

Otley All Saints C.E Primary School

'Learning, Love and Laughter Every Day' Maths Progression

	Maths Curriculum Map						
Т	erm	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Nursery	-Numbers of s -Numbers -Cardinality (takes or give a gro -Subitise -Objects an	in order is two/three items from up) 1 and 2	-Numerals in the -Counting or -Mathematical language (e. -Positional la -Near and fa	n fingers g.more, lots, the same). anguage	-Compare 2 groups (-Count up to -Recognition of n -Subitise up to 3 (wi -Link numerals to an -Cardinality and co -Positional lang	o 5 (1:1) umbers to 10 thout counting) nounts (up to 5) unting in order
EYFS	Receptio n	-Match & sort -Compare amounts -Compare size,mass & capacity -Exploring pattern	-Representing 1,2 & 3 -Comparing 1,2, & 3 -Composition of 1,2, & 3 -Circles and triangles -Positional language Representing numbers to 5 -One more or less -Shapes with 4 sides -Time	-Introducing zero -Compare numbers to 5 -Composition of 4 & 5 -Compare mass & capacity -Number bonds to 10 -Balancing Numicon 6, 7, 8 -Combining two amounts -Making pairs -Length, height, Time	-Counting to 9 & 10 -Comparing Numbers to 10 -Number bonds to 10 3D shapes -Patterns Spatial awareness -Adding more/Taking away -Sorting and Matching -Comparing and ordering	-Adding more -Taking away -Spatial reasoning 2 -Compose & decompose -Subitising -Counting -Composition -Sorting and matching Comparing and ordering -Number bonds 10 -20	-Doubling -Sharing equally -Count to 100 -Recognise the counting system -Exploring and representing patterns in numbers like odd and even -Adding more/Taking away
	Voar 1 Number: Addition		alue within 10 ubtraction within 10 v: Shape	Number: Place value within 20 Number: Addition & Subtraction within 20 Number: Place value within 50 Measurement: Length & Height,Weight & Volume		Number: Multiplication and Division,Fractions Geometry: Position & Direction Number: Place value within 100 Measurement: Time & Money	
Key Stage 1	Year 2	Number: Place Value Measurement: Shape Number: Addition and Subtraction		Measurement: Money Number: Multiplication and Division Measurement: Length and Height Mass, Capacity and Temperature		Number: Fractions Measurement: Time/Position and Direction Statistics: Tally charts, tables, block diagrams and pictograms Consolidation	

Т	erm	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Year 3	Number: Place Value Geometry: Properties of Shapes Measurement: Time 20 mins weekly (runs throughout the year)	Number:Addition and Subtraction	Statistics Number: Multiplication and Division	Number: Multiplication and Division Measurement: Money	Number: Fractions	Measurement: Length and Perimeter Measurement: Mass and Capacity
Key	Year 4	Number: Place Value Number: Addition and subtraction Geometry: Properties of shape		Number: Multiplication and Division Measurement: Area, length and perimeter Number: Fractions		Number: Decimals Measurement: Money and Time Geometry: Position and Direction Statistics	
Stage 2	Stage Number: Place Value		and subtraction actions A	Number: Multiplicat Number: Fra Number: Decimals a Measurement: peri Statist	ctions B and Percentages meter and area	Number: Do Geometry: Proper Geometry: Position Measurement: Co Measuremen	ties of shape and Direction nverting Units
	Year 6	Number: Place Value Number:Four Operations Number: Fractions Geometry: Position & Direction		Number: Decimals Number: Percentages/Algebra/Ratio Measurement: Converting units Measurement: Perimeter, area & volume		Geometry: Properties of shape/Position & Direction Statistics General Problem solving Preparation for SATs	Themed projects, consolidation & problems solving

EYFS

Enhanced Provision:

- The creative area, mark making areas and changing provision areas are always resourced and children have free access to the equipment in them, which encourages the children to talk about what they are learning. It gives them the opportunity to revisit their learning and apply it in different situations and also extends their learning allowing them the chance to teach their peers.
- Provision (both indoor and outdoor) is regularly enhanced with new items so that children continue to be engaged, see examples below. These are linked to topics, or are child led based on the children's interests.
- Spontaneous opportunities arise from the children's comments and interests and are developed through talking and interacting with the children, these are resourced accordingly.
- Evidence of the children using enhanced provision in their own way can be found on Tapestry.

size, weight, height, length, 3D shape using the construction

Term/Topic	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery:	Myself	Colour, Pattern & Light	I am Healthy/Stories & Rhymes	Arctic/Antarctic	Where we live / People who help us	The Transport / The Seaside
Examples of provision, Global Goals & enrichment*: *Not exclusive. Children's interests are responded to and learning journeys created/adapted to suit these interests.	Outdoor sand/water: capacity/measure, filling and emptying containers, counting Creative Area: picture representation of simple maths e.g draw 2, counting while tidying, counting Reading Area: stories linked to maths, e.g. Anno's counting book, 10 Little Ladybirds, Handa's Hen, Titch, Rosie's Walk, 3 Little Pigs, Goldilocks and the Three Bears Large and small construction/Loose Parts/Small World: creating models- link to size, weight, height, length, 3 D shape using the construction Role Play: the home corner: matching resources to templates, counting, sorting based on size, object and colour, subitising- 1 not 1.		Outdoor sand/water: capacity/measure, filling and emptying containers, counting, numbers in the playground Creative Area: picture representation of simple maths e.g draw 2, sorting, counting while tidying. Reading Area: stories linked to maths, e.g. Anno's counting book, Handa's Hen, Dear Zoo, Titch, Rosie's Walk, Jack and the Beanstalk Large and small construction/Loose Parts/Small World: creating models- link to size, weight, height, length, 3 D shape using the construction, positional language Role Play: the home corner: matching resources to templates, sorting based on size, object and colour, simple subitising, counting. GG: 10 Reduced inequalities (linked to Fair Trade Week)		Outdoor sand/water: capacity/measure, filling and emptying containers, counting how many (to 5), match the amount to the number Creative Area: picture representation of simple maths e.g draw 2, repeating patterns, Reading Area: stories linked to maths, e.g. Handa's Hen, Dear Zoo, Titch, Large and small construction/Loose Parts/Small World: creating models- link to size, weight, height, length, 3D shape using the construction, positional language Role Play: the home corner: matching amounts of resources to numbers, sorting based on size, object and colour, subitising to 3. GG 12: Responsible Consumption and Production GG 15: Life on Land	
Reception:	I am Amazing!	Celebrations Light and Dark	Traditional Stories- Keeping Healthy	We Like to Travel Space	We're Going on an Adventure	Big Beasts and Little Beasts
Examples of provision, Global Goals & enrichment*: Not exclusive. Children's interests are responded to and learning journeys created/adapted to suit these interests.	Outdoor sand/water: capacity/measure, filling and emptying containers, counting conkers- comparing amounts, loose parts, large numicon and matching numbers Creative Area: picture representation of simple maths e.g what is 1, 2, 3? counting while tidying- tidy up baskets, cut out shapes, 3D shaped boxes for model building Funky Fingers: repeating patterns with tweezers and beads, buttons, beads on pipe cleaners, threading reels, counting amounts of beads/buttons using tweezers Reading Area: stories linked to maths, e.g. Anno's counting book, 10 Little Ladybirds, Handa's Hen, Titch, Rosie's Walk, heavy and light. Large and small construction/Loose Parts/Small World: repeating patterns using the loose parts, creating models- link to		Outdoor sand/water: capacity/measure, filling and emptying containers, counting, more/less, half, full and empty, loose parts Creative Area: picture representation of simple maths e.g what is 4, 5, 6?, draw the number story for, counting while tidying-tidy up baskets, cutout shapes Funky Fingers: counting amounts of beads, buttons using tweezers, beads on pipe cleaners, threading reels. Reading Area: stories linked to maths, e.g. Anno's counting book, 10 Little Ladybirds, Handa's Hen, Titch, Rosie's Walk, shapes, time, The Naughty Bus Large and small construction/Loose Parts/Small World: creating models- link to size, weight, height, length, 3D shape using the construction, comparing amounts, addition		Reading Area: stories linked to maths, e.g. Anno's counting book, 10 Little Ladybirds, Handa's Hen, Titch, Rosie's Walk, shapes, 5 Little Ducks, The Naughty Bus Large and small construction/Loose Parts/Small World: creating models- link	

using loose parts-part-part whole model, more/less,

Role Play: the home corner: matching resources to templates, counting, sorting

Role Play: the home corner: matching resources to templates, clocks and timers, counting, sorting based on size, object and colour, subitising to 5, more/less, counting and comparing amounts, weighing scales

positional language

Role Play: the home corner: clocks, matching resources to templates, counting, sorting based on size, object and colour, subitising to 5/10, positional language,

based on size, object and colour, subitising to 10, tens frames for tidying resources.

Development Matters statements

In Nursery, this area draws upon guidance from Development Matters (2021) specifically the 'Mathematics' area of learning. Children will:

- Fast recognition of up to 3 objects, without having to count them individually ('subitising').
- Recite numbers past 5.
- Say one number for each item in order: 1,2,3,4,5.
- Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
- Show 'finger numbers' up to 5.
- Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.
- Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5.
- Compare quantities using language: 'more than', 'fewer than'.
- Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.
- Understand position through words alone for example, "The bag is under the table," with no pointing.
- Describe a familiar route.
- Discuss routes and locations, using words like 'in front of' and 'behind'.
- Make comparisons between objects relating to size, length, weight and capacity.
- Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.
- Combine shapes to make new ones an arch, a bigger triangle etc.
- Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.
- Extend and create ABAB patterns stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.
- Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...

In Reception, this area draws upon guidance from Development Matters (2021) specifically the 'Mathematics' area of learning. Children will:

- Count objects, actions and sounds.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- Compare numbers.
- Understand the 'one more than/one less than' relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0–5 and some to 10.
- Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity

Characteristics of Effective Learning:

Children in EYFS develop their 'Characteristics of Effective Learning' through their independent learning and adult guided activities. The characteristics which show subject specific skills are documented through photographs on Tapestry. The following characteristics are seen as complementing future Mathematical learning:

- Plan and think ahead about how they will explore or play with objects.
- Guide their own thinking and actions by referring to visual aids or by talking to themselves while playing.

	 Make independent choices. Bring their own interests and fascinations into early years settings, this helps them to develop their learning. Respond to new experiences brought to their attention. Show goal-directed behaviour. Begin to correct their mistakes themselves. Keep on trying when things are difficult. Sort materials. Review their progress as they try to achieve a goal, check how well they are doing. Solve real problems. Make links between their ideas Know more, so they feel confident about coming up with their own ideas. Concentrate on achieving something that is important to them, they are increasingly able to control their attention and ignore distractions.
EYFS End Points (ELGs):	 Number Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
	 Numerical Patterns Verbally count beyond 20, recognising the pattern of the counting system. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Maths Progression of Knowledge & Skills

	K32 - Teat 1					
Term	Autumn	Spring	Summer			
Topic:	Number: Place value within 10 Number: Addition & Subtraction within 10 Geometry: Shape	Number: Place value within 20 Number: Addition & Subtraction within 20 Number: Place value within 50 Measurement: Length & Height,Weight & Volume	Number: Multiplication and Division,Fractions Geometry: Position & Direction Number: Place value within 100 Measurement: Time & Money			
Prior knowledge:	Maths NCETM Progression of Maths Skills					
Small steps of Knowledge & Skills: Maths NCETM Progressio n of Maths Skills	Number: Place value 1. Sort objects 2. Count objects 3. Count objects from a larger group 4. Represent objects 5. Recognise numbers as words 6. Counting on from any number 7. One more 8. Counting backwards within 10 9. One less 10. Fewer, More, Same 11. Compare objects (up to 10) using greater than, less than and equal to 12. Compare numbers (up to 10) using greater than, less than and equal to 13. Order objects and numbers within 10 14. The number line 15. Count within 20 16. Understand 10 17. Understand 11, 12 and 13 18. Understand 14, 15 and 16 19. Understand 17, 18 and 19 20. Understand 20 21. 1 more and 1 less 22. Count from 20-50 23. 20, 30, 40 and 50 24. Count by making groups of 10 25. Groups of tens and ones 26. Partition into tens and ones 27. The number line to 50 28. Estimate on a number line to 50	Number: Place value, addition & subtraction 1. Introduce parts and wholes 2. Part whole Model 3. Write number sentences 4. Fact families - addition facts 5. Number bonds within 10 6. Systematic number bonds within 10 7. Number Bonds to 10 8. Addition - add together 9. Addition - add more 10. Addition problems 11. Find a part 12. Subtraction - Find a part 13. Fact Families - the 8 facts 14. Subtraction - take away/cross out/how many left? 15. Subtraction on a number line 16. Add or Subtract 1 or 2 17. Add by counting on within 20 18. Add ones using number bonds 19. Find and make number bonds to 20 20. Doubles 21. Near doubles 22. Subtract ones using number bonds. 23. Subtraction - counting back 24. Subtraction - finding the difference 25. Related Facts 26. Missing Number Problems	Number: Multiplication and Division 1. Count in 2s 2. Count in 10s 3. Count in 5s 4. Recognise equal groups 5. Add equal groups 6. Make arrays 7. Make doubles 8. Make equal groups-grouping 9. Make equal groups - sharing Geometry: Position & Direction 1. Describe turns 2. Describe position - left and right 3. Describe position - forwards & backwards 4. Describe position - above and below 5. Ordinal numbers Number: place value within 100 1. Count from 50 to 100 2. Tens to 100 3. Partition into tens and ones 4. The number line to 100 5.1 more, 1 less 6. Compare numbers with the same number of tens 7. Compare any two numbers Measurement: Time & Money 1. Before and after 2. Days of the week 3. Months of the year			

	29. 1 more and 1 less		4.Hours, minutes, seconds 5.Tell the time to the hour 6.Tell the time to the half-hour 7.Unitising 8.Recognising coins 9.Recognise notes 10.Count in coins
End points:	 Number and Place Value Progression Map Addition and Subtraction Progression Map Properties of Shapes Progression Map 	 Number and Place Value Progression Map Addition and Subtraction Progression Map Measurement Progression Map 	 Multiplication and Division Progression Map Geometry, Position and Direction Progression Map Number and Place Value Progression Map Measurement Progression Map

Maths Progression of Knowledge & Skills					
KS1 - Year 2					
Term	Autumn Spring Summer				
Topic:	Number: Place Value Number: Addition and Subtraction Measurement: Shape Measurement: Shape Mass, Capacity and Temperature Number: Place Value Number: Fractions Measurement: Time/Position and Direction Statistics: Tally charts, tables, block diagrams and pictograms pictograms Consolidation				
Prior knowledge:	Maths NCETM Progression of Maths Skills				

Small steps of Knowledge & Skills:

Maths NCETM Progression of Maths Skills

Number: Place Value

- 1. Numbers to 20
- 2. Count to 100 by making 10s
- 3. Recognise 10s and 1,
- 4. Use a place value chart
- 5. Partition numbers to 100
- 6. Write numbers to 100 in words
- 7. Flexibly partition numbers to 100
- 8, Write numbers to 100 in expanded form
- 9. 10s on the number line to 100
- 10. 10s and 1s on the number line to 100
- 11. Estimate numbers on the number line
- 12. Compare objects
- 13. Compare numbers
- 14. Order objects and numbers
- 15. Count in 2s, 5s and 10s
- 16. Count in 3s

Geometry: Properties of Shapes

- 1. Recognise 2D and 3D shapes
- 2. Count sides on 2D shapes
- 3. Count vertices on 2D shapes
- 4. Draw 2D shapes
- 5. Lines of symmetry on 2D shapes
- 6. Use lines of symmetry to complete shapes
- 7. Sort 2D shapes
- 8. Count faces on 3D shapes
- 9. Count edges on 3D shapes
- 10. Count vertices on 3D shapes
- 11. Sort 3D shapes
- 12. Make patterns with 2D and 3D shapes

Addition and Subtraction

- 1. Bonds to 10
- 2. Fact families to 20
- 3. Related facts
- 4. Bonds to 100 (tens)
- 5. Add and subtract 1s
- 6. Add by making 10
- 7. Add three 1-digit numbers
- 8. Add to the next 10
- 9. Add across a 10
- 10. Subtract across a 10
- 11. Subtract from a 10

Money

- 1. Count money pence
- 2. Count money pounds
- 3. Count money pounds and pence
- 4. Choose notes and coins
- 5. Make the same amount
- 6. Compare amounts of money
- 7. Calculate with money
- 8. Make a pound
- 9. Find change
- 10. Two-step problems

Mass, Capacity and Temperature

- 1. Compare mass
- 2. Measure in grams
- 3. Measure in kilograms
- 4. Four operations with mass
- 5. Compare volume and Capacity
- 6. Measure in ml
- 7. Measure in litres
- 8. Four operations with volume and capacity
- 9. Temperature

Length and height

- 1. Measure in cm
- 2. Measure in m
- 3. Compare lengths and heights
- 4. Order lengths and heights
- 5. Four operations with lengths and heights

Multiplication and Division

- 1. Recognise equal groups
- 2. Make equal groups
- 3. Add equal groups
- 4. Introduce the multiplication symbol
- 5. Multiplication sentences
- 6. Use arrays
- 7. Make equal groups grouping
- 8. Make equal groups sharing
- 9. The 2 times table
- 10. Divide by 2
- 11. Doubling and halving
- 12. Odd and even numbers
- 13. The 10 times table
- 14. Divide by 10
- 15. The 5 times table
- 16. Divide by 5
- 17. The 5 and 10 times table

Number: Fractions

- 1. Introduction to parts and whole
- 2. Equal and unequal parts
- 3. Recognise a half
- 4. Find a half
- 5. Recognise a quarter
- 6. Find a quarter
- 7. Recognise a third
- 8. Find a third
- 9. Find the whole
- $10. \ Unit \ fractions$
- 11. Non-unit fractions
- 12. Recognise the equivalence of a half and two quarters
- 13. Recognise 3 quarters
- 14. Find three quarters
- 15. Count in fractions up to a whole

Geometry: Position & Direction

- 1. Language of position
- 2. Describe movement
- 3. Describe turns
- 4. Describe movement and turns
- 5. Shape patterns with turns

Statistics

- 1. Make tally charts
- 2. Tables
- 3. Block diagrams
- 4. Drawing pictograms (1-1)
- 5. Interpret pictograms (1-1)
- 6. Draw pictograms (2, 5 and 10)
- 7. Interpret pictograms (2, 5 and 10)

Time

- 1. O'Clock and half past
- 2. Quarter past and quarter to
- 3. Tell time past the hour
- 4. Tell time to the hour
- 5. Tell the time to 5 mins
- 6. Minutes in an hour
- 7. Hours in a day

End	points:
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- Number and Place Value Progression Map
- Addition and Subtraction Progression Map
- Properties of Shapes Progression Map

- Multiplication and Division Progression Map
- Measurement Progression Map

- Fractions (Decimals and Percentages) Progression Map
- Geometry, Position and Direction Progression Map
- Statistics Progression Map

Maths Progression of Knowledge & Skills

Term	Αι	ıtumn	Spring		S	ummer
Topic:	Number: Place Value Measurement: Time 20 mins weekly (runs throughout the year)	Number: Addition and Subtraction	Statistics Number: Multiplication and Division	Number: Multiplication and Division Measurement: Money	Number: Fractions Geometry: Properties of Shapes	Measurement: Length and Perimeter Measurement: Mass and Capacity
Prior knowledge:			Maths NCETM Progressio	n of Maths Sk	<u>ills</u>	
Small steps of Knowledge & Skills: Maths NCETM Progression of Maths Skills	Number: Place value 1. Represent numbers to 2. Partition numbers to 3. Hundreds 4. Represent numbers to 5. Partition numbers to 6. Flexible partitioning of 7. Finding 1 more or less 8. Finding 10 more or less 9. Finding a hundred mod 10. Compare numbers to 11. Order numbers to 12. Count in 50s Number: Addition and St 1. Add & subtract 1 st of 2. Add and subtract 10s 3. Add & subtract 10s 4. Column addition TU+1 6. Column addition HTU-7. Column addition HTU-7. Column subtraction 11. Column subtraction 12. Column subtraction 11. Column subtraction 12. Column subtraction 13. Column subtraction 14. Compliments to 100 15. Estimating answers 16. Using the inverse	a 1000 a 1000 b 1000 f numbers to 1000 than a HTU ss than a HTU re or less. a 1000 b 1	Multiplication and Division A 1. Equal groups 2. Arrays 3. Multiply by 3 4. Divide by 3 5. Multiply by 4 6. Divide by 4 7 Multiply by 8 8. Divide by 8 Multiplication and Division B 1. Multipling Multiples of 10 2. Tu x u expanded practical 3. Tu x u expanded pictorial 4. Tu x u expanded abstract 5. Tu x u estimating Money 1. Recognising coins 2. Making amounts 3. Converting money 4. Adding money 5. Subtracting money 6. Making change Statistics 1. Tables 2. Pictograms 3. Bar Charts		Fractions 1 1. Whole and parts 2. Equal parts 3. The denominator 4. Halves and quarters 5. Numerator and denominator 6. Tenths 7. Whole fractions 8. Unit fractions 9. Compare and order unit fractions 10. Non unit fractions 11. Compare and order non unit fractions 12 Fractions on a number line 13. Equivalent fractions as bar models Fractions 2 1. Adding fractions 2. Subtracting Fractions 3. Unit fractions of a set of objects 4. Non Unit fractions of a set of objects Geometry 1. Turns and angles 2. Right angles	Time 1. Parts of day am pm noon midnight 2. Day of week, months of year 3. Days in months, days in year 4. Secs in minute, mins in hour 5. Hours in day Revision 5. O'clock 6 Half past 7 Quarter to and quarter past 8. 5 minute interval past 9. 5 minute intervals to New Learning 10. One minute intervals past 11. One minute intervals to 12. Read time Roman Numerals 13. Compare duration of times Length and Perimeter 1. Measure in metres 2. Measure in mm 4. Measure in mm 4. Measure in m and cm 5. Measure in m and cm 6. Equivalent lengths m and cm 7. Equivalent lengths cm and mm 8. Compare lengths 9. Add lengths 10. Subtract lengths 11. What is perimeter? 12. Measure perimeter

			3. Comparing angles 4. Measure and draw accurately 5.Horizontal and vertical lines 6. Parallel and perpendicular lines 7.Recognise and describe 2-D shapes 8. Draw polygons 9. Recognise and describe 3-D shapes	13. Calculate perimeter Mass and Capacity 1. Measure mass in grams 2. Measure mass in kg and g 3. Equivalent mass 4. Compare mass 5. Add and subtract mass 6. Measure capacity and volume in ml 7. Measure capacity and volume in litres and ml 8. Equivalent capacities and volumes (I and ml) 9. Compare capacity and volume 10. Adding and subtracting capacities and volumes
End points:	 Number and Place Value Progression Map Addition and Subtraction Progression Map Measurement Progression Map 	 Statistics Progression Map Multiplication and Division Progression Map Measurement Progression Map 	 Fractions (Decimals and Percentages) Progression Map Measurement Progression Map Geometry, Position and Direction Progression Map 	

Maths Progression o	f Knowledge	& Skills
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Term	Autumn	Spring	Summer	
Topic:	Number: Place Value Number: Addition and subtraction Measurement: Area Number: Multiplication and Division	Number: Fractions Number: Multiplication and Division Measurement: Length and perimeter	Number: Decimals Measurement: Money and Time Geometry: Position and Direction/Properties of shape	
		Statistics		
Prior knowledge:		Maths NCETM Progression of Maths Skill	<u>ls</u>	
Small steps of Knowledge & Skills: Maths NCETM Progression of Maths Skills	Number: Place Value 1. Represent numbers to 10,000 2. Partition numbers to 10,000 3. Number line to 10,000 4. Find 1, 10, 100, 1,000 more or less 5. Compare numbers to 10,000 6. Order numbers to 10,000 7. Negative numbers (not part of WR new scheme but Y4 NC objective) 8. Roman numerals 9. Round to the nearest 10 10. Round to the nearest 1,000 11. Round to the nearest 1,000 12. Round to the nearest 10, 100 or 1,000 Number: Addition and subtraction 1. Add and subtract 1s, 10s, 100s and 1,000s 2. Add up to two 4-digit numbers - no exchange 3. Add two 4-digit numbers - one exchange 4. Add two 4-digit numbers - more than one exchange 5. Subtract two 4-digit numbers - no exchange 6. Subtract two 4-digit numbers - one exchange 7. Subtract two 4-digit numbers - more than one exchange 8. Efficient subtraction 9. Estimate answers 10. Checking strategies Area 1. What is area? 2. Finding area by counting squares	Number: Multiplication and Division Factor pairs Use factor pairs Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Related facts — multiplication and division Informal written methods for multiplication Multiply a 2-digit number by a 1-digit number Multiply a 3-digit number by a 1-digit number (1) Divide a 2-digit number by a 1-digit number (2) Divide a 2-digit number by a 1-digit number (2) Divide a 3-digit number by a 1-digit number Correspondence problems Efficient multiplication Fractions Understand the whole Count beyond 1 Partition a mixed number Number lines with mixed numbers Compare and order mixed numbers Understand improper fractions Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers Equivalent fractions on a number line Equivalent fraction families Add two or more fractions Add fractions and mixed numbers	Position and Direction 1. Describe position using coordinates 2. Plot coordinates 3. Draw 2-D shapes on a grid 4. Translate coordinates on a grid 5. Describe translation on a grid Geometry 1. Understand angles as turns 2. Identify angles 3. Compare and order angles 4. Properties of 2d shapes: Triangles 5. Properties of 2d shapes: Quadrilaterals 6. Properties of 2d shapes: Polygons 7. Lines of symmetry 8. Complete a symmetric figure Measurement: Time 1. Years, months, weeks and days 2. Hours, minutes and seconds 3. Telling the time at minute intervals (y3 recap) 4. Convert between analogue and digital times 5. Convert to the 24 hour clock 6. Convert from the 24 hour clock Measurement: Money 1. Write money using decimals 2. Convert between pounds and pence	

	3. Making shapes 4. Compare area Number: Multiplication and Division 1. Devision 2nd 4nd 8nd (23 mans)	Subtract two fractions Subtract from whole amounts Subtract from mixed numbers Length and Perimeter 1. Measure in kilometres and metres	3. Compare amounts of money 4. Estimate with money 5. Calculate with money 6. Solve problems with money
	1. Revision 2x, 4x, 8x (y3 recap) 2. Multiples of 3	Equivalent lengths (kilometres and metres)	
	3. Multiply and divide by 6	3. Perimeter on a grid	
	4. 6 times-table and division facts	4. Perimeter of a rectangle	
	5. Multiply and divide by 9 6. 9 times-table and division facts	5. Perimeter of rectilinear shapes 6. Find missing lengths in rectilinear shapes	
	7. The 3, 6 and 9 times-tables	7. Calculate the perimeter of rectilinear shapes	
	8. Multiply and divide by 7	8. Perimeter of regular polygons	
	9. 7 times-table and division facts	9. Perimeter of polygons	
	10. 11 times-table and division facts	, 75	
	11. 12 times-table and division facts	Statistics	
	12. Multiply by 1 and 0	1. Interpret charts	
	13. Divide by 1 and itself	2. Comparison, sum and difference	
	14. Multiply three numbers	3. Interpret line graphs	
		4. Draw line graphs	
End points:	 Number and Place Value Progression Map Addition and Subtraction Progression Map Multiplication and Division Progression Map 	 Measurement Progression Map Fractions (Decimals and Percentages) Progression Map Multiplication and Division Progression Map Statistics Progression Map 	 Fractions (Decimals and Percentages) Progression Map Measurement Progression Map Geometry, Position and Direction Progression Map Properties of Shapes Progression Map

Maths Progression of Knowledge & Skills

Term	Autumn	Spring	Summer
Topic:	Number: Place Value Number: Addition and subtraction Number: Fractions A Number: Multiplication and division	Number: Multiplication and division Number: Fractions B Number: Decimals and Percentages Measurement: perimeter and area Statistics	Number: Decimals Geometry: Properties of shape Geometry: Position and Direction Measurement: Converting Units Measurement: Volume
Prior knowledge:	Maths NCETM Progression of Maths Skills		<u>ls</u>
Small steps of Knowledge & Skills: Maths NCETM Progression of Maths Skills	Number: Place Value 1. Roman numerals to 1,000 2. Numbers to 10,000 3. Numbers to 100,000 4. Numbers to 1,000,000 5. Read and write numbers to 1,000,000 6. Powers of 10 7. 10/100/1,000/10,000/100,000 more or less 8. Partition numbers to 1,000,000 9. Number line to 1,000,000 10. Compare and order numbers to 100,000 11. Compare and order numbers to 1,000,000 12. Round to the nearest 10, 100 or 1,000 13. Round within 100,000 14. Round within 1,000,000 Number: Addition and subtraction 1. Mental strategies 2. Add whole numbers with more than four digits 3. Subtract whole numbers with more than four digits 4. Round to check answers 5. Inverse operations (addition and subtraction) 6. Multi-step addition and subtraction problems 7. Compare calculations 8. Find missing numbers Fractions Part 1 1. Find fractions equivalent to a unit fraction 2. Find fractions equivalent to a non-unit fraction 3. Recognise equivalent fractions 4. Convert improper fractions to mixed numbers	Number: Multiplication and division 1. Multiples 2. Common multiples 3. Factors 4. Common factors 5. Prime numbers 6. Square numbers 7. Cube numbers 8. Multiply by 10, 100 and 1,000 9. Divide by 10, 100 and 1,000 10. Multiples of 10, 100 and 1,000 Formal written methods 1. Multiply up to a 4-digit number by a 1-digit number 2. Multiply a 2-digit number by a 2-digit number (area model) 3. Multiply a 3-digit number by a 2-digit number 4. Multiply a 3-digit number by a 2-digit number 5. Multiply a 4-digit number by a 2-digit number 6. Solve problems with multiplication 7. Short division 8. Divide a 4-digit number by a 1-digit number 9. Divide with remainders 10. Efficient division 11. Solve problems with multiplication and division Fractions Part 2 1. Multiply a unit fraction by an integer 2. Multiply a mixed number by an integer 3. Multiply a mixed number by an integer 4. Calculate a fraction of a quantity	Perimeter and area 1. Perimeter of rectangles 2. Perimeter of polygons 4. Area of rectangles 5. Area of compound shapes 6. Estimate area Number: Decimals 1. Use known facts to add and subtract decimals within 1 2. Complements to 1 3. Add and subtract decimals across 1 4. Add decimals with the same number of decimal places 5. Subtract decimals with the same number of decimal places 6. Add decimals with different numbers of decimal places 7. Subtract decimals with different numbers of decimal places 8. Efficient strategies for adding and subtracting decimals 9. Decimal sequences 10. Multiply by 10, 100 and 1,000 11. Divide by 10, 100 and 1,000 12. Multiply and divide decimals - missing values Ceometry: Position & Direction 1. Read and plot coordinates 2. Problem solving with coordinates 3. Translation 4. Translation with coordinates 5. Lines of symmetry 6. Reflection in horizontal and vertical lines

	5. Convert mixed numbers to improper fractions 6. Compare fractions less than 1 7. Order fractions less than 1 8. Compare and order fractions greater than 1 9. Add and subtract fractions with the same denominator 10. Add fractions within 1 11. Add fractions with total greater than 1 12. Add to a mixed number 13. Add two mixed numbers 14. Subtract fractions 15. Subtract from a mixed number 16. Subtract from a mixed number — breaking the whole 17. Subtract two mixed numbers	 Fraction of an amount Use fractions as operators Decimals and percentages Decimals up to 2 decimal place Equivalent fractions and decimals (tenths) Equivalent fractions and decimals (hundredths) Equivalent fractions and decimals Thousandths as fractions 6.Thousandths as decimals Thousandths on a place value chart Order and compare decimals (same number of decimal places) Order and compare any decimals with up to 3 decimal places Round to the nearest whole number Round to 1 decimal place Understand percentages Percentages as fractions Percentages as decimals Equivalent fractions, decimals and percentages 	Geometry: Properties of shape 1.Understand and use degrees 2.Classify angles 3.Estimate angles 4.Measure angles up to 180° 5.Draw lines and angles accurately 6.Calculate angles around a point 7.Calculate angles on a straight line 8.Lengths and angles in shapes 9.Regular and irregular polygons 10.3-D shapes Measurement: Converting units 1.Kilograms and kilometres 2.Millimetres and millilitres 3.Convert units of length 4.Convert between metric and imperial units 5. Convert units of time 6. Calculate with timetables Measurement: Volume 1.Cubic centimetres 2.Compare volume 3.Estimate volume 4.Estimate capacity
End points:	 Number and Place Value Progression Map Fractions (Decimals and Percentages) Progressi Addition and Subtraction Progression Map Multiplication and Division Progression Map 	 Measurement Progression Map Statistics Progression Map Properties of Shapes Progression Map Fractions (Decimals and Percentages) Progression Multiplication and Division Progression Map 	 Measurement Progression Map Statistics Progression Map Properties of Shapes Progression Map Geometry, Position and Direction Progression Map Fractions (Decimals and Percentages) Progression M

Maths Progression of Knowledge & Skills

Term	Autumn	Spring	Summer	
Topic:	Number: Place Value Number:Four Operations Number: Fractions Geometry: Position & Direction	Number: Decimals Number: Percentages/Algebra/Ratio Measurement: Converting units Measurement: Perimeter, area & volume	Geometry: Properties of shape/Position & Direction Statistics General Problem solving Preparation for SATs	Themed projects, consolidation & problem solving
Prior knowledge:		Maths NCETM Progression of Maths Skills	<u>.</u>	
Small steps of Knowledge & Skills:	Number: Place Value 1. Numbers to 1,000,000 2. Numbers to 10,000,000 3. Read & write numbers to 10,000,000 4. Powers of 10 5. Number line to 10,000,000 6. Compare & order integers 7. Round any integer 8. Negative numbers Number: Fractions 1. Decimal & fraction equivalents 2. Fractions as division 3. Understand percentages 4. Fractions to percentages 5. Equivalent fractions, decimals, percentages 6. Order fractions, decimals, percentages 7. Percentage of amount-1 step 8. Percentage of amount-multi- step 9. Percentages-Missing values Number: Four operations 1. Common factors 2. Common multiples 3. Rules of divisibility 4. Primes to 100 5. Square & cube numbers 6. Multiply up to 4-digit by 2-digit 7. Solve problems with multiplication 8. Short division	Ratio & Proportion 1. Add or multiply? (additive/multiplicative) 2. Use ratio language 3. Introduction to the ratio symbol 4. Ratio & fractions 5. Scale drawing 6. Use scale factors 7. Similar shapes 8. Ratio & proportion problems 9. Recipes Algebra 1. 1 & 2-step function machines 2. Form expressions 3. Substitutions 4. Formulae 5. Form equations 6. Solve 1 & 2-step equations 7. Find pairs of values 8. Solve problems with two unknowns Measurement-converting units 1. Metric measures 2. Convert metric measures 3. Calculate with metric measures 4. Miles & kilometres 5. Imperial measures 6. Shapes - same area Measurement - area, perimeter, volume 1. Shapes-same area 2. Area & perimeter	Geometry:Properties of shape 1. The first quadrant 2. Four quadrants 3. Translations 4. Reflections Geometry:Position & Direction 1. Measure with a protractor 2. Recap & calculate angles 3. Vertically opposite angles 4. Angles in a triangle 5. Angles in a triangle (special cases) 6. Angles in a triangle (missing angles) 7. Angles in special quadrilaterals 8. Angles in regular polygons 9. Draw 2-D shapes accurately 10. Draw nets of 3-D shapes 11. Circles Statistics 1. Line graphs 2. Dual bar charts 3. Read & interpret pie charts 4. Pie charts with percentages 5. Draw pie charts 6. The mean	Range of life skills covered, including scaling recipes, understanding budgeting, salaries, bills, costing flights and accommodation. Further consolidation of maths skills in preparation for secondary school.

	9. Division using factors 10. Introduction to long division 11. Long division with remainders 12. Solve problems, including multi-step with division 13. Order of operations 14. Mental calculations & estimation 15. Reason from known facts (also threaded through learning) Number: Addition & Subtraction 1. Add & subtract integers 2. Mental calculations and large numbers 3. Solve addition & subtraction multi-step problems in contexts	 3. Area of a triangle-counting squares 4. Area of a right-angled triangle 5. Area of any triangle 6. Area of a parallelogram 7. Volume - counting cubes 8. Volume of a cuboid 	
End points:	 Number and Place Value Progression Map Fractions (Decimals and Percentages) Progressio Addition and Subtraction Progression Map Multiplication and Division Progression Map 	 Ratio and Proportion Progression Map Algebra Progression Map Measurement Progression Map 	 Statistics Progression Map Properties of Shapes Progression Map Geometry, Position and Direction Progression Map