

#### Challenge, Equality & Opportunity

#### **MATHS**

#### **Whole School Curriculum Intent:**

We can build knowledge and skills	We are creative	We are resilient	We understand ourselves and each Other
We strive for all of our children to have competency in the basic skills of reading, writing, maths and communication to underpin their learning, give them access to the broader curriculum and build their confidence as learners.  We want our children to know more, remember more and be able to do more as a result of every learning experience across the curriculum.	We want our children to be creative in their thinking so that they use their knowledge and skills to solve problems and create new knowledge, skills, thoughts and objects which give them enjoyment and inspire them to take their learning further.	We need our children to develop independence and resilience so that they are able to grow as thinkers and learners.	We aim for our children to develop empathy, awareness, respect and tolerance in-keeping with the school's No Outsiders values.  We also want all of our children to understand themselves and be ready for the next steps in their education and the wider world.
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What does this look like?										
Achieve well in reading, writing and communication,	Reflect, adapt and develop ideas.	Bounce back and try again.	Listen to others.							
including being at the age related expectation in early	Explore concepts.	Try new things and take risks.	Can work in a group and cooperate with							
reading and phonics.	Make links across the curriculum.	Manage their own things, time and	others. Assess own success and learning.							
Can build on previous learning.	Ask questions and are curious.	learning as appropriate.	Take turns and are patient.							
Can access new learning experiences.	Use initiative.	Engage with extra-curricular	Use manners and are polite in interactions							
Value and enjoy success in the core subjects.	Hypothesise and generate ideas	activities.	with everyone.							
Choose reading and use reading effectively.	Communicate learning.	Solve problems through	Can manage emotions and support others.							
Apply maths, reading, writing and communication across	Direct own learning through range of	perseverance.	Show respect.							
the curriculum.	skills.	Work towards a goal.	Are kind and begin to show compassion.							
	Can argue and use evidence.		Can follow the Golden Rules.							
			Can express themselves.							

#### **Mathematics Intent**

#### We can build knowledge and skills

Aim for all of our children to love to learn, become resilient, fluent mathematicians and who have the ability and skills to tackle a variety of problem solving activities.

Provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful throughout their lives.

Incorporate sustained levels of challenge through varied and high quality activities with a focus on fluency, reasoning and problem solving.

Value a maths curriculum that is creative and engaging where children can access and master the curriculum and make significant progress in this subject.

Provide opportunities for children to revisit prior learning and build their knowledge and skills through a fluid and progressive curriculum.

#### We are Creative

Deliver a curriculum that allows pupils to be part of creative and engaging lessons allowing them to explore maths in depth, using mathematical vocabulary to reason and explain their workings.

Learn to construct informed responses that involve thoughtful selection and organisation of relevant mathematical information.

Appreciate patterns and connections. Rather than seeing it as purely knowledge, rules and answers that are either right or wrong. By developing creativity in maths, we enable children to apply their knowledge in the real world.

Opportunities to work with open-ended problems, to discuss and share ideas and strategies, appreciating that there are often different solutions to the same problems.3

#### We are Resilient

Encourage resilience, perseverance and an acceptance that struggle is often a necessary step in learning.

Use a wide vocabulary of appropriate and accurate mathematical terms.

Ask and answer questions with confidence drawing on previous learning and experiences in Maths.

Offer questions that may challenge their own views and thinking, or that of others.

Inspiring children by creating challenging opportunities which can be worked on to an end-point creating a sense of achievement, self-satisfaction and ultimately success.

#### We Understand Ourselves and Each Other

Work collaboratively to develop communication skills and critical thinking skills.

Give children the language, experience and knowledge to evaluate their own work and the work of others.

Provide learning opportunities through social contexts to allow collaborative learning which helps to maintain intrinsic motivation and in turn provides satisfaction and pride in working things out together.

Evaluate and re-evaluate opinions, adjusting points of view if appropriate, in the light of subsequent learning and additional evidence.

#### **Mathematics Implementation**

The content and principles underpinning the 2014 Mathematics curriculum and the Maths curriculum at Havannah First School are reflected within each maths lesson. These principles and features characterise this approach and convey how our curriculum is implemented:

Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics.

- •The large majority of children progress through the curriculum content at the same pace.
- Differentiation is achieved by emphasising deep knowledge and through individual support and intervention.

Early Years is at the start of the mathematical journey and the focus is on developing a strong sense of number and a recognition of maths being all around us. Pattern spotting, subitising and making maths are key areas that are an integral part of everything that is developing in early maths. Maths in the Early Years takes place both indoors and outdoors through a wide range of practical activities. Children then have the opportunity to apply and explore these concepts though continuous provision as well as adult directed tasks.

In KS 1 and 2, Maths is taught 5 times in a week. Schemes of learning are based on the White Rose Maths Schemes of Work and support our school's mastery approach to teaching and learning and are consistent with the aims and objectives of the National Curriculum. Number is at the heart of our schemes of learning and a significant

amount of time is spent reinforcing number in order to build competency and allow and ensure children can confidently access the rest of the curriculum. We aim for children to stay within the required Key Stage so that children acquire depth of knowledge in each topic. Opportunities to re-visit previously learnt skills are built into planning. Children can progress through schemes of learning as a whole group, encouraging children of all abilities to support each other in their learning. Research shows that all children, when introduced to a new concept, should have the opportunity to build competency by following the CPA approach which features throughout the children's pathway of learning. Children should have the opportunity to work with physical objects/concrete resources, in order to bring the maths to life and to build understanding of what they are doing. Alongside concrete resources, children should work with pictorial representations, making links to the concrete. Visualising a problem in this way can help children to reason and to solve problems. With the support of both the concrete and pictorial representations, children can develop their understanding of abstract methods. Every block in the schemes of learning is broken down into manageable small steps (See progression maps of small steps attached).

Across the school from Year 1 to Year 4 children work in mixed ability groups. Flexible groupings are used to provide support for children according to assessment information. Children have opportunities to work independently, within pairs or as a group. The vast majority of children progress through the curriculum at a similar pace. This enables the most able to deepen their subject knowledge through rich sophisticated problems, while the lower ability children are able to continue to develop their fluency and reasoning skills as well as given opportunities to solve mathematical problems. SEN children will predominantly be covering the curriculum content of their year group. Their learning will be supported through the use of models, scaffolds and practical apparatus. Specific targets are set which focus on a gap in their learning. Additional work will be set to support the child in meeting this target. Staff will support these children at points within their learning.

Mathematical topics are taught in blocks based on the White Rose Maths Hub, to enable the achievement of 'mastery' over time (Long Term Planning). These are designed to ensure coverage and progression. Teaching is underpinned by methodical curriculum design (Medium Term Planning) and supported by carefully crafted lessons with small steps which are carefully sequenced and built upon systematically (Short Term Planning) and resources to foster deep conceptual and procedural knowledge. The design of the 12 week blocks allows flexibility within each term so teachers can work on misconceptions or small steps can be re-visited or given more time if necessary.

Carefully designed variation within the start of a lesson builds fluency and understanding of underlying mathematical concepts. Teachers use careful questions to draw out children's discussions and their reasoning skills which are applied in activities. Tasks are then designed which allow children to apply their fluency and reasoning skills to solve mathematical problems. Concrete manipulatives are available in every classroom and are accessible for children to use as directed or independently. Children are encouraged to use the correct mathematical vocabulary and use their reasoning skills when answering questions. Teachers and TAs move around the classroom and actively respond, challenge and support children with their learning. Working walls are used to display strategies that are being used and include the key vocabulary being taught in that unit. Additional time, outside of lessons - Flashback 4 and MATHS BLAST are used to support, retrieve and recall previous learning using arithmetic strategies in number with a strong emphasis on multiplication.

Questioning, marking and feedback of work helps to identify those children who need further support, provides opportunities to address misconceptions and also allows children to make corrections or complete next step challenges. This allows the vast majority of children to continue to work at a similar pace.



### Challenge, Equality & Opportunity

Number & Place Value	Addition & Subtraction	Multiplication & Division	Fractions
Tens Ones Tonthi Hundradthi	Adding and Subtracting		half 7 9 whole
Measurement	Geometry - Shape	Geometry - Position & Direction	Statistics
		NE E SS	



# Reception

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
		ting to Know unities for se			Just like me	!	ŀ	t's Me 1, 2, 3	!		Light and Darl	(		Phase
Autumn	introducing the areas of provision and getting to know the children. Key times of day, class routines. Exploring the continuous provision		e children. routines.	Match and Sort Compare Amounts		Coi	Representing 1,2 &3 Comparing 1,2 & 3 Composition of 1,2 & 3			Representing Numbers to 5 One More and Less			<u>Number</u>	
Au	inside and	the continuou d out. Where belong? sitional langu	do things	Compare Size, Mass & Capacity Exploring Pattern			les and Trian itional Langu	Friangles Shapes with 4 Sides		des		<u>Measure,</u> <u>Shape and</u> <u>Spatial</u> <u>Thinking</u>		
		Alive in 5		Growing 6,7,8		В	uilding 9 & 1	0		Consolidation			Phase	
Spring	Comp	ntroducing ze paring numbe aposition of 4	bers to 5 Combining 2 amounts			Counting to 9 & 10 Comparing numbers to 10 Bonds to 10							Number	
S		mpare Mass npare Capacit	• •	Le	ngth & Heig Time	ht		3d-shapes Patterns						Measure, Shape and Spatial Thinking
	То	20 and Beyo	ond	Fi	irst Then No	w	Fi	nd my Patter	'n		On the Move			Phase
Summer		g Numbers Be g Patterns Be	· <del>-</del>		Adding More Taking Away		Doubling Sharing & Grouping Even & Odd Spatial Reasoning (3) Visualise and Build		ing	Deepening Understanding Patterns and Relationships			<u>Number</u>	
ns	-	tial Reasonin , Rotate, Mar		_	ial Reasonin se and Deco				Spatial Reasoning (4) Mapping				Measure, Shape and Spatial Thinking	



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	N	lumber: Pla	ce Value	– Within	10	Number: Addition & Subtraction – within 10					Geometry: Shape	Consolidation Assessment
Spring	Number: Place Value (within 20) Subtraction- (w							r: Place ithin 50)	Measurement: Weight and Volume	Assessment		
Summer			es of	lumber: Fr	ractions	Geometry: Position & Direction	Number Val (within	ue	Measurement : Money	Measureme nt: Time	Assessment	



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn		Number: Pl	ace Value		N	Number: Addition & Subtraction					Geometry: Properties of Shape	
Spring		urement: oney	Iltiplicatio	iplication and Division  Measurement: Length and Height					Measurement: Mass, Capacity and Temperature			
Summer	Sta	tistics	Nun	nber: Frac	tions	Problem	Solving	Posit	metry: ion and ection	Measuren	nent: Time	Assessment



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Numk	per: Place	e Value		Number: Addition & Subtraction Num					er: Multiplica Division	<b>Consolidation Assessment</b>	
Spring	1-11				ement: Le Perimete	ength and er					rement: I Capacity	Consolidation Assessment
Summer	Num Fract			rement: ney	Measurement:		Time Geometry: Statistics Properties of Shape		stics	Consolidation Assessment		



#### Challenge, Equality & Opportunity

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Ni	umber: P	Number: Addition & Subtraction  Subtraction  Number: Multiplication are Designed to the subtraction are subtra				ion and	<b>Consolidation Assessment</b>				
Spring	Number: and	Multipli Divisior		Measure Length Perim	and		Number: Fractions Number: Deci					Consolidation Assessment
Summer				rement: me	Statistics	Prope	netry: rties of ape	Geometry: and Dir		Consolidation Assessment		



#### Challenge, Equality & Opportunity

# Year 3/4

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value  Number: Measurement:				Number: Addition and Subtraction				Number	Assessment		
Spring	Multip	nber: Dication Division	Ler Perime	rement: ngth, eter and rea		Numbe	er: Fraction	S	Y3: Meas	Consolidation and Assessment		
Summer				rement: me	Sta	tistics			operties of S ition and Dir		Consolidation and Assessment	



# Maths Curriculum Map - Reception

Core	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Number and place value - Numbers to 5  Count up to three or four objects by saying one number name for each item  Count actions or objects that cannot be moved  Recognise numerals 1-5  Select the correct numeral to represent 1-5  Addition and subtraction - Sorting  Sorting into groups  Say the number that is one more or less to 5  Manuel - Time  Use everyday language related to time  Order and sequence familiar events  Measure short periods of time in simple ways	Number and place value – Comparing groups	Addition and subtraction — Numbers to 5  Find the total number of items in two groups by counting all of them  Say the number that is one more than any number  In practical activities and discussion, is beginning to use the vocabulary involved in adding and subtracting  Record, using marks that they can interpret and explain  Addition and subtraction — Numbers to 10  Combine two groups to find the whole  Number and place value — Numbers to 10  Count objects to 10, and begin to count beyond 10  Count an irregular arrangement of up to ten objects  Say the number that is one more  Find one more or less from a group of up to ten objects  Count out up to six objects from a larger group  Compare groups up to 10  Use the language of 'more' and 'fewer' to compare two sets of objects  Addition and subtraction — Count on and back  Find pairs with a total of 6 or 7	Addition and subtraction  Numbers to 10  In practical activities and discussion, begin to use the vocabulary involved in adding and subtracting  Find number bonds to 10 using a ten frame  Find number bonds to 10 using a part-whole model  Begin to subtract by guessing how many are hiding  Record, using marks that they can interpret and explain  Geometry — exploring patterns  Make simple patterns  Explore more complex patterns  Continue a repeating pattern with three colours/shapes/objects  Recognise and create symmetrical patterns	Addition and subtraction — Count on and back  Add 1,2 or 3 to any number to 10 by counting on Taking away by counting back  Find doubles to 5 +5  Measurement — Measure Order two or three items by length or height  Geometry — Exploring patterns Explore more complex patterns Explore more complex patterns Continue a repeating pattern with three colours/shapes/objects Recognise and create symmetrical patterns	Number and place value -Numbers to 20  Count reliably to 20, place numbers in order and say which number is one more or one less  Multiplication and Division — Numerical patterns  Count in 1s and 10s to 100  Double numbers to 5 +5  Solve practical problems involving halving and sharing  Use practical resources to find odd and even numbers

	Describe their
	relative position
	such as 'behind' or
	'next to'
Maths	Number and Place Value (Securing Numbers, Ordering and Comparing): Counting forwards and backwards in 1s to 20 - teen numbers; Order a set of consecutive numbers to 10,
	subitising to 10.
through Daily	
Routines	Addition and Subtraction (Multiples): Partitioning 3 or 4 objects in different ways; Number bonds to 5; Knowing 1 more / less than numbers to 5 / 10; Counting all-combining groups;
	Counting on to add from any number; Knowing 1 less than numbers to 5; Counting back to subtract
	Multiplication and Division (Doubling Numbers / Near Doubles): Double numbers to 5; Halve even numbers up to 10 by sharing
Vocabulary	Number and Place Value: number, zero 1-20 count on/back lots, more, few, fewer, compare, sort, order, before, after, less, many, most, the same as, ones, pair
introduced in	Addition and Subtraction: add, more, altogether, takeaway, number line, one more, one less, equals, equal to, double, half, how many? make, total
	Addition and Subtraction: add, more, altogether, takeaway, number line, one more, one less, equals, equal to, double, hall, now many? make, total
Reception	Fractions: double, half, whole
	Tractions: double, fidin, whole
	Measure: days of the week, week, month, year, weekend, birthday, holiday, morning, afternoon, evening, night, midnight, bedtime, dinnertime, playtime, today, yesterday,
	tomorrow, before, after, next, last, now, soon, early, late, quick, fast, slow, old, new, watch, clock, always, never, first, size, weight, capacity, time, money long, longer, longest,
	short, shorter, shortest, heavy, light, empty, full, tall, small, large, thick, thin, low, deep, ruler, far, near, holds, container, weigh, weighs coin, buy, sell, pay, price, how many?
	short, shorter, shortest, heary, han, tan, shan, tan, shan, tan, hear, hear, hear, hear, hear, hear, see, pay, price, hear, he
	Multiplication and Division: times, counting in ones, twos, fives, tens, lots of, groups of, once, twice, five times sharing, share, set, group, left, left over
	Geometry (Position and Direction): position, distance, after, before, in, on, inside, under, on top of, behind, next to, above, below, top, bottom, side, outside, around, underneath, in
	front, front, back, before, middle, up, down, forwards, backwards, across, close, far, along, to, from, slide, roll, turn, stretch, bend, move.
	Geometry (Properties of Shape): shape, group, sort, round, flat, straight, make, build, draw. square, circle, triangle, cube, cuboid, sphere
	General / Problem Solving: listen, join in, say, think, imagine, remember, start from, start with, start at, look at, point to, put, place, fit, change, split, carry on, what comes next?
	find, choose, collect, use, make, build, tell me, pick out, talk about, explain, show me read, write, finish, copy, colour, tick, cross, draw, draw a line between, join (up), ring, arrow,
	count, work out, answer, fill in, check, in order, every, each.



				<u> </u>		
Core	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Number: Place Value (within 10)  Sort, count and represent objects  Count, read and write forwards and backwards from any number 0-10  Count one more and one less  One-to-one correspondence to compare groups  Compare groups using language such as equal, more/greater, less/fewer  Introduce <,> and = symbols  Compare, order numbers and groups of objects  Ordinal numbers (1st, 2nd, 3rd)  Use a number line for counting	Number: Addition and Subtraction (within 10)  Use a part-whole model Find number bonds for numbers within 10  Compare number bonds Addition-adding together, adding more, finding a part Subtraction-taking away, how many left? Subtraction-finding a part, breaking away, counting back, finding the difference Fact families Comparing addition and subtraction statements Geometry: Shape Recognise and name 3-D shapes Sort 3-D shapes Recognise and name 2-D shapes Make patterns with 2-D and 3-D shapes	Number: Place Value (within 20)  Count within 20 Understand 10 Understand 11, 12 and 13  Understand 14, 15 and 16  Understand 17, 18 and 19 Step 6 Understand 20  1 more and 1 less The number line to 20  Use a number line to 20  Estimate on a number line to 20 Compare numbers to 20  Order numbers to 20  Number: Addition and Subtraction (within 20)  Add by counting on within 20  Add ones using number bonds Find and make number bonds to 20  Doubles  Near doubles Subtract ones using number bonds Subtraction – counting back  Subtraction – finding the difference Related facts  Missing number problems	Number Place Value (within 50)  Count from 20 to 50  20, 30, 40 and 50 Count by making groups of tens  Groups of tens and ones  Partition into tens and ones  The number line to 50  Estimate on a number line to 50  I more, 1 less Measurement Length and Height  Compare length using objects Measure length in centimetres Measure length in centimetres Measure length and Volume  Heavier and lighter Measure mass  Compare wolume Measure capacity  Compare capacity	Number: Multiplication and Division  Count in 2s, 5s, 10s  Make and add equal groups  Make arrays  Make doubles  Make equal groups-grouping and sharing  Number: Fractions  Find halves and quarters  Geometry: Position and Direction  Describe turns and position	Number: Place Value (within 100)  Count forwards and backwards within 100  Partition numbers  Compare and order numbers  One more, one less  Measurement Money  Recognise coins and notes  Count in coins  Measurement Time  Before and after  Dates  Tell time to the hour and half hour  Compare time

Voc	abulary	Number and Place value: 20-100 count (on/up/to/from/ down), lead (In) order/a different order, size, value, between, halfway between,		units, tens, ten more/less, digit, nu	meral, figure(s), compare							
intr	oduced	Addition and subtraction: number bonds, addition, plus, sum, greater, inverse, near double, halve, is the same as, (including equals sign), difference between, how many more to make?,										
_		how, many more isthan?, how much more is? subtract, minus, how many fewer isthan?, how much less is?										
In	Year 1	Fractions: whole, equal parts, four equal parts, one half, two halves, a quarter, two quarters.										
		Measurement: size, bigger, larger, length, width, height, depth, taller, tallest, high, higher, highest, wide, narrow, shallow, close, Metre, metre stick. half full, balances, heavier, heaviest,										
		lighter, lightest, scales.										
		Measurement (Time): Seasons (Spring, Summer, Autumn, Winter)										
		time, hour, o clock, half past, hands, how long ago? how long will it										
		to, about the same as, just over/under, too many/few, not enough,										
		Multiplication and Division: odd, even, count in twos, fives, tens, (f		ole of, multiply, multiply by repeat	ed addition, array, row,							
		column, halve, share equally, group in pairs, threes, etc. equal grou		at sidoways noar through towars	ds away from movement							
		<u>Geometry (Position and Direction):</u> over, beside, opposite, apart, b whole turn, half turn.	etween, edge, centre, corner, direction, journey, iert, rigi	it, sideways, flear, tiffough, toward	is, away iroili, illovelllelli,							
			nollow solid corner (point pointed) face side edge									
		Geometry (Properties of Shape): pyramid, cone, cylinder. curved, hollow, solid, corner (point, pointed) face, side, edge.  General / Problem Solving: arrange, rearrange, change over, separate, continue, repeat, describe, explain, record, trace, complete, shade, same number(s)/different number(s)/missing										
		number(s) number facts, same way, different way, best way, another										
10	Minute		·									
	hs in Year	NAACTI	EDINIC NUINADED DDOCDAN									
iviati	iis iii Teai	IVIASTI	<u>ERING NUMBER PROGRAI</u>	VIIVIE								
	1											
MAS	STERING	Multiplication Multiplication Multiplication Multiplication										
NU	<b>JMBER</b>	Count in 2s to 24 link even and odd numbers  Count in multiples of 5 up to 60  Count in multiples of 10, 2 and Count in multiples of										
		Count in 10s in order up to 120	Count in 2s and 10s	5 fluently	and 5 fluently							
(N/Lul+	iplication)											
(iviuiti	ipiication)											



Core Curriculum Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value  Count forwards and backwards within 20  Tens and ones within 20  Count forwards and backwards within 50  Tens and ones within 50  Compare numbers within 50  Count objects, read, write and represent numbers to 100  Tens and ones with a part whole model  Tens and ones using addition  Use a place value chart  Compare and order objects and numbers  Number: Addition and  Subtraction  Fact families-addition and subtraction bonds to 20  Compare number sentences and related facts  Bonds to 100 (10s)  Add and subtract 1s  10 more and 10 less  Add and subtract 10s  Add by making 10  Add 2 and 1 digit number — crossing 10  Subtract a 1 digit from a 2 digit number-crossing 10  Add 2 digit numbers not crossing then crossing 10	Number: Multiplication and Division  Make and add equal groups  Make arrays Geometry: Properties of Shape  Recognise 2D and 3D shapes  Count sides and vertices on 2D shapes  Draw, sort and make patterns with 2D shapes  Lines of symmetry  Count faces, edges and vertices on 3D shapes  Sort and make patterns with 3D shapes	Count money – pence Count money – pounds (notes and coins)  Count money – pounds and pence  Choose notes and coins Make the same amount Compare amounts of money  Calculate with money Make a pound  Find change  Two-step problems  Number: Multiplication and Division  Recognise equal groups  Make equal groups  Make equal groups  Multiplication sentences  Use arrays  Make equal groups – grouping  Make equal groups – sharing  The 2 times-table  Divide by 2  Doubling and halving  Odd and even numbers  The 10 times-table  Divide by 10  The 5 times-table  Divide by 5  The 5 and 10 times-tables	Measurement tength and Height  Measure in centimetres  Measure in metres  Compare lengths and heights  Order lengths and heights  Four operations with lengths and heights  Measurement Mass, Capacity and Temperature  Compare mass  Measure in grams  Measure in kilograms  Four operations with mass  Compare volume and capacity  Measure in millilitres  Measure in litres  Four operations with volume and capacity  Temperature	Statistics  Make tally charts  Draw and interpret pictograms (1-1)  Draw and interpret pictograms (2,5 and 10)  Block diagrams  Number: Fractions  Make equal parts  Recognise and find half and quarter  Recognise and find one third  Unit and non-unit fractions  Equivalence of ½ and 2/4  Find three-quarters  Count in fractions	Geometry: Position and Direction  Describe position, movement and turns  Make patterns with shapes  Measurement Time  Tell time to the hour and half hour  clock and half past  Quarter past and quarter to  Tell time to 5 minutes  Hours and days  Find and compare durations of time

Vocabulary	Number and Place Value: numbers to one hundred, hundreds, partition, recombine, hundred more/less, represents, exchange,									
introduced in	Statistics: count, tally, sort, vote, graph, block graph, pictogram, represent group, set, list, table label, title most popular, most common, least popular, least common									
Year 2	Fractions: three quarters, one third, a third, equivalence, equivalent.  Measurement: quarter past/to, fortnight temperature (degrees) m/cm, g/kg, ml/l									
i cai z	Measurement: quarter past/to, fortnight temperature (degrees) m/cm, g/kg, mi/i  Multiplication and Division: count in multiples of 3									
	Geometry (Position and Direction): rotation, clockwise, anticlockwise, straight line, ninety degree turn, right angle. Geometry (Properties of shape): smaller, symmetrical, line of symmetry, fold,									
	match, mirror line, reflection, pattern, repeating pattern, vertices, vertex. pentagon, hexagon, octagon, circular, triangular, right angle.									
	General/Problem Solving: predict, describe the pattern, describe the rule, find, find all, find different, investigate.									
10 Minute	Counting	Number and Place	Addition and Subtraction	Addition and Subtraction	Multiplication and	Multiplication and Division				
Maths in Year 2	Count to and across 100 from	Value (Counting):	(Multiples):	(Adding / Subtracting 10's,	Division (Doubling	(Order of Operations):				
(MATHS BLAST)	any given number Count, read and write numbers	Count	Recall number bonds to 20 and	100's, 1000's):	Numbers / Near Doubles): Double teen numbers 16 +	Explore commutativity using arrays e.g. 4 x 3 = 3 x 4;				
	to 100 in numerals	forwards/backwards in 10s and 1s to 100	use this to find bonds to 18, 19; Add 3 numbers where bond to 10	Add 1 to any number to 100; Count in 10s from any number	16 Near doubles 16 + 17;	Rewrite repeated addition as				
Retrieval/	Count in multiples of 2, 3, 5 and	(mixed counting)	evident:	(forwards/backwards);	Double multiples of 10 to	multiplication;				
Arithmetic	10 from any number forward and	e.g.,20, 30, 40 etc,	Partition numbers (1 number)	Add/subtract near 10s and	<b>100</b> e.g double 20;	Relationship between 5x and				
Fluency	back.	20, 30, 31, 32, 33	using number bonds to	adjusting e.g. 9, 11 Number	Halve multiples of 10 with	10x table and doubling and				
(Multiplication)	Number and Place Value	etc, 80, 70, 60 etc	add/subtract (reordering	bonds to 100 e.g. 70 + 30;	even number of 10s to	halving.				
(manufacturi)	(Securing Numbers, Ordering and	Number facts (+ -)	numbers) e.g. 8 + 7 = 8 + 2 + 5, 13	Add multiples of ten e.g. 30 +	<b>100</b> e.g. half of 40.	Mental / Written (x ÷)				
	Comparing):	Use place value and	- 5 = 13-(3-5)	20, 30 + 60, 30 + 80	Focus on doubling/halving	Show that multiplication of 2				
	Count forwards and backwards	number facts to	Subtract any single digit number	Written (+ -)	multiples of 10 with odd	numbers can be done in any				
	in 1s to 100;	solve problems	from a multiple of <b>10</b> <i>e.g.</i> 80 – 7	Record addition and	number of 10s by	order (commutative) and				
	Order a set of random numbers	Recall and use	(knowledge of bonds to 10)	subtraction in columns to	partitioning and	division of 1 number by				
	to 100;	addition and	Mental (+ -)	prepare for formal written	recombining e.g. half of	another cannot				
	Compare numbers using symbols <> =	subtraction facts to 20 fluently	Add and subtract numbers mentally:	methods with larger numbers  Multiplication	30, 50, 70, 30 = 20+10 Double even numbers up	Fractions Decimals and Percentages (Comparing,				
	Multiplication	Derive and use	A two digit number and 1s	Recall multiples of 5 up to	to 100 by partitioning and	Ordering and Calculating):				
	Consolidate 2,5,10 in order up to	related facts up to	A two digit number and 10s	12x5 in any order including	recombining;	Count in fractions up to 10,				
	12X	100	2 two digit numbers	missing numbers and division	Halve even numbers up to	starting from any number and				
		Multiplication	Add 3 one digit numbers	facts	100 by partitioning and	using the 1/2 and 2/4				
		Count fluently from	Multiplication	Recall multiples of 2 fluently	recombining.	equivalence on the number				
		0 in 2,5 and 10	Recall multiples of 2 up to 12x2	including division facts	<u>Multiplication</u>	line				
		Recall multiples of	in any order including missing		Count in multiples of 4 up	<u>Multiplication</u>				
		10 up to 12x10 in	numbers and division facts		to 12x4 in order from 0 –	Count in multiples of 4 up to				
		any order including	Recall multiples of 10 fluently		Relate to doubling 2	12x4 in order from 0				
		missing numbers			Recall multiples of 2	Recall multiples of 5 up to				
		and division facts			fluently including division facts	12x5 fluently and related division facts				
					Recall multiples of 5	uivision facts				
					fluently including division					
					facts					



Core	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Number: Place Value  Represent numbers to 100  Tens and ones using addition  Hundreds  Represent numbers to 1000  100s, 10s and 1s  Number line to 1000  Find 1,10,100 more or less than a given number  Compare objects to 1000  Compare and order numbers to 1000  Count in 50s  Number: Addition and Subtraction  Add and subtract multiples of 100  Add and subtract 1s  Add and subtract 2,3 and 1 digit numbers and crossing 10  Subtract 2 digit and 1 digit numbers and crossing 10  Subtract 3 and 2 digit numbers and crossing 100	Number: Addition and Subtraction Add and subtract 100s Spot patterns Add two 2 digit numbers crossing 10 Subtract 2 digit from a 2 digit number crossing 10 Number: Multiplication and Division Multiplication equal groups Multiplication using the symbol Using arrays 2 and 5 times table Make equal groups-sharing and grouping Divide by 2,5 and 10 Multiply and divide by 3 Times table	Number: Multiplication and Division  Multiples of 10 Related calculations Reasoning about multiplication Multiply a 2-digit number by a 1-digit number – no exchange Multiply a 2-digit number by a 1-digit number – with exchange Link multiplication and division Divide a 2-digit number by a 1-digit number – no exchange Divide a 2-digit number by a 1-digit number – flexible partitioning Divide a 2-digit number by a 1-digit number – with remainders Scaling How many ways? Measurements benedit and remainders Measure in metres and centimetres Measure in centimetres and millimetres Measure in centimetres and millimetres Equivalent lengths (metres and centimetres) Equivalent lengths (centimetres) Equivalent lengths Compare lengths Add lengths Subtract lengths What is perimeter? Measure perimeter Calculate perimeter	Number: Fractions  Understand the denominators of unit fractions  Compare and order unit fractions  Understand the numerators of non-unit fractions  Understand the whole  Compare and order non-unit fractions  Fractions and scales  Fractions and scales  Fractions on a number line  Count in fractions on a number line  Equivalent fractions on a number line  Equivalent fractions as bar models  Measure mass in grams  Measure mass in kilograms and grams  Measure mass (kilograms and grams)  Compare mass  Add and subtract mass  Measure capacity and volume in litres and millilitres  Equivalent capacities and volumes (litres and millilitres)  Compare capacity and volume  Add and subtract capacity and volume in litres and millilitres)	Number: Fractions  Making the whole Count in tenths Tenths as decimals Fractions on a number line Fractions of a set of objects Equivalent fractions Compare and order fractions Add and subtract fractions Convert pounds and pence Add and subtract money Give change Wass rement Time Clock, half past, quarter to and quarter past Months and years Hours in a day Telling the time to 5 minutes and the minute Using am and pm 24 hour clock Find and compare durations Start and end times Measuring time in seconds	Geometry: Properties of Shape  Turns and angles Right angles in shapes Compare angles Draw accurately Horizontal, vertical, parallel and perpendicular Recognise and describe 2D and 3D shapes Make 3D shapes  Make tally charts Draw and interpret pictograms (2,5 and 10) Pictograms, bar charts, tables

Vocabulary
introduced in
Year 3
10 Minute

Number and Place Value: numbers to 1,000 Addition and subtraction: column addition and subtraction Fractions: numerator, denominator, unit fraction, non-unit fraction, compare and order, tenths Measurement: leap year twelve-hour/24- hour clock, am/pm, century roman numerals I-XII mm Multiplication and Division: count in multiples of 4, 8 and 11, product, scale up Geometry (Position and Direction): greater/less than 90 degrees orientation (same orientation, different orientation), north, south, east, west Geometry (Properties of Shape): horizontal, vertical, perpendicular and parallel lines. perimeter hemi-sphere, prism, semi-circle Statistics: chart, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axes diagram

# 10 Minute Maths in Year 3 (MATHS BLAST) Retrieval/ Arithmetic Fluency (Multiplication)

Number and Place Value (Securing Numbers, Ordering and Comparing):

Count in 100, 10s, 1s from any number to 1000; Order a set of random numbers to 1000:

Compare numbers using symbols < > and = up to 1000

Number and Place Value (Counting):

Add 100 to any 2 / 3digit number e.g., 45 + 100, 145 + 100; Add multiples of 100 to any 2 / 3 digit number 45 + 200, 145 + 200, 145 + 700 (regrouping)

Counting

Count from 0 in multiples of 4,8,50 and 100 Find 10 or 100 more or less than a given number Multiplication

Count in multiples of 2 up to 12x2 in any order including missing numbers and division facts.

Count in multiples of 4 up to 12x4 in order from 0 with growing fluency

Addition and Subtraction (Multiples):

Add any multiple of 10 to a 2/3 digit number e.g. 153 + 20, 153 + 70 (regrouping);

Subtract any multiple of 10 from a 2/3 digit number, e.g. 153 – 20, 153 – 70 (regrouping)

Counting in 10s e.g. Use number bonds/partitioning 153 – (50 + 20);

To subtract many amounts, combine to add first in context. Eg £1 - (20p - 30p), £1 - 50p

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts Introduce (relating

to 4) and begin to

from 0 to 12x8

count multiples of 8

Multiplication

**Add 10 to any number**, 43 + 10, 143 + 10, **Add multiples of 10 to any** 

Addition and Subtraction (Adding

/ Subtracting 10's, 100's, 1000's):

number e.g. 43+ 30 (no regrouping), 43 + 70 (regrouping), 143 + 30 (no regrouping), 143 + 70 (regrouping);

Explain effects of adding 10. Why do 1s not change when adding 10s? When will 100s change?; Add near multiples of 10 e.g. + 99, 31, 29 etc including in simple money context e.g. 99p, £1.99 Multiplication

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts

Count in multiples of 8 to 12x8 in any order

Addition and Subtraction
Mental (+ -)

Add and subtract numbers mentally, including:

- A three digit number and 1s
- A three digit number and 10s
- A three digit number and 100s

Multiplication

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts Count in multiples of 8 to 12x8 in any order Multiplication and Division (Doubling Numbers / Near Doubles):

Doubles of multiples of 10/near10s 60 + 60, 60 + 70; Review doubling/halving multiples of 10 with odd number of 10s by partitioning and recombining e.g. half of 30, 50, 70, 30 = 20+10, Half is 10 + 5 = 15; Double simple 3 digit numbers (multiples of 10, 50, 100) e.g. double 200, double

#### Multiplication

facts

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts Recall multiples of 8 up to 12x8 in any order, missing numbers and division **Fractions and Decimals** 

Count up and down in tenths Add and subtract fractions with the same denominator within one whole Multiplication and Division

Multiplication and Division (Order of Operations):

Multiplication and division of whole numbers by 10 exploring the effect of moving digits e.g. 6 x 10, 10 x 10. 16 x 10: Use known facts to multiply and divide by multiples of 10 e.g. 6 x 3, 6 x 30 Knowledge of doubling e.g. double 4x table = 8x; Know that... e.g.  $50 \times 2 = 100$ ,  $25 \times 4 = 100$ .  $20 \times 5 = 100$ : Link to measure and reading scales e.g. 50p x 2 = £1.00,  $£50 \times 2 = £100, 25p \times 4 =$ £1.00 £25 x 4 = £100,  $20p \times 5$ = £1.00 , 1000g = 1kg1000ml = 1l , 1000cm = 1km,  $1000 \div 2 = 500 \quad 1000 \div 4 =$ 250, ½ l/kg/km = 500, ¼  $I/kg/km = 250, \frac{3}{4} I/kg/km =$ 750 Multiplication

Recall multiples of 8 up to 12x8 in any order, missing numbers and division facts Introduce counting in 3s and multiples of 3



								•				
Core	Autu	mn 1	Autu	mn 2	Spri	ng 1	Sprin	ıg 2	Sumi	ner 1	Sumi	ner 2
Curriculum Small Steps	Y3	Y4	Y3	Y4	Y3	Y4	Y3	Y4	<b>Y</b> 3	Y4	Y3	Y4
Sman Steps	Number: Place Value Represent numbers to 100 Partition numbers to 100 Number line to 100 Hundreds Represent numbers to 1,000 Partition numbers to 1,000 Flexible partitioning of numbers to 1000 Hundreds, tens and ones Find 1, 10 or 100 more or less Number line to 1,000 Estimating on a number line to 1,000 Compare numbers to 1,000 Compare numbers to 1,000 Count in 50s Number: Addition and Subtraction	Number: Place Value Represent numbers to 1,000 Partition numbers to 1,000 Number line to 1,000 Thousands Represent numbers to 10,000 Partition numbers to 10,000 Flexible partitioning of numbers to 10,000 Find 1, 10, 100, 1,000 more or less Number line to 10,000 Estimate on a number line to 10,000 Compare numbers to 10,000 Order numbers to 10,000 Roman numerals Round to the nearest 10 Round to the nearest 100	Number: Addition and Subtraction Subtract two numbers (across a 10) Subtract two numbers (across a 100) Add 2-digit and 3-digit numbers Subtract a 2- digit number from a 3-digit number Complements to 100 Estimate answers Inverse operations Make decisions Number: Multiplication and Division Multiplication - equal groups Use arrays Multiples of 2 Multiples of 5 and 10 Sharing and grouping Multiply by 3 Divide by 3 The 3 times- table Multiply by 4 Divide by 4 The 4 times- table	What is area? Counting squares Making shapes Comparing area Number: Multiplication and Division Multiples of 3 Multiply and divide by 6 6 times-table and division facts Multiply and divide by 9 9 times-table and division facts The 3, 6 and 9 times-tables Multiply and divide by 7 7 times-table and division facts 11 times-table and division facts 12 times-table and division facts 13 times-table and division facts 14 times-table and division facts Divide by 1 and 0 Divide by 1 and itself Multiply three numbers	Number: Multiplication and Division Consolidate 2,4 and 8 times tables Compare statements Related calculations Multiply and divide 2 digit by 1 digit Scaling How many ways? Measurement Lengthand Parimeter Measure length (m) Equivalent lengths m, cm and mm Compare lengths Add and subtract lengths Measure and calculate perimeter	Number: Multiplication and Division Factor pairs Efficient multiplication Written methods Multiply 2 digits by 1 digit Multiply 3 digits by 1 digit Divide 2 digits by 1 digit Measurement Length and Perimeter Equivalent lengths-m and cm, mm and cm Kilometres Add lengths Subtract lengths Measure perimeter Perimeter or rectangles and rectilinear shapes	Number: Fractions Make equal parts Recognise and find half, quarter and third Unit and non-unit fractions Equivalence of ½ and 2/4 Count in fractions Measurement. Mass and Capacity Compare and measure mass Add and subtract mass Compare volume Measure and compare capacity Add and subtract capacity Temperature	Number: Fractions Unit and non-unit fractions Tenths — count in tenths Equivalent fractions Fractions greater than 1 Count in fractions Add fractions Add 2 or more fractions Number: Decimals Recognise tenths and hundredths Tenths as decimals Tenths on a place value grid and number line Divide 1 then 2 digits by 10 Hundredths as decimals Hundredths on a place value grid Divide 1 or 2 digits by 100	Number: Fractions Making the whole Count in tenths Tenths as decimals Fractions on a number line Fractions of a set of objects Equivalent fractions Compare and order fractions Add and subtract fractions Measurement Maney Convert pounds and pence Add and subtract money Give change Measurement Time Clock, half past, quarter to and quarter past Months and years Hours in a day Telling the time to 5 minutes and the minute Using am and pm 24 hour clock Find and compare durations	Number: Decimals Bonds to 10 and 100 Make a whole Write, compare and order decimals Round decimals Halves and quarters Measurement From Pounds and pence Ordering money Estimating money Convert pounds and pence Add and subtract money Find change Four operations Measurement Time Telling the time to 5 minutes Telling the time to the minute Using a.m. and p.m. 24 hour clock Hours, minute and seconds Years, months, weeks and days Analogue to digital-12 hour Analogue to digital-24 hour	Geometry: Properties of Shape Turns and angles Right angles in shapes Compare angles Draw accurately Horizontal, vertical, parallel and perpendicular Recognise and describe 2D and 3D shapes Make 3D shapes Statistics Make tally charts Draw and interpret pictograms (2,5 and 10) Pictograms, bar charts, tables	Interpret charts Comparison, sum and difference Introduce line graphs Geometry: Properties of Shape Turns and angles Right angles in shapes Compare, identify and order angles Recognise and describe 2-D shapes Triangles and quadrilaterals Horizontal and vertical Lines of symmetry Complete a symmetrical figure Geometry: Position and Direction Describe a position Draw on a grid Move on a grid Move on a grid Describe movement on a grid

Apply	number Round to th	o Divido by 0			Start and end		
	s within nearest	The 8 times-			times		
10	1,000	table			Measuring time		
Add ar					in seconds		
subtra		times-tables					
Add ar		0					
	act 10s Number:						
Add ar							
	act 100s Subtraction						
Spot th							
patter							
	s across 10s, 100s ar	nd					
a 10	1,000s						
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	ers (no Add two 4-						
exchar	nge) digit						
	act two numbers—						
	ers (no more than						
exchar	inge) one						
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	ss a 10) 4-digit						
Add tw		10					
	ss a 100) Subtract tw						
(across	4-digit	0					
	numbers -						
	one						
	exchange						
	Subtract tw	0					
	4-digit						
	numbers –						
	more than						
	one						
	exchange						
	Efficient						
	subtraction						
	Estimate						
	answers						
	Checking						
	strategies						

Vocabular
introduce
in Year 3
Vocabula

Number and Place Value: numbers to 1,000 Addition and subtraction: column addition and subtraction Fractions: numerator, denominator, unit fraction, non-unit fraction, compare and order, tenths Measurement: leap year twelve-hour/24- hour clock, am/pm, century roman numerals I-XII mm Multiplication and Division: count in multiples of 4, 8 and 11, product, scale up Geometry (Position and Direction): greater/less than 90 degrees orientation (same orientation), different orientation), north, south, east, west Geometry (Properties of Shape): horizontal, vertical, perpendicular and parallel lines. perimeter hemi-sphere, prism, semi-circle Statistics: chart, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axes diagram

#### Vocabulary introduced in Year 4

Number and Place value: tenths, hundredths, numeral decimal places round (to nearest) thousand more / less negative integers count through zero roman numerals I to C Multiplication and Division: count in multiples of 6, 7, 9, 12, inverse, derive division facts Fractions: equivalent fractions and decimals, decimal point, decimal fraction hundredths Geometry (Position and Direction): coordinates translation, translate, quadrant x-axis, y-axis Geometry (Properties of Shape): area, net rectilinear adjacent quadrilaterals: (rhombus, parallelogram, trapezium, t

# 10 Minute Maths in Year 3 (MATHS BLAST) Retrieval/ Arithmetic Fluency (Multiplication)

Tell time to the hour and half hour clock and half past Quarter past and quarter to Tell time to 5 minutes Hours and days Multiplication

Count in multiples of 2 up to 12x2 in any order including missing numbers and division

Count in multiples of 4 up to 12x4 in order from 0 with growing fluency

<u>Shape</u>

Right angles Compare angles Horizontal, vertical, parallel and perpendicular Recognise and describe 2D and 3D shapes

Multiplication

Recall multiples of 3, 4 and 8 up to 12 x in any order including missing numbers and related division facts fluently

Fluently count in 6s up to 12x6

Number and Place Value
Partition numbers to 100

Partition numbers to 1,000
Find 1, 10 or 100 more or less
Order numbers to 1,000
Count in 50s

**Addition and Subtraction** 

Apply number bonds within 10 Add and subtract 1s Add and subtract 10s Add and subtract 100s

Subtract 1s across a 10
Add two numbers (across a 10)
Add two numbers (across a 100)

Multiplication

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts Introduce (relating to 4) and begin to count multiples of 8 from 0 to 12x8

Number and Place Value

Partition numbers to 10,000 Find 1, 10, 100, 1,000 more or less Order numbers to 10,000 Roman numerals Round to the nearest 10, 100 or 1,000

**Addition and Subtraction** 

Add and subtract 1s, 10s, 100s and 1,000s Add two 4-digit numbers— more than one exchange

Multiplication

Introduce 6s in order up to 12x6 Relate to multiples of 3 Fluently count in 9s in order up to 12x9 **Addition and Subtraction** 

Subtract two numbers (across a 10)
Subtract two numbers (across a 100)

Add 2-digit and 3-digit numbers Subtract a 2-digit number from a 3digit number

Complements to 100 Inverse operations

Multiplication

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts

Count in multiples of 8 to 12x8 in any order

**Addition and Subtraction** 

Subtract two 4-digit numbers - no exchange Subtract two 4-digit numbers –

more than one exchange
Efficient subtraction

**Multiplication** 

Recall multiples of 6 in any order missing boxes and division Recall multiples of 9 and order including missing numbers and division facts fluently Fluently count in 7s in order up to

Addition and Subtraction

Add and subtract numbers mentally, including:
A three digit number and 1s
A three digit number and 10s
A three digit number and 100s

Equivalent lengths m, cm and mm

Add and subtract lengths Measure and calculate perimeter

Multiplication

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts

Count in multiples of 8 to 12x8 in any order

**Multiplication and Division** 

Factor pairs
Written methods
Multiply 2 digits by 1 digit
Multiply 3 digits by 1 digit
Divide 2 digits by 1 digit

**Length and Perimeter** 

Equivalent lengths-m and cm, mm and cm Kilometres Measure perimeter Perimeter of rectangles and rectilinear shapes

**Multiplication** 

Recall multiples of 7 and order including missing numbers and division facts fluently Fluently count in 11s in order up to 12x12

Fractions
Recognise and find half, quarter and

third
Equivalence of ½ and 2/4
Count in fractions

Mass and Capacity
Add and subtract mass

Add and subtract capacity
Temperature

**Multiplication** 

Recall multiples of 4 up to 12x4 in any order, missing numbers and division facts Recall multiples of 8 up to 12x8 in any order, missing numbers and division facts

Fractions

Tenths –count in tenths
Equivalent fractions
Fractions greater than 1
Count in fractions
Add 2 or more fractions

**Decimals** 

Tenths as decimals
Divide 1 then 2 digits by 10
Hundredths as decimals
Divide 1 or 2 digits by 100

Multiplication

Recall multiples of 7 and 11 in any order.

Fluently count in 12s

MULTIPLICATION TABLES CHECK

Fractions

Count in tenths
Tenths as decimals
Equivalent fractions
Compare and order fractions
Add and subtract fractions

Clock, half past, quarter to and quarter past
Months and years

Hours in a day

Telling the time to 5 minutes and the minute

Using am and pm 24 hour clock

Measuring time in seconds

Multiplication

Recall multiples of 8 up to 12x8 in any order, missing numbers and division facts
Introduce counting in 3s and

multiples of 3
Decimals

Write, compare and order decimals
Round decimals

Halves and quarters

Time

Telling the time to 5 minutes
Telling the time to the minute
24 hour clock

Hours, minute and seconds Years, months, weeks and days Analogue to digital-12 hour Analogue to digital -24 hour

Multiplication

Recall multiples of 12 in any order.

END OF YEAR SECURE IN ALL 12 TIMES TABLES



Core Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Represent numbers to 1000  Represent numbers to 1000  100s,10s and 1s  Number line to 1000  Round to nearest 10,100  Count in 1000s  1000s,10s,10s,1s  Partitioning  Number line to 10000  Find 1,10,100 more or less  Compare numbers  Number: Addition and Subtraction  Add and subtract  1s,10s,100s,1000s  Add two 3 digit numbers not crossing then crossing 10 and 100  Add two 4 digit numbers, no exchange then one or more exchanges  Subtract a 3 digit from a 3 digit number no exchange  Subtract a 4 digit from a 4 digit number no exchange  Subtract a 3 digit from a 3 digit number no exchange  Subtract a 4 digit from a 3 digit number-exchange  Subtract a 4 digit from a 3 digit number-exchange  Subtract two 4 digit numbers-exchange  Efficient subtraction  Estimate answers and check strategies	Number: Multiplication and Division  Multiply and divide by 10 and 100  Multiply by 1 and 0  Divide by 1 and itself  Multiply and divide by 3  The 3 times table  Multiply and divide by 6  6 times table and division facts  Multiply and divide by 9  9 times table and division facts  Multiply and divide by 7  7 times table and division facts  Multiply and divide by 7  7 times table and division facts  Multiply and divide by 7  7 times table and division facts  Multiply and divide by 7  7 times table and division facts  Making shapes  Comparing area	Number: Multiplication and Division  Factor pairs  Use factor pairs  Multiply by 10  Multiply by 100  Divide by 10  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 by a 1-digit number by a 1-digit number by a 1-digit number compared a 2-digit number by a 1-digit number compared a 3-digit number by a 1-digit number of a 1-digit number by a 1-digit number of a 1-digit number by a 1-digit nu	Number: 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 Subtract two fractions Subtract from whole amounts Subtract from mixed numbers  Number: Decimals Tenths as fractions Tenths on a place value chart Tenths on a number line Divide a 1-digit number by 10 Hundredths as fractions Hundredths on a place value chart Underths on a place value chart Hundredths on a place value chart Divide a 1- or 2-digit number by 10 Divide a 1- or 2-digit number by 10	Number: Decimals  Bonds to 10 and 100  Make a whole  Write, compare and order decimals  Round decimals  Halves and quarters  Messical Maye  Pounds and pence  Ordering money  Estimating money  Convert pounds and pence  Add and subtract money  Find change  Four operations  Messical Maye  Telling the time to 5 minutes  Telling the time to 5 minute  Using a.m. and p.m.  24 hour clock  Hours, minute and seconds  Years, months, weeks and days  Analogue to digital- 12 hour  Analogue to digital- 24 hour	Statistics  Interpret charts  Comparison, sum and difference Introduce line graphs Geometry: Properties of Shape  Turns and angles Right angles in shapes Compare, identify and order angles Recognise and describe 2-D shapes Triangles and quadrilaterals Horizontal and vertical Lines of symmetry Complete a symmetrical figure Geometry: Position and Direction Describe a position Draw on a grid Move on a grid Describe movement on a grid

Vocabular
introduced
in Year 4
10 Minute

Number and Place value: tenths, hundredths, numeral decimal places round (to nearest) thousand more / less negative integers count through zero roman numerals I to C Multiplication and Division: count in multiples of 6, 7, 9, 12, inverse, derive division facts Fractions: equivalent fractions and decimals, decimal point, decimal fraction hundredths Geometry (Position and Direction): co-ordinates translation, translate, quadrant x-axis, y-axis Geometry (Properties of Shape): area, net rectilinear adjacent quadrilaterals: (rhombus, parallelogram, trapezium, trapezoid, kite). heptagon, polygon, tetrahedron, polyhedron, cylindrical triangles (isosceles, scalene) right angle, acute angle, obtuse angles Measurement: convert, noon Statistics: continuous data, line graphs

10 Minute
Maths in
Year 4
(MATHS
BLAST)
Retrieval/
Arithmetic
Fluency
(Multiplication)

Number and Place Value
(Securing Numbers, Ordering
and Comparing):

Count in 1s across boundaries 1000, 10,000, 100,000;
Order a set of random numbers to 100,000; Compare numbers using symbols < and < up to 100,000
Counting

Count in multiples of 6,7,9, 25 and 1000
Find 1000 more or less than a given number through zero to include negative numbers
Multiplication

Recall multiples of 3, 4 and 8 up to 12 x in any order including missing numbers and related division facts fluently Fluently count in 6s up to 12x6

Number and Place Value
(Counting): Count in 10,
100s, 1000s forwards
and backwards across
boundaries 1000,
10,000, 100,000; What is
10, 100, 1000 more/less
than ....?; Round any
number to the nearest
10, 100 or 1 000;
Addition and
Subtraction (Multiples):

Subtraction (Multiples):
Add any multiple of 10
to a 4-digit number
e.g.,2153 + 20, 2153 + 70
(regrouping); Add any
multiple of 100 to a 4digit number e.g.2153 +
100, 2153 + 300, 2153 +

900 (regrouping)
Written (+ -)
Add and subtract
numbers with up to 4
digits using the formal
written methods of
columnar addition and
subtraction where
appropriate
Multiplication

Introduce 6s in order up to 12x6 Relate to multiples of 3 Fluently count in 9s in order up to 12x9 **Fractions and decimals** 

Count up and down in hundredths
Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten
Written (+ -)
Multiply two and three

digit numbers by a one

digit number using formal written layout Multiplication

Recall multiples of 6 in any order missing boxes and division Recall multiples of 9 and order including missing numbers and division facts

fluently Fluently count in 7s in order up to 12x7 Multiplication and Division (Doubling Numbers / Near Doubles): Near doubles to multiple of 10 e.g., 60 + 59; Double simple 3-digit numbers by recall of known facts or partitioning and recombining (multiples of 10, 50, 100) e.g. double 200, double 250, double 220, half of 140.

Multiplication and Division

Multiplication and Division (Order of Operations):

Multiplication and division of whole numbers by 10 and 100 and multiples of e.g., 6 x 100, 10 x 100.. Distributive law e.g., 39 x 7= 30 x 7+ 9 x 7; Associative law and reordering calculations to make it easier, expressing equal calculations e.g.  $2 \times 6 \times 5 = 10 \times 10^{-2}$ 6; Multiply by 50 by multiply by **100** and halving e.g. 23 x 50= half of 23 x 100; Know all the table facts and the related division facts e.g. 500 x 2 =  $1000, 1000 \div 2 = 500, 250 \times 4 =$  $1000, 1000 \div 4 = 250, 200 \times 5 =$  $1000, 1000 \div 5 = 200;$ Multiplication

Recall multiples of 7 and order including missing numbers and division facts fluently Fluently count in 11s in order up to 12x12

Number and Place
Value (Counting):
Round decimals with
one decimal place to
the nearest whole
number
Multiplication and

Division (Rounding and Adjusting): Rounding and adjusting decimals in context of money e.g, 3 items costing 99p or £1.99
Mental / Written (x ÷)
Use place value, known and derived

divide mentally, including: multiplying by 0 and 1; dividing by 1; Multiply together three numbers Recognise and use factor pairs and commutativity in mental calculations Multiplication

facts to multiply and

Recall multiples of 7
and 11 in any order.
Fluently count in 12s

MULTIPLICATION
TABLES CHECK

Fractions and decimals

Add and subtract fractions with the same denominator Find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Count up and down in hundredths: compare numbers with the same number of decimal places up to two decimal places; round decimals with one decimal place to the nearest whole number; recognise and write decimal equivalents of any number of tenths or hundredths, recognise and write decimal equivalents to 1/4; 1/2; 3/4 Multiplication Recall multiples of 12 in any order.

END OF YEAR SECURE IN ALL
12 TIMES TABLES

#### A Typical Maths Lesson at Havannah First School

#### Each KS1 and 2 lesson typically, but not exclusively, follows the following format:

- 1. Flashback 4 (Daily retrieval questions based on last lesson, last week, two weeks ago and further back)
- 2. Starter Activity Practice skills needed for main activity introduce key vocabulary.
- 3. Prime and Tether Talk activity what do the children know/build on previous knowledge.
- 4. Open questioning task to engage all learners (discussion of strategies)
- 5. Misconception question a question that shows a common misconception.
- 6. Progress to different questions which encourages reasoning/strategies e.g. How do you know? What's the same and what's different, missing lengths or representations, True or False etc...
- 7. Independent Practice Fluency/Reasoning and Problem Solving questions in book.
- 8. Recap of lesson/Self marking and discussions.
- 9. Maths Blast Fast recall (retrieval) of previous term's content (knowledge and skills). Maths Blast might be taught discretely at the start of the school day.

Lessons often follow the 'Ping Pong' strategy of 'I do – You do'

If individual or groups of children are not ready to move on then opportunities are built in later that day (post/pre –teach) or next lesson if necessary, to address misconceptions of the small step.

Lesson structures can vary to suit the content and the objective.

Children will largely work within the classroom setting although outdoor learning is encouraged if it supports mathematical learning.

Vocabulary is built upon and used in each lesson. Expectations of the vocabulary that is expected to be learned and used is also included as part of the Medium Term Curriculum Maps.

Marking is used to identify errors and misconceptions which can be addressed in future planning – there is little purpose in over-marking and it is not encouraged.

End of block units and End of Term Assessments are used to assess whether children have retained small steps knowledge, skills and understanding in their longer term memory and opportunities are planned to discuss or even re-visit common errors or misconceptions.

#### SOURCES OF SUPPORT, INFORMATION AND GUIDANCE FOR TEACHERS

https://whiterosemaths.com/

https://www.ncetm.org.uk/teaching-for-mastery/

https://nrich.maths.org/teacher-primary

https://www.iseemaths.com/

https://numbersensemaths.com/

https://ttrockstars.com/

https://www.learningblocks.tv/numberblocks/home

https://www.mathsisfun.com/

https://mathsframe.co.uk/

