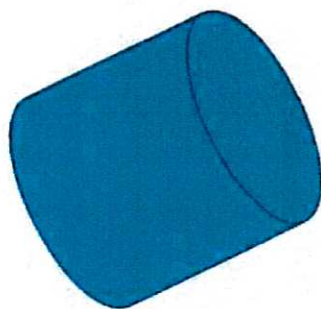| WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
➢ **Focus specifically on:** ➢ Knowing which number in a set of 3 digit numbers is the greatest ➢ Knowing which number in a set of 3 digit numbers is the smallest ➢ Ordering a set of 3 digit numbers from smallest to largest ➢ Ordering a set of 3 digit numbers from largest to smallest ➢ Identifying the hundreds, tens and ones in any 3 digit number ➢ Partitioning a 3 digit number identifying the value of each digit	➢ Solve missing number problems ➢ Solve word problems involving place value ➢ Solve problems with addition to 1000 ➢ Solve problems with subtraction to 1000	➢ **Focus specifically on:** ➢ Adding two fractions with the same denominator that add up to no more than one whole. ➢ Subtracting one fraction from another with the same denominator (below one whole). ➢ Counting up in tenths starting at zero ➢ Counting back in tenths to zero ➢ Counting up in tenths starting at any 'tenth number' ➢ Counting back in tenths starting at any 'tenth number' ➢ Knowing that tenths arise from dividing an object, quantity or number into 10 equal parts ➢ Placing fractions (tenths) in order – ascending and descending.	➢ Add any two amounts of money using notes and coins ➢ Sort out an amount of money by organising it into sets of the same coins and then making up sets of pounds ➢ Give change from £5 ➢ Give change from £10	➢ Solve problems using pictograms ➢ Solve problems using bar charts ➢ Solve problems using graphs ➢ Solve 1-step problems using pictograms, scaled bar charts and other graphs ➢ Solve 2-step problems using pictograms, scaled bar charts and other graphs ➢ Solve problems which ask, 'How many more...?' ➢ Solve problems which ask, 'How many fewer...?'	Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in Year 3. Analyse the results and use information to help focus the intervention sessions, as needed, for the following term.

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name   Autumn 2 Week 5

Objective: Geometry   Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them
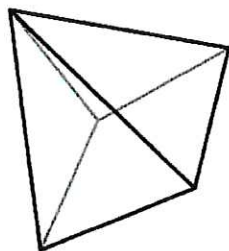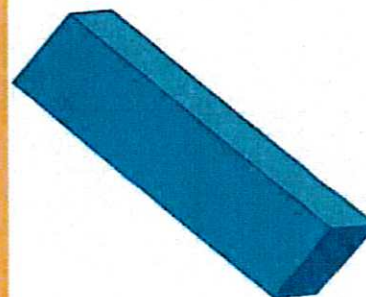
Name the shape.

_____

Describe its properties.
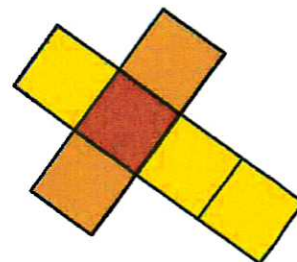
_____

_____

Think of at least one use for this shape.

Name the shape.

_____

Describe its properties.

_____

_____

Think of at least one use for this shape.

Name the shape.

_____

What would you use this shape for?

_____

What 3D shape does this net make?

_____

Autumn 2: Week 5: Practice and Consolidation

Geometry: Shape: Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them
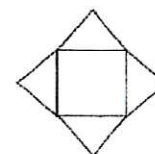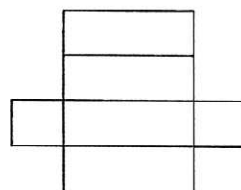
Teaching Sequence

- ➤ Make 3D shapes from a range of materials (including modelling materials and construction)
- ➤ Accurately describe the properties of 3D shapes

## Oral and Mental Activities: Examples:

- Collect a number of containers, such as cereal boxes; tins of beans, etc.
- Talk to the pupils about each of the 3D shapes and their uses.
- Where it is possible, open up the boxes to see what the net looks like.
- Give pupils card and let them try to create their own 3D shapes using the containers they have seen as an example.
- Create a class collection of boxes and containers of different shape and classify them accordingly.

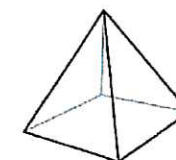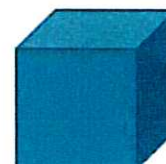## Pencil and Paper Activities Examples:

What 3D shapes will these nets make?
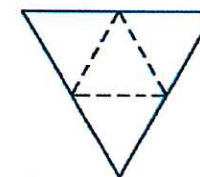
Make up 3 cubes starting from a piece of card.
One should be large; one medium size and one small.
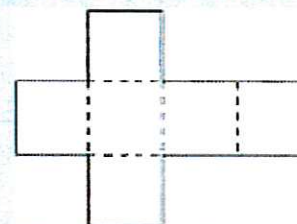
Describe the properties of the following shapes, using terms like faces, edges and corners.

Autumn 2: Week 5: Mastering this Objective

Geometry: Shape: Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them

Teaching Sequence

> Make 3D shapes from a range of materials (including modelling materials and construction)
> Accurately describe the properties of 3D shapes

If pupils have mastered this objective they will be able to complete these activities:

Put the following shapes into a feely bag: cube; cuboid; triangular pyramid; square-based pyramid; sphere, cylinder and cone.

One person has to reach into the feely bag and describe accurately the shape they have without showing it to others. Pupils should work out which shape it is according to the description given.

I am thinking of a 3-dimensional shape which has faces that are triangles and squares.
What could my shape be?

One face of a 3-D shape looks like this.

What could it be?
Are there any other possibilities?
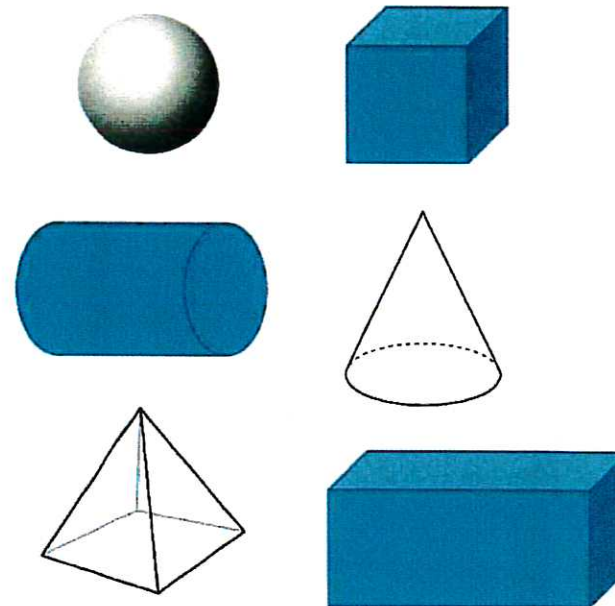
Look at the six 3D shapes above.
Take any 2 shapes and explain what is the same and what is different about each pair.

Geometry: Shape: Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them

Teaching Sequence

- ➢ Make 3D shapes from a range of materials (including modelling materials and construction)
- ➢ Accurately describe the properties of 3D shapes

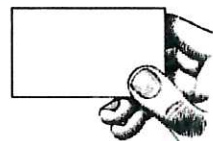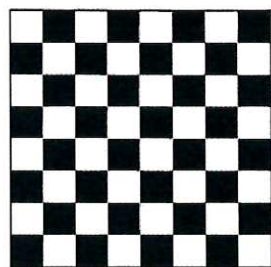## Activities for pupils working at greater depth:

Futuristic Town Design
Working with a partner:
Create a futuristic space town, using 3D shapes that you have made up from nets.
Try to use different 3D shapes of different sizes.
Design your town first before you make it.

Create a board game that has either a 2D or a 3D shape in each square.

Make up a set of cards with the description of 2D and 3D properties on them.
From a given starting point move to the nearest square that matches the description on the card. The winner is the one that makes most moves after picking up three cards.

Look at the following shapes.
If you cut down the middle (cross section) of each shape, in the direction of the arrow, what 2D shape will be left exposed?
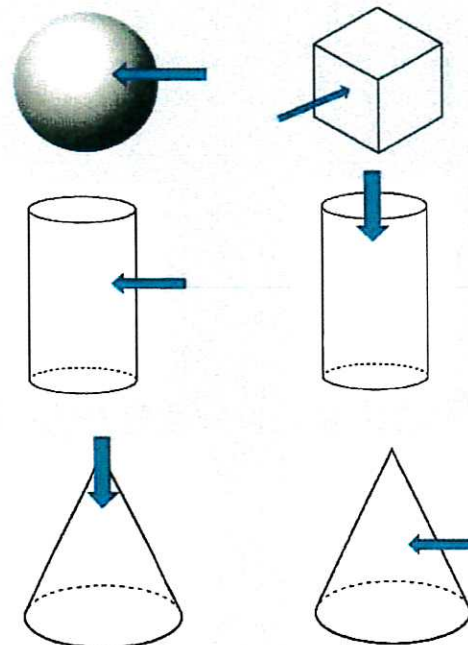
Now do the same with a cuboid cut in two different ways.

Autumn 2: Week 5: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Geometry: Shape: Make 3D shapes using modelling materials; recognise 3D shapes in different orientations; & describe them

|	Me	My Teacher
Can you see what different 3D shapes are used for in everyday life?		
Do you know what the net of the following shapes look like: cube; cuboid; cylinder; square-based pyramid; and, triangular-based pyramid?		
Can you recognise and name the following 3D shapes: cube; cuboid; sphere; cone; cylinder; square-based pyramid; triangular-based pyramid?		
Can you recognise and name all the regular 2D shapes: square; rectangle; circle; triangle and semi-circle?		
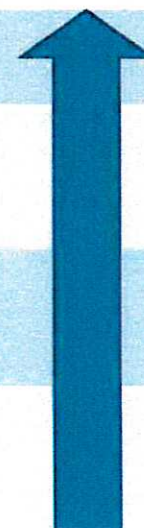
The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Spring 2: Week 5

| Objective: Measures | **Time:** -12-hour & 24-hour clocks; Record and compare time in terms of seconds, minutes, hours; Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight. |
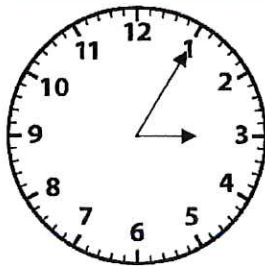
The time on the left is during the afternoon.
Show the time using the 24-hour clock system.

Do the following times say morning or afternoon/ evening?

0530	Morning
1427	
1936	
1035	
1316	

How many minutes are there in the following times:

2 hours and 15 minutes:

1 hour and 16 minutes:

4 hours and 7 minutes:

5 hours exactly:

Write these times, using the 24 hour clock method.

3.30 am	
7.15 pm	
11.35 am	
2.30 pm	
8.16 pm	

Spring 2: Week 5: Practice and Consolidation

Measures: Time: -12-hour & 24-hour clocks

- Record and compare time in terms of seconds, minutes, hours.
- Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.

Teaching Sequence

- ➤ Read 24 hour clock and show time on analogue clock face, e.g. 18:30 is half past 6 in the evening.
- ➤ Be able to tell whether a time is am or pm on 24 hour clock
- ➤ Know that 60 seconds is one minute.
- ➤ Know that 60 minutes is one hour.
- ➤ Show understanding of equivalence, e.g. 90 secs = 1 minute and a half; 75 minutes = 1 hour and a quarter.
- ➤ Order amounts of time using different units of measurement, e.g. 90 secs; 2 minutes; 120 minutes; 1.5 hours etc.
- ➤ Know that am represents time from midnight to noon.
- ➤ Know that pm represents time from noon to midnight.

Oral and Mental Activities: Examples:

- Explain how the day has 24 hours but our clocks are set out in 12 hours.
- Talk about how we now use a 24 hour clock system digitally.
- Show the system by having a variety of digital clocks available in the classroom.
- Explain how four digits are used and the 0 is placed in front of am times from 1 to 9.
- Look at how the minute hand moves around the clock and explain that there are 60 minutes in one hour, link this to our quarter past and to the hour being 15 minutes past or to and that 30 minutes past is half past.
- Explain the relationship between minutes and seconds.

Pencil and Paper Activities Examples:

If the digital clock shows the following times, what would a clock face look like?

07:30	14:15
19:10	02:45
16:20	17:50

How many hours and minutes are there in the following:
  75 minutes;   139 minutes;   220 minutes
  105 minutes   230 minutes;   176 minutes
How many minutes and seconds are the in the following:
  230 seconds   150 seconds   305 seconds
  140 seconds   201 seconds   430 seconds

Show the following times as the 24-hour clock would show them:
2.30am   6.25am   7.23pm   8.16pm
2.30 in the afternoon   7.30 in the morning
half past six in the morning   quarter to five in the afternoon

Name six things you can definitely do in under 2 minutes.

Measures: Time: 12 hour & 24 hour clocks
Record and compare time in terms of seconds, minutes, hours.
Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.

Teaching Sequence

> Read 24 hour clock and show time on analogue clock face, e.g. 18:30 is half past 6 in the evening.
> Be able to tell whether a time is am or pm on 24 hour clock
> Know that 60 seconds is one minute.
> Know that 60 minutes is one hour.
> Show understanding of equivalence, e.g. 90 secs = 1 minute and a half; 75 minutes = 1 hour and a quarter.
> Order amounts of time using different units of measurement, e.g. 90 secs; 2 minutes; 120 minutes; 1.5 hours etc.
> Know that am represents time from midnight to noon.
> Know that pm represents time from noon to midnight.

If pupils have mastered this objective they will be able to complete these activities independently:
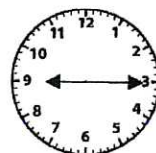
Match the clock faces to the two possible digital times.

| 09:15 |
| 01:45 |
| 04:30 |
| 16:30 |
| 21:15 |
| 13:45 |

It is half past eight in the evening when I go to bed. What will this look like on a 24 hour digital clock?

It is quarter past twelve when I have lunch. What will this look like on a 24 hour digital clock?

My PE lesson starts at twenty past two in the afternoon. What will this look like on a 24 hour digital clock?

Complete this table:

Clock	Digital	Words
		Half past two in the afternoon
	09:20	
		Quarter to five in the afternoon
	21:45	

Spring 2: Week 5: Working at greater depth

Measures: Time: -12-hour & 24-hour clocks
- Record and compare time in terms of seconds, minutes, hours.
- Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.

Teaching Sequence

➢ Read 24 hour clock and show time on analogue clock face, e.g. 18:30 is half past 6 in the evening.
➢ Be able to tell whether a time is am or pm on 24 hour clock
➢ Know that 60 seconds is one minute.
➢ Know that 60 minutes is one hour.
➢ Show understanding of equivalence, e.g. 90 secs = 1 minute and a half; 75 minutes = 1 hour and a quarter.
➢ Order amounts of time using different units of measurement, e.g. 90 secs; 2 minutes; 120 minutes; 1.5 hours etc.
➢ Know that am represents time from midnight to noon.
➢ Know that pm represents time from noon to midnight.

Activities for pupils working at greater depth:

Are you the time expert?
1 minute = 60 seconds
2 minutes = 120 seconds
Continue the pattern for up to 10 minutes.
Write down other time facts you now know using vocabulary such as:
am; pm; afternoon; morning; evening; yesterday; today; tomorrow, week; month; days.
Challenge your friend to come with some that you have not thought of.

Bus timetable
A bus leaves the depot for the town centre every 45 minutes; it takes 1 hour and 30 minutes to get to the town centre and then stops at the town centre for 15 minutes before returning to the depot.
- The first bus leaves for the town centre at 06:00, at what time does it comes back to the depot?
- At what time does the third bus get to the town centre?

A television programme ended at twenty to six in the evening. It lasted for 1 hour and 10 minutes.
Use a digital system (24 hours) to record what time it started and ended.

A football match lasts 90 minutes but there were 6 minutes of additional time played. The half time break was 15 minutes. The game ended at 21 minutes past nine in the evening. Record digitally (24 hours) what time the game started and finished.

Adventure Day
Your class goes to an adventure centre for the day. You arrive at the centre at 09.30 am. And put into 3 groups (red; yellow; and blue). There are three different activities: Canoeing; Climbing and Go Carting.
Event 1 starts at 10.00 am
Event 2 starts at 11.30 am
Event 3 starts at 02.00 pm
Make up a chart to show how each group will do each of the three activities.

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Time: 12-hour & 24-hour clocks

Record and compare time in terms of seconds, minutes, hours.

Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.

	Me	My Teacher
Given a time, can you record it as am or pm and on an analogue clock face, as well as on a 24-hour clock face?		
Can you convert a 'pm' time to the digital 24 hour system?		
Can you convert an 'am' time to the digital 24 hour system?		
Do you know that quarter past is 15 minutes past; and that half past is 30 minutes past?		
Do you know that 60 seconds is one minute and that 60 minutes is one hour?		
Do you know that the term 'pm' represents time from noon to midnight?		
Do you know that the term 'am' represents time from midnight to noon?		

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name   Summer 2: Week 1

| **Objective: Place Value** | Revise all Year 3 activities associated with place value, including additional reasoning activities. |

Circle the tens value in each of the following numbers:

269   172   430   45

Count on from the following sequence:

251.. 255..259.. ▮ .. ▮

If 379 is be set as 300 + 70 + 9 Set the following in the same way:

279
358
612

Continue with the following sequences:

412..405.. ▮ ..391.. ▮

620.. 605.. ▮ .. 575.. ▮

Order the following putting the smallest first:

262; 98; 258; 82; 501; 239

Write the following amounts in words:

259 _____

167 _____

Place Value: Revise all Year 3 activities associated with place value, including additional reasoning activities.

Teaching Sequence

➢ **Focus specifically on:**
➢ Knowing which number in a set of 3 digit numbers is the greatest
➢ Knowing which number in a set of 3 digit numbers is the smallest
➢ Ordering a set of 3 digit numbers from smallest to largest
➢ Ordering a set of 3 digit numbers from largest to smallest
➢ Identifying the hundreds, tens and ones in any 3 digit number
➢ Partitioning a 3 digit number identifying the value of each digit

Oral and Mental Activities: Examples:

• During this session it is important to ensure all pupils are confident in place value of numbers with up to 3-digits.
• Go up and down in sequences with numbers up to 1000.
• Ensure pupils are confident going through the hundreds and through the tens when counting in amounts both forwards and backwards.
• Knowing the value of each digit is of paramount importance before they move on to Year 4, so double check pupils' understanding.

Pencil and Paper Activities Examples:

Partition the following numbers, as set out by the first example:

258 = (200 + 50 + 8)   723
349   174
402   509

Continue these sequences:

234...239...244... ▪
825...819...816.... ▪
264... ▪ ...244...234.. ▪
518...503... ▪ 473... ▪

Which of the these numbers is the greatest value? Write them in order – smallest first:

238   283   832   823   328   382
562   625   652   265   256   526

Write these numbers in words:

278   723   491   666
276   476   601   905

Place Value: Revise all Year 3 activities associated with place value, including additional reasoning activities.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:

Focus specifically on:

- Knowing which number in a set of 3 digit numbers is the greatest
- Knowing which number in a set of 3 digit numbers is the smallest
- Ordering a set of 3 digit numbers from smallest to largest
- Ordering a set of 3 digit numbers from largest to smallest
- Identifying the hundreds, tens and ones in any 3 digit number
- Partitioning a 3 digit number identifying the value of each digit

Write the value of the numbers represented by counters in the following matrix:

100s	10s	1s	No.
● ● ●	● ● ●	●	
● ● ● ● ●	● ● ●	● ● ● ● ●	
● ●	● ● ●		
	● ●		
● ●		● ● ●	

To which set do these numbers belong:

213
147
76
7
245
189
102
171
67
199
201

1 to 50
51 to 100
101 to 150
151 to 200
201 to 250

Harry has three cards:

6	8	5
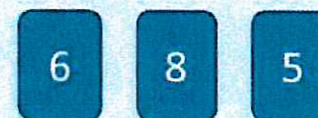
Make up as many 3-digit numbers as you can using these three cards.

How many 3-digit numbers can you make if you could use each card twice?
How many if you could use each card three times?

Make up a set of 20 cards with numbers between 0 and 1000 written in words. There should be a good mixture of larger and smaller 3-digit numbers as well as the occasional 2-digit and one-digit number.

Now make up a set of 20 cards with the corresponding numbers on.
With a friend think of a suitable game to play. Make up and write out the rules.

Place Value: Revise all Year 3 activities associated with place value, including additional reasoning activities.

Teaching Sequence

- ➤ **Focus specifically on:**
- ➤ Knowing which number in a set of 3 digit numbers is the greatest
- ➤ Knowing which number in a set of 3 digit numbers is the smallest
- ➤ Ordering a set of 3 digit numbers from smallest to largest
- ➤ Ordering a set of 3 digit numbers from largest to smallest
- ➤ Identifying the hundreds, tens and ones in any 3 digit number
- ➤ Partitioning a 3 digit number identifying the value of each digit

Activities for pupils working at greater depth:

Look at the six cards with digits on below. How many 3-digit numbers can you make from the set you have if:
- you use the number just once?
- you can use each digit twice?
- if one digit has to be in every number?
- If two of the digits have to be in every number?

| 7 | 5 | 0 | 8 | 1 | 3 |

Create two 3-digit numbers that have a difference of more than 10 with the ones number being 7 and the hundreds number being 6?

Create a 3-digit number where the sum of the 3 digits adds up to 12.
What is the largest number you can make?
What is the smallest number you can make?

Now create your own problems for your friends to solve.

There are six numbers below.
Each has a missing digit.
Add a digit to each so that the number on top is always smaller than the number beneath it.

	7	2
3		
5		7
5	2	
	6	8
8		0

Now create similar problems for your friends where the numbers go down in value.

Summer 2: Week 1: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Place Value: Revise all Year 3 activities associated with place value, including additional reasoning activities.

Me   My Teacher

Can you write each 3-digit number in words?

Can you continue a sequence of 3-digit numbers that either go up or down in value?

Can you order a set of 3-digit numbers with either the highest number or lowest number first?

Do you know the value of each number in a 3-digit number?