#### **National Curriculum Maths Aims**

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

\*\*DfE Mathematics Programmes of Study, September 2013\*\*

### **Maths Curriculum Intent**

This is the purpose and aims of our maths curriculum. It is what we want our children to experience and achieve through their mathematical learning journey at our school.

#### **Statement of Maths Intent**

At Kinnerley CE Primary School, we intend for all pupils to experience an inspiring, number-rich and motivational maths environment. We aim for all pupils to have access to a maths curriculum which meets the needs of all learners and equips them with the mathematical skills necessary for them to succeed on whichever path they follow. We want all pupils or develop a positive 'can do' attitude to maths and support all children to become mathematicians. We want to use maths purposefully across other curricular areas and for pupils to understand the purpose of maths – to see the link between the maths they experience in the classroom and the rich contexts of maths experienced in real life.

Our youngest children will begin their early mathematical journey supported by excellent early mathematical teaching using concrete and pictorial representations which supports the development of early number sense, giving them the foundational skills needed to confidently reason and solve mathematical problems.

Our intent is for every child to leave our school as able and independent mathematicians, with the confidence and skills required to calculate fluently, reason confidently and solve problems efficiently. They will be thoroughly prepared in all aspects of mathematics and fully equipped for the next step in their educational journey.

## **Maths Curriculum Implementation**

#### **Statement of Maths Implementation**

Our Maths curriculum at Kinnerley CE Primary School is currently delivered with the support of cyclical curriculum statements, this year using the Planbee Maths Curriculum resource. This scheme of work supports teachers to structure maths learning effectively in mixed age and single age groupings, and provides consistent models and images and teaching throughout the school. In EYFS the use of Numberblocks and associated resources from NCETM and Twinkl will be utilised to full effect to ensure a strong start for our youngest learners, along with pupil led, teacher led and topic led learning activities.

Resources such as White Rose, NCETM, Classroom Secrets, NRich, Hamilton Trust and Twinkl support the delivery of additional well-structured and exciting mathematical opportunities that enable our children to learn, revisit and progressively develop their skills in maths at an age-appropriate level. These are selected according to their effectiveness for the different groupings, learning styles, and specific maths area being taught.

Lessons are structured in a variety of ways to ensure the best learning opportunities for all learners. Using TAs, HLTAs and other learning support staff, cohorts may be taught in mixed aged or single age groupings, or a combination of both, at the discretion of the teacher. In our mixed age classes opportunities for challenge or additional coverage are exploited for maximum effect.

The curriculum is designed to promote the retention of knowledge. In mixed age classes pupils are naturally exposed to objectives from other year groups which aids retention, fluency and consolidates understanding. Other strategies include revisiting objectives using resources, such as 'Flashback Four' from White Rose, at the beginning of each lesson.

Teachers and other adults working in EYFS are fully trained in supporting early mathematical development and helping our youngest learners to acquire early number sense. This is achieved through practical and engaging activities, which children can access, alongside adults or independently with peers, to practise their maths skills.

In key stages one and two, maths lessons are planned to follow the small-step mastery approach to acquiring maths skills. This enables children to progress through knowledge and skills in Maths sequentially, building on prior knowledge and skills. Teachers plan and deliver lessons which teach pupils essential skills, give them time to develop their fluency and apply their knowledge to practise mathematical reasoning and solve problems. Teachers promote and encourage pupils to work collaboratively, as well as independently, and provide excellent modelling of all mathematical processes and concepts as part of everyday teaching.

Good practice in Maths is celebrated in Celebration assembly, by showing another class teacher, through certificates and stickers. Work is also shared with parents/carers on Seesaw.

Maths is assessed during class tasks by the class teacher against Age Related Expectations, and also through termly PUMA assessment tests. Intervention groups/tasks are identified by the class teacher and delivered by them or class TAs.

Staff are trained and supported well. Maths CPD is high on the school agenda, as is access to high quality resources and schemes.

Opportunities to engage in Maths are included in the school day, outside of maths lessons, with times tables activities, quizzes, mathematical board games, and use of online Apps to promote application and recall.

Maths is enriched by events such as Number Day, whole school activities, and outdoor lessons such as orienteering. Opportunities for using Maths is promoted through other curriculum areas such as cooking, and through pupils costing and organising events.

### **Maths Curriculum Impact**

Since Covid disruption we have seen a downturn in attainment results, despite quality first teaching and structured catch up and intervention programmes. In response we have made adjustments to our scheme of work, reduced the number of year groups taught together in each class and planned improved classroom practice.

The impact of this will be monitored through assessment, evaluation of lessons, work in children's books, and pupil voice.

At Kinnerley CE Primary School, it is clear to see the high aspiration for mathematics throughout the school. Children are able to confidently talk about their work in Mathematics lessons and can apply age-appropriate skills and knowledge in their work. There is a culture of demonstrating a willingness to take risks and learn from their mistakes, showing both perseverance and resilience in mathematical learning.



## **Number Blocks - EYFS**



SERIES 1	SERIES 2		
Counting to 1	Counting (1 to 6); subitising (dice patterns)		
2 is more than 1	7 is more than 6; counting (1 to 7)		
Counting to 2, the 'twoness' of 2	Counting (1 to 8); 8 is one more than 7; subitising (8)		
3 is more than 2	Counting (1 to 9); the structure of square numbers (4 and 9); partitioning and combining 9		
Counting to 3; comparing numbers 1, 2 and 3 – 'bigger' and 'smaller'; ordering numbers 1 to 3; 3 is made of 2 and 1	Counting (1 to 10); 10 ones are equivalent to one 10		
4 is more than 3; counting to 4; the structure of 4 as a square number; recognition of 4 items without counting (subitising)	Adding 1; counting (1 to 10)		
5 is more than 4; counting to 5; line up 1 to 5 in order	Count back from 10 to 1; number bonds that total 10		
Counting to 4; adding 1s	Exploring equivalent ways to represent 6; partitioning 6 into equal groups; factors of 6		
Counting to 5; line up 1 to 5 in order; identify missing numbers within a 1 to 5 line-up	Doubling (1, 2, 4, 8) and halving; partitioning 8 into equal groups		
The key principles of counting: one-to-one correspondence; cardinality; stable order	Partitioning 9 into 3 equal groups; partitioning is the inverse of combining		
Subitising numbers 1 to 5; different ways of arranging blocks to 5; conservation of number	Odd and even numbers; equal groups		
Composition of numbers 1 to 5: introduction to 'part-part-whole' Structure; partitioning a whole number into parts; conservation of number	Counting (1 to 8); number bonds within 7		
4 can be partitioned into 2 and 2; and, 1 and 1 and 1 and 1.	Subtracting 2 from numbers up to 10; counting in 2s		
The number of a group can be changed by adding to it or taking from it; addition and subtraction of 1; number bonds to 5	Adding more than 1 to make 5 to 10		
Addition and subtraction of numbers to 5; number bonds to 5	Subtracting 1; counting (1 to 10); counting down 10 to 1		

SERIES 3	SERIES 3		
	Pattern		
A review of numbers 1 to 5			
Comparison of numbers 1 to 5 using the language of 'greater than' and 'less than'	Problem solving and finding the missing number  Adding multiples of the same number		
Composition of 5; partitioning and combining 5 in different ways	Adding multiples of the same number		
Composition of numbers to 5; exploring the part-part-whole model to partition and combine numbers to 5	Problem solving – reasoning about number		
Introducing the concept of zero; zero is one less than 1 and an absence of something	Learn about numbers that make rectangle shapes (arrays)		
A review of numbers 6 to 10	Partition 12 into equal groups		
Counting to 10	Solve problems involving arrays		
Building with blocks and exploring space and pattern	Number 11; 11 is 10 and 1		
Comparison of numbers to 10 using the language of 'bigger than', 'smaller than' leading to 'greater than' and 'less than'	Number 12 and arrays		
Composition of numbers to 10; partitioning and combining numbers in different ways	Number 14; 14 is 10 and 4		
Comparison of numbers to 10; finding the difference to make 7			
Subtraction	Number 15; 15 is 1+2+3+4+5		
Numbers 6 to 10 are made from 5 and a 'bit'	Exploring numbers 11, 12, 13, 14, and 15		
Pairs of numbers that total 8	Number 13; 13 is 10 and 3		
Pairs of numbers that total 10	Other numbers made of consecutive numbers (3, 6, 10 and 15)		
2D shape			

SERIES 4
Multiplication as repeated addition
The sharing structure of division
The grouping structure of division
Division involving the grouping structure
Learn about the numbers 21, 22 and 23
Learn more about square numbers
Learn about the numbers 30, 40 and 50
Learn how to count, add and think in multiples of 10
Count in steps of 5
Learn about the numbers 60, 70, 80
Learn to count to 99
Introduction to 100
Learn about huge numbers
Numbers are everywhere

SERI	ES	5
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Learn about number lines, comparing numbers, and more

Learn how to write numbers with Numberblocks Zero to Nine

Learn number bonds to 6, 7, 8, 9 and 10

Learn how to recognise numbers of things without counting them

Sing along and learn the one times table

Learn about number bonds to 20

Learn about adding past 10

Learn about even numbers to 20

Sing along and learn the two times table

Learn about odd and even numbers to 20

Learn about the numbers 23 and 24 and explore arrays

Learn about the different arrays numbers can make

Learn about numbers that can split into equal parts

Learn about the number 26 and how it splits into two thirteens

Learn about the numbers 27 and 28 and explore number patterns

# PlanBee Primary Maths Curriculum | Year 1 and Year 2

	Autumn Term Y1	Autumn Term Y2	Spring Term Y1	Spring Term Y2	Summer Term Y1	Summer Term Y2
Wask	Lat's identify numbers	What's may name and	Let's read write and use	Haw can we compare	Let's use numbers to	Lot's wouldingly and divide
Week	•	What's my number?	Let's read, write and use	How can we compare	Let's use numbers to	Let's multiply and divide  recall and use
1	• identify and represent	• identify, represent and	numbers	numbers?	• count to and across	
	numbers using objects	estimate numbers using	• given a number, identify	• recognise the place		multiplication and
	and pictorial	different	one more and one less	value of each digit in a	100, forwards and	division facts for the 2, 5
	representations	representations,	• identify and represent	two-digit number (tens,	backwards, beginning	and 10 multiplication
	including the number	including the number line	numbers using objects	ones)	with 0 or 1, or from any	tables, including
	line, and use the	• read and write numbers	and pictorial	• compare and order	given number	recognising odd and
	language of: equal to,	to at least 100 in	representations	numbers from 0 up to	• given a number, identify	even numbers
	more than, less than	numerals and in words	including the number	100; use <, > and = signs	one more and one less	calculate mathematical
	(fewer), most, least		line, and use the	• read and write numbers	identify and represent	statements for
	• read and write numbers		language of: equal to,	to at least 100 in	numbers using objects	multiplication and
	from 1 to 20 in numerals		more than, less than	numerals and in words	and pictorial	division within the
	and words		(fewer), most, least	• use place value and	representations	multiplication tables and
			• read and write numbers	number facts to solve	including the number	write them using the
			from 1 to 20 in numerals	problems	line, and use the	multiplication (×),
			and words		language of: equal to,	division (÷) and equals
					more than, less than	(=) signs
					(fewer), most, least	• show that
						multiplication of two
						numbers can be done in
						any order (commutative)
						and division of one
						number by another
						cannot
						• solve problems
						involving multiplication
						and division, using
						materials, arrays,
						repeated addition,
						mental methods, and
						multiplication and
						division facts, including
						problems in contexts

Week	Let's represent numbers	What is place value?	Let's count in twos, fives	Let's learn our times	Let's use number facts	Let's add big numbers
2	<ul> <li>identify and represent</li> </ul>	<ul> <li>recognise the place</li> </ul>	and tens	<u>tables</u>	<ul> <li>read, write and interpret</li> </ul>	• read and write numbers
	numbers using objects	value of each digit in a	<ul> <li>count, read and write</li> </ul>	<ul> <li>recall and use</li> </ul>	mathematical	to at least 100 in
	and pictorial	two-digit number (tens,	numbers to 100 in	multiplication and	statements involving	numerals and in words
	representations	ones)	numerals; count in	division facts for the 2, 5	addition (+), subtraction	• use place value and
	including the number	<ul> <li>identify, represent and</li> </ul>	multiples of twos, fives	and 10 multiplication	(-) and equals (=) signs	number facts to solve
	line, and use the	estimate numbers using	and tens	tables, including	<ul> <li>represent and use</li> </ul>	problems
	language of: equal to,	different		recognising odd and	number bonds and	add and subtract
	more than, less than	representations,		even numbers	related subtraction facts	numbers using concrete
	(fewer), most, least	including the number line		• calculate mathematical	within 20	objects, pictorial
	• read and write numbers	• compare and order		statements for	• solve one-step	representations, and
	from 1 to 20 in numerals	numbers from 0 up to		multiplication and	problems that involve	mentally, including
	and words	100; use <, > and = signs		division within the	addition and subtraction,	- a two-digit number and
		• use place value and		multiplication tables and	using concrete objects	tens
		number facts to solve		write them using the	and pictorial	- two two-digit numbers
		problems		multiplication (×),	representations, and	
				division (÷) and equals	missing number	
				(=) signs	problems such as 7 =	
					9	
Week	Let's add objects	Let's use number bonds	Let's learn number	Let's explore 3D shapes	Let's halve and quarter	Let's subtract big
3	<ul> <li>read and write numbers</li> </ul>	<ul> <li>show that addition of</li> </ul>	<u>bonds</u>	<ul> <li>identify and describe</li> </ul>	<ul> <li>recognise, find and</li> </ul>	<u>numbers</u>
	from 1 to 20 in numerals	two numbers can be	<ul> <li>read, write and interpret</li> </ul>	the properties of 3-D	name a half as one of	• read and write numbers
	and words	done in any order	mathematical	shapes, including the	two equal parts of an	to at least 100 in
	<ul> <li>read, write and interpret</li> </ul>	(commutative) and	statements involving	number of edges,	object, shape or quantity	numerals and in words
	mathematical	subtraction of one	addition (+), subtraction	vertices and faces	<ul> <li>recognise, find and</li> </ul>	<ul> <li>add and subtract</li> </ul>
	statements involving	number from another	(-) and equals (=) signs	<ul> <li>identify 2-D shapes on</li> </ul>	name a quarter as one of	numbers using concrete
	addition (+), subtraction	cannot	<ul> <li>represent and use</li> </ul>	the surface of 3-D	four equal parts of an	objects, pictorial
	(-) and equals (=) signs	<ul> <li>solve problems with</li> </ul>	number bonds and	shapes	object, shape or quanitity	representations, and
		addition and subtraction	related subtraction facts	<ul> <li>compare and sort</li> </ul>		mentally, including
		using concrete objects	within 20	common 2-D and 3-D		- a two-digit number and
		and pictorial		shapes and everyday		ones
		representations,		objects		- a two-digit number and
		including those involving				tens
		l numbere guentities and	i			- two two-digit numbers
		numbers, quantities and				
		measures				a trace grant and
		· •				January Grant Control of the Control

		20 fluently, and derive				
		and use related facts up				
		to 100				
Week	Let's subtract objects	What is multiplication?	Let's make shapes	Let's measure weight	Let's find the total by	Can we find fractions of
4	• read and write numbers from 1 to 20 in numerals and words • read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• recognise and name common 2-D and 3-D shapes	choose and use appropriate standard units to estimate and measure mass (kg/g) compare and order lengths, mass, volume/capacity and record the results using >, < and =	grouping  count in multiples of twos, fives and tens solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	numbers?  • recognise, find, name and write fractions ½¼,  ²/₄ and ¾ of a length, shape, set of objects or quantity  • write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of ²/₄ and ½
Week 5	Let's identify 2D Shapes • recognise and name common 2-D and 3-D shapes	What is division?  • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs  • solve problems involving multiplication	What is half? • recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object	Can we link addition and subtraction? • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • show that addition of two numbers can be done in any order (commutative) and subtraction of one	Let's share objects equally count in multiples of twos, fives and tens solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations	Let's measure capacity  • choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit, using measuring vessels • compare and order volume/capacity and record the results using >, < and =

		and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts		number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations	and arrays with the support of the teacher	
				and solve missing number problems		
Week	Let's compare length,	Let's explore 2D shapes	Let's tell the time	Can we link	Which direction?	Let's go shopping
6	height and mass     compare, describe and solve practical problems for:     lengths and heights     (e.g. long/short, longer/shorter, tall/short, double/half)     mass/weight (e.g. heavy/light, heavier than, lighter than)	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line     compare and sort common 2-D and 3-D shapes and everyday objects	sequence events in chronological order using language (e.g. before, after, next, first, today)     recognise and use language relating to dates, including days of the week, weeks, months and years     tell the time to the hour and half past the hour and draw hands on a clock face to show these times	multiplication and division?  • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers  • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot  • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	describe position, direction and movement, including whole, half, quarter and three quarter turns	• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

Week 7	Let's find one more and one less • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words	Let's use a ruler  choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm)  compare and order lengths, mass, volume/capacity and record the results using  >, < and =	Let's use a number line  • read and write numbers from 1 to 20 in numerals and words  • identify and represent numbers using objects and pictorial representations including the number line • given a number, identify one more and one less • count read and write numbers to 100 in numerals	Let's find fractions  • recognise, find, name and write fractions 1/3 1/4,  2/4 and 3/4 of a length, shape, set of objects or quantity  • write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	Let's get confident with numbers  count read and write numbers to 100 in numerals; count in multiples of twos, fives and tens  count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number  identify and represent numbers using objects and pictorial representations including the number line	• interpret and construct simple pictograms, tally charts, block diagrams and simple tables • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • ask and answer questions about totalling and comparing categorical data
Week 8	Let's add and subtract objects • read and write numbers from 1 to 20 in numerals and words • read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Let's make a pictogram  interpret and construct simple pictograms, tally charts, block diagrams and simple tables  ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity  ask and answer questions about totalling and comparing categorical data	Let's count in multiples  • identify and represent numbers using objects and pictorial representations including the number line  • count in multiples of twos, fives and tens  • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	How can we tell the time?  • compare and sequence intervals of time  • tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times  • know the number of minutes in an hour and the number of hours in a day	Let's identify and use shapes • recognise and name common 2-D and 3-D shapes	Let's solve place value problems  count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward recognise the place value of each digit in a two-digit number (tens, ones)  identify, represent and estimate numbers using different representations, including the number line use place value and number facts to solve problems

Week 9	Can you recognise these coins?  • recognise and know the value of different denominations of coins	Let's use number patterns • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • read and write numbers to at least 100 in numerals and in words	Let's solve missing number problems  • read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs  • add and subtract one-digit and two-digit numbers to 20, including zero  • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □  – 9	Let's explore charts and tables  • interpret and construct simple pictograms, tally charts, block diagrams and simple tables  • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity  • ask and answer questions about totalling and comparing categorical data	Let's tell the time to half past the hour  compare, describe and solve practical problems for:  time (e.g. quicker, slower, earlier, later) sequence events in chronological order using language tell the time to the hour and half past the hour and draw hands on a clock face to show these times measure and begin to record the following time (hours, minutes, seconds)	• compare and sequence intervals of time • tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • know the number of minutes in an hour and the number of hours in a day
Week 10	Let's find the value of coins  • recognise and know the value of different denominations of coins	How can we add numbers?  • add and subtract numbers using concrete objects, pictorial representations, and mentally, including adding three one-digit numbers  • solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Let's make totals using coins (part 1)  • recognise and know the value of different denominations of coins  • count in multiples of twos, fives and tens	Let's explore position and direction order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns	Let's measure time  compare, describe and solve practical problems for:  time (e.g. quicker, slower, earlier, later)  measure and begin to record the following  time (hours, minutes, seconds)  sequence events in chronological order using language  recognise and use language relating to dates, including days of	what's the answer?  • solve problems with addition and subtraction:  - using concrete objects and pictorial representations, including those involving numbers, quantities and measures  - applying their increasing knowledge of mental and written methods  • recognise and use the inverse relationship between addition and subtraction and use this

		solve problems with addition and subtraction applying their increasing knowledge of mental and written methods     add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and ones     add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and mentally, including a two-digit number and tens		(clockwise and anti- clockwise)	the week, weeks, months and years	to check calculations and solve missing number problems. • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
Week 11	Let's identify 3D shapes • recognise and name common 2-D and 3-D shapes	How can we subtract numbers?  • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens • solve problems with	Let's make totals using coins (part 2)  • recognise and know the value of different denominations of coins and notes  • count in multiples of twos, fives and tens	• choose and use appropriate standard units to estimate and measure temperature (°C) to the nearest appropriate unit using scales and thermometers • compare and order lengths, mass,	Let's use money  • recognise and know the value of different denominations of coins and notes	Let's sort shapes and objects  • identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line  • identify and describe the properties of 3-D shapes, including the
		addition and subtraction using concrete objects and pictorial representations, including those involving		volume/capacity and record the results using >,< and =		number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes • compare and sort common 2-D and 3-D

Week 12	Let's use time language  • sequence events in chronological order using language (e.g. before, after, next, first, today)  • recognise and use language relating to dates, including days of the week, weeks, months and years	numbers, quantities and measures  Let's use pounds and pence  recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value  find different combinations of coins that equal the same amounts of money  solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Let's compare mass and capacity  • compare, describe and solve practical problems for:  - mass/weight (e.g. heavy/light, heavier than, lighter than)  - capacity and volume (e.g. full/empty, more than, less than, half, half full, quarter)  • measure and begin to record the following  - lengths and heights  - mass/weight  - capacity and volume	Let's solve problems  • solve problems with addition and subtraction:  - using concrete objects and pictorial representations, including those involving numbers, quantities and measures  - applying their increasing knowledge of mental and written methods  •recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing	Let's measure  compare, describe and solve practical problems for:  lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half)  mass/weight (e.g. heavy/light, heavier than, lighter than)  capacity and volume (e.g. full/empty, more than, less than, half, half full, quarter)  measure and begin to record the following lengths and heights  mass/weight	shapes and everyday objects  What is your position?  order and arrange combinations of mathematical objects in patterns and sequences  use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)
				number problems	- capacity and volume	

Р	lan <b>Bee<sup>®</sup> PlanBe</b> e	Primary Maths (	Curriculum   Year	3 and Year 4	
Autumn Term Y3	Autumn Term Y4	Spring Term Y3	Spring Term Y4	Summer Term Y3	Summer Term Y4

1   Value   - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a given number sup to 1000 + read and write numbers up to 1000 in numerals and in words + solve number problems and practical problems involving these ideas + solve problems, uincluding missing number problems, under facts, place value, and more complex addition and subtraction   place value   facts of each digit in a three-digit number (hundreds, tens, ones) + compare and order numbers up to 1000 + recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a three-digit number (hundreds, tens, ones) + recognise the place value of each digit in a three-digit number + count backwards through zero to include the value of each digit in a three-digit number + recognise the place value of each digit in a three-digit number + recognise the place value of each digit in a three-digit number + recognise the place value of each digit in a three-digit number + recognise the place value of each digit in a through zero to include the value of each digit in a three-digit number + recognise the place value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to include the value of each digit in a through zero to inc	0 olace git in a er dreds, pare d 1000
value of each digit in a three-digit number (hundreds, tens, ones)	0 olace git in a er dreds, pare d 1000
three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 read and write numbers up to 1000 in numerals and in words solve number problems and practical problems involving these ideas solve problems, uincluding missing number facts, place value, and more complex value, and more complex value of each digit in a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan a given number compare and order numbers up to 1000 stan and in words solve number problems and in words solve number problems involving these ideas solve problems, using number facts, place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) solve number problems and practical problems involving these ideas solve problems, using number facts, place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) solve number beyond 1000 sidentify, represent and estimate numbers beyond different representations solve numbers beyond 1000 solve numbers beyond 1000 sidentify, represent and estimate numbers solve numbers beyond 1000 sidentify, represent and estimate number (bundreds, tens, ones) solvendier numbers up to 1000 solventify, represent and estimate numbers solventify, represent and estimate number (bundreds, tens, ones) solventify, represent and estimate number (bundreds, tens, and ores) solventify, represent	olace git in a er dreds, pare d 1000
(hundreds, tens, ones)	git in a er idreds, pare d 1000
• compare and order numbers up to 1000 • read and write numbers up to 1000 • read and write numbers up to 1000 in numerals up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas • solve problems, including missing number problems, using number facts, place value, and more complex • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • read and write numbers up to 1000 • read and write numbers up	er idreds, pare d 1000
value of each digit in a four-digit number up to 1000 in numerals up	dreds, pare d 1000
<ul> <li>read and write numbers up to 1000 in numerals and in words</li> <li>solve number problems and practical problems involving these ideas</li> <li>solve problems, including missing number problems, number problems, number facts, place value, and more complex</li> <li>four-digit number (thousands, hundreds, and in words</li> <li>solve number problems and practical problems involving these ideas</li> <li>solve problems, and ones)</li> <li>order and compare numbers beyond 1000</li> <li>read Roman numerals to 100 (I to C) and know number facts, place value, and more complex</li> <li>order and compare number beyond 1000</li> <li>involving these ideas involving these ideas</li> <li>solve problems, including missing number facts, place value, and more complex</li> <li>order and compare numbers beyond 1000</li> <li>identify, represent and estimate numbers using different representations</li> <li>order and compare numbers beyond 1000</li> <li>solve problems, including missing number facts, place value, and more complex addition and subtraction</li> </ul>	pare d 1000
up to 1000 in numerals and in words and in words • solve number problems and practical problems involving these ideas • solve problems, including missing number problems, number facts, place value, and more complex  up to 1000 in numerals (thousands, hundreds, tens, and ones) • order and compare number problems involving these ideas • solve number problems and practical problems involving these ideas • solve problems, including missing number facts, place value, and more complex  (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations number problems, using number facts, place value, and more complex value, and more complex on the order and compare numbers beyond 1000 • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations on the number problems and practical problems involving these ideas • solve problems, including missing number problems, using number facts, place value, and more complex and practical problems involving these ideas • solve problems, including missing number problems, using number facts, place value, and more complex and practical problems involving these ideas • solve problems, including missing number problems, using office the problems and practical problems involving these ideas • solve problems, including missing office the problems and practical problems involving these ideas • solve problems, using office the problems and practical problems involving these ideas • solve problems, using office the problems involving these ideas • solve problems, using office the problems and practical problems involving these ideas • solve problems, using office the problems and practical problems involving these ideas • solve problems, using office the problems involving these ideas • solve problems, using office the problems involving these ideas • solve problems, using office the problems involving these ide	d 1000
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• solve problems, including missing that over time, the number problems, using number facts, place value, and more complex to 100 (I to C) and know including missing number problems, using number facts, place value, and more complex to 100 (I to C) and know that over time, the number problems, using number facts, place value, and more complex addition and subtraction or complex addition and subtraction or complex addition and subtraction or complex including missing numbers using different representations or solve number and practical problems that involve all of the above or complex addition and subtraction or complex including missing number complex addition and subtraction or complex including missing number susing different representations or solve number and practical problems that involve all of the above or complex including missing number problems, using number facts, place value, and more complex addition and subtraction or complex including missing number problems, using number facts, place value, and more complex addition and subtraction involve all of the above or complex including missing number susing different representations or complex including missing number problems, using number facts, place value, and more complex addition and subtraction involve all of the above or complex including missing number susing different representations or complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place value, and more complex including missing number facts, place val	rs using
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number problems, using numeral system number facts, place value, and more complex value, and more comp	ber to
number facts, place changed to include the value, and more complex value, and more complex concept of zero and addition and subtraction involve all of the above practical problems.	00 or
value, and more complex   concept of zero and   addition and subtraction   involve all of the above   practical problem	
addition and subtraction place value and with increasingly involve all of th	
• count from 0 in large positive numbers and with increa	
multiples of 4, 8, 50 and large positive n	ımbers
100; find 10 or 100 more	
or less than a given	
number	
Week Investigating Number Exploring Addition Doubling and Halving Methods of Addition Knowing Number Facts Using Addition	and
2 Facts • add and subtract • add and subtract • add and subtract • count from 0 in Subtraction 1	
• add and subtract numbers with up to 4 numbers mentally, numbers with up to 4 multiples of 4, 8, 50 and • add and subtract	ict
numbers mentally, digits using the formal including a three-digit digits using the formal 100; find 10 or 100 more numbers with using the formal numbers with numbers with numbers with nu	o to 4
including: written methods of number and ones; a written methods of or less than a given digits using the	formal
- a three-digit number   columnar addition and   three-digit number and   columnar addition and   number   written method	of
and ones subtraction where tens; a three-digit subtraction where • add and subtract columnar addit	on and
- a three-digit number appropriate number and hundreds appropriate numbers mentally, subtraction wh	re
and tens • solve addition and • solve problems, • estimate and use including: appropriate	
- a three-digit number   subtraction two-step   including missing   inverse operations to   - a three-digit number   • estimate and	se
and hundreds problems in contexts, number problems, using check answers to a and ones inverse operation	no to
• estimate the answer to deciding which number facts, place calculation - a three-digit number check answers	บาร เบ

	a calculation and use	operations and methods	value, and more complex	solve addition and	and tens	calculation
	inverse operations to	to use and why	addition and subtraction	subtraction two-step	- a three-digit number	solve addition and
	check answers	,		problems in contexts,	and hundreds	subtraction two-step
	• solve problems,			deciding which	• solve problems,	problems in contexts,
	including missing			operations and methods	including missing	deciding which
	number problems, using			to use and why	number problems, using	operations and methods
	number facts, place			ŕ	number facts, place	to use and why
	value, and more complex				value, and more complex	
	addition and subtraction				addition and subtraction	
Week	Mental Addition	Seeing Doubles	Partition Addition	Methods of Subtraction	Let's Add and Subtract	Using Addition and
3	<ul> <li>add and subtract</li> </ul>	• use place value, known	<ul> <li>add and subtract</li> </ul>	<ul> <li>add and subtract</li> </ul>	<ul> <li>add and subtract</li> </ul>	Subtraction 2
	numbers mentally,	and derived facts to	numbers mentally,	numbers with up to 4	numbers with up to three	add and subtract
	including:	multiply and divide	including a three-digit	digits using the formal	digits, using formal	numbers with up to 4
	- a three-digit number	mentally, including:	number and ones; a	written methods of	written methods of	digits using the formal
	and ones	multiplying by 0 and 1;	three-digit number and	columnar addition and	columnar addition and	written methods of
	- a three-digit number	dividing by 1; multiplying	tens; a three-digit	subtraction where	subtraction	columnar addition and
	and tens	together three numbers	number and hundreds	appropriate	<ul> <li>estimate the answer to</li> </ul>	subtraction where
	- a three-digit number	<ul> <li>multiply two-digit and</li> </ul>	<ul> <li>estimate the answer to</li> </ul>	<ul> <li>solve addition and</li> </ul>	a calculation and use	appropriate
	and hundreds	three-digit numbers by a	a calculation and use	subtraction two-step	inverse operations to	estimate and use
	<ul> <li>estimate the answer to</li> </ul>	one-digit number using	inverse operations to	problems in contexts,	check answers	inverse operations to
	a calculation and use	formal written layout	check answers	deciding which	<ul> <li>solve problems,</li> </ul>	check answers to a
	inverse operations to		<ul> <li>solve problems,</li> </ul>	operations and methods	including missing	calculation
	check answers		including missing	to use and why	number problems, using	solve addition and
	<ul> <li>solve problems,</li> </ul>		number problems, using		number facts, place	subtraction two-step
	including missing		number facts, place		value, and more complex	problems in contexts,
	number problems, using		value, and more complex		addition and subtraction	deciding which
	number facts, place		addition and subtraction			operations and methods
	value, and more complex					to use and why
	addition and subtraction					
	add and subtract					
	amounts of money to					
	give change, using both					
	£ and p in practical					
	contexts					
Week		<b>Exploring Subtraction</b>	Solving Subtraction	Shape Angles	Using Times Tables	Multiplying Doubles and
4	• solve problems,	<ul> <li>add and subtract</li> </ul>	add and subtract	<ul> <li>compare and classify</li> </ul>	<ul> <li>recall and use</li> </ul>	<u>Digits</u>
					l	

	including missing number problems, using number facts, place value, and more complex addition and subtraction • add and subtract amounts of money to give change, using both £ and p in practical contexts	numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	numbers with up to three digits, using formal written methods of columnar addition and subtraction • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds	geometric shapes, including quadrilaterals and triangles, based on their properties and sizes  • identify acute and obtuse angles and compare and order angles up to two right angles by size  • identify lines of symmetry in 2-D shapes presented in different orientations  • complete a simple symmetric figure with respect to a specific line of symmetry	multiplication and division facts for the 3, 4 and 8 multiplication tables  • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods  • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers     multiply two-digit and three-digit numbers by a one-digit number using formal written layout     recognise and use factor pairs and commutativity in mental calculations
Week 5	2D Shape • measure the perimeter	Properties of 2D Shapes • measure and calculate	Space and 3D Shape • draw 2-D shapes and	Measuring Weight  · convert between	Shapes and Angles  • draw 2-D shapes and	Position and Direction  • describe positions on a
	of simple 2-D shapes	the perimeter of a	make 3-D shapes using	different units of	make 3-D shapes using	2-D grid as coordinates
	• draw 2-D shapes and	rectilinear figure	modelling materials;	measure	modelling materials;	in the first quadrant
	make 3-D shapes using	(including squares) in	recognise 3-D shapes in	• estimate, compare and	recognise 3-D shapes in	describe movements
	modelling materials; recognise 3-D shapes in	centimetres and metres • find the area of	different orientations and describe them	calculate different measures, including	different orientations and describe them	between positions as translations of a given
	different orientations	rectilinear shapes by	and describe them	money in pounds and	• recognise angles as a	unit to the left/right and
	and describe them	counting squares		pence	property of shape or a	up/down
	and describe them					

		geometric shapes, including quadrilaterals and triangles, based on their properties and sizes			identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle     identify horizontal and vertical lines and pairs of perpendicular and parallel lines	and draw sides to complete a given polygon • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
Week 6	• measure, compare, add and subtract: lengths (m/cm/mm)	Recording Length  convert between different units of measure [for example, kilometre to metre; hour to minute]  estimate, compare and calculate different measures, including money in pounds and pence	• measure, compare, add and subtract: mass (kg/g)	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling	Times Table Facts  • recall multiplication and division facts for multiplication tables up to 12 × 12

					problems and correspondence problems in which n objects are connected to m objects	
Week 7	• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	• interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables	Using Multiplication and Division  • recall multiplication and division facts for multiplication tables up to 12 × 12  • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • estimate and read time with increasing accuracy to the nearest minute; record and • compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events	• recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n

						objects are connected to m objects
8 · n c c a a t · · · iii n n iii a p p c c p c c c p c c c c	Multiplication Facts recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables recolve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	Multiplication and Division Facts  count in multiples of 6, 7, 9, 25 and 1000  recall multiplication and division facts for multiplication tables up to 12 × 12  use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers  solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	Linking Multiplication and Division • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n	Multiplication and Division Methods  • recall multiplication and division facts for multiplication tables up to 12 × 12  • multiply two-digit and three-digit numbers by a one-digit number using formal written layout  • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	• measure, compare, add and subtract: volume/capacity (I/mI)	Measuring Capacity  convert between different units of measure [for example, kilometre to metre; hour to minute]  estimate, compare and calculate different measures, including money in pounds and pence

			objects are connected to			
			m objects			
Week	Multiplying and Dividing	Davising Multiplication	Haing Division and	Talling the Time	Collecting and Costing	Handling Data
week 9	Multiplying and Dividing • recall and use	Revising Multiplication	Using Division and	Telling the Time convert between	Collecting and Sorting	Handling Data
9		and Division	Multiplication		<u>Data</u>	• interpret and present
	multiplication and	• recall multiplication	• recall and use	different units of	interpret and present	discrete and continuous
	division facts for the 3, 4	and division facts for	multiplication and	measure	data using bar charts,	data using appropriate
	and 8 multiplication	multiplication tables up	division facts for the 3, 4	• read, write and convert	pictograms and tables	graphical methods,
	tables	to 12 × 12	and 8 multiplication	time between analogue	<ul> <li>solve one-step and two-</li> </ul>	including bar charts and
	<ul> <li>write and calculate</li> </ul>	• use place value, known	tables	and digital 12- and 24-	step questions using	time graphs
	mathematical	and derived facts to	<ul> <li>write and calculate</li> </ul>	hour clocks	information presented in	<ul> <li>solve comparison, sum</li> </ul>
	statements for	multiply and divide	mathematical	solve problems	scaled bar charts and	and difference problems
	multiplication and	mentally, including:	statements for	involving converting	pictograms and tables	using information
	division using the	multiplying by 0 and 1;	multiplication and	from hours to minutes;		presented in bar charts,
	multiplication tables that	dividing by 1; multiplying	division using the	minutes to seconds;		pictograms, tables and
	they know, including for	together three numbers	multiplication tables that	years to months; weeks		other graphs
	two-digit numbers times	<ul> <li>recognise and use</li> </ul>	they know, including for	to days		
	one-digit numbers, using	factor pairs and	two-digit numbers times			
	mental and progressing	commutativity in mental	one-digit numbers, using			
	to formal written	calculations	mental and progressing			
	methods		to formal written			
	• solve problems,		methods			
	including missing		<ul> <li>solve problems,</li> </ul>			
	number problems,		including missing			
	involving multiplication		number problems,			
	and division, including		involving multiplication			
	positive integer scaling		and division, including			
	problems and		positive integer scaling			
	correspondence		problems and			
	problems in which n		correspondence			
	objects are connected to		problems in which n			
	m objects		objects are connected to			
			m objects			

Week	Finding Fractions	Fractions and Time	What's the time?	Fractions and Decimals	Fractions in Action	Proportion Problems
10	<ul> <li>count up and down in</li> </ul>	<ul> <li>recognise and show,</li> </ul>	<ul> <li>tell and write the time</li> </ul>	<ul> <li>count up and down in</li> </ul>	<ul> <li>recognise and use</li> </ul>	<ul> <li>recognise and show,</li> </ul>
	tenths; recognise that	using diagrams, families	from an analogue clock,	hundredths; recognise	fractions as numbers:	using diagrams,
	tenths arise from	of common equivalent	including using Roman	that hundredths arise	unit fractions and non-	equivalent fractions with
	dividing an object into 10	fractions	numerals from I to XII,	when dividing an object	unit fractions with small	small denominators
	equal parts and in	<ul> <li>recognise and write</li> </ul>	and 12-hour and 24-hour	by one hundred and	denominators	<ul> <li>solve problems that</li> </ul>
	dividing one-digit	decimal equivalents of	clocks	dividing tenths by ten	<ul> <li>recognise and show,</li> </ul>	involving increasingly
	numbers or quantities by	any number of tenths or	<ul> <li>estimate and read time</li> </ul>	<ul> <li>add and subtract</li> </ul>	using diagrams,	harder fractions to
	10	hundredths	with increasing accuracy	fractions with the same	equivalent fractions with	calculate quantities, and
	<ul> <li>recognise, find and</li> </ul>	<ul> <li>find the effect of</li> </ul>	to the nearest minute;	denominator	small denominators	fractions to divide
	write fractions of a	dividing a one- or two-	record and compare	<ul> <li>recognise and write</li> </ul>	<ul> <li>add and subtract</li> </ul>	quantities, include non-
	discrete set of objects:	digit number by 10 and	time in terms of	decimal equivalents of	fractions with the same	unit fractions where the
	unit fractions and non-	100, identifying the value	seconds, minutes and	any number of tenths or	denominator within one	answer is a whole
	unit fractions with small	of the digits in the	hours; use vocabulary	hundredths	whole	number
	denominators	answer as ones, tenths	such as o'clock,	<ul> <li>recognise and write</li> </ul>	<ul> <li>compare and order unit</li> </ul>	<ul> <li>add and subtract</li> </ul>
	<ul> <li>recognise and show,</li> </ul>	and hundredths	a.m./p.m., morning,	decimal equivalents to	fractions, and fractions	fractions with the same
	using diagrams,	<ul> <li>read, write and convert</li> </ul>	afternoon, noon and	1/4, 1/2 and 3/4	with the same	denominator
	equivalent fractions with	time between analogue	midnight	<ul> <li>compare numbers with</li> </ul>	denominators	<ul> <li>round decimals with</li> </ul>
	small denominators	and digital 12- and 24-	<ul> <li>compare durations of</li> </ul>	the same number of	<ul> <li>solve problems that</li> </ul>	one decimal place to the
	<ul> <li>compare and order unit</li> </ul>	hour clocks	events	decimal places up to two	involve all of the above	nearest whole number
	fractions, and fractions			decimal places		• solve simple measure
	with the same					and money problems
	denominators					involving fractions and
	<ul> <li>solve problems that</li> </ul>					decimals to two decimal
	involve all of the above					places

#### PlanBee Primary Maths Curriculum | Year 5 and Year 6 **Autumn Term Y5 Autumn Term Y6 Spring Term Y5 Spring Term Y6 Summer Term Y5 Summer Term Y6 A Million Numbers Decimal Place Value Exploring Decimals Working with Numbers Positive and Negative Comparing and Ordering** Week • read, write, order and • read, write, order and read and write decimal round any whole **Numbers Numbers** 1 compare numbers to at compare numbers up to numbers as fractions number to a required • count forwards or • read, write, order and least 1 000 000 and 10 000 000 and round decimals with degree of accuracy backwards in steps of compare numbers up to determine the value of determine the value of • use negative numbers powers of 10 for any 10 000 000 and two decimal places to

	each digit • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above • read Roman numerals	each digit • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • solve problems which	the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places	in context, and calculate intervals across zero • solve number and practical problems that involve all of the above • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10,	given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • solve number problems	determine the value of each digit  • use negative numbers in context, and calculate intervals across zero  • solve number and practical problems that involve all of the above
	to 1000 (M) and recognise years written in Roman numerals	require answers to be rounded to specified degrees of accuracy • calculate and interpret the mean as an average		100 and 1000 giving answers up to three decimal places	and practical problems that involve all of the above • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
Week	What's the Total?	Choosing Methods	Calculating Decimals	Calculating Fractions	Mental and Written	Ratio, Percentages and
2	<ul> <li>count forwards or</li> </ul>	<ul> <li>perform mental</li> </ul>	<ul> <li>recognise and use</li> </ul>	and Decimals	<u>Addition</u>	<u>Proportion</u>
	backwards in steps of	calculations, including	thousandths and relate	<ul> <li>use common factors to</li> </ul>	<ul> <li>add and subtract whole</li> </ul>	<ul> <li>solve problems</li> </ul>
	powers of 10 for any	with mixed operations	them to tenths,	simplify fractions; use	numbers with more than	involving the relative
	given number up to 1	and large numbers	hundredths and decimal	common multiples to	4 digits, including using	sizes of two quantities
	000 000	<ul> <li>solve addition and</li> </ul>	equivalents	express fractions in the	formal written methods	where missing values
	<ul> <li>add and subtract whole</li> </ul>	subtraction multi-step	<ul> <li>read, write, order and</li> </ul>	same denomination	(columnar addition and	can be found by using
	numbers with more than	problems in contexts,	compare numbers with	<ul> <li>add and subtract</li> </ul>	subtraction)	integer multiplication
	4 digits, including using	deciding which	up to three decimal	fractions with different	<ul> <li>add and subtract</li> </ul>	and division facts
	formal written methods	operations and methods	places	denominators and mixed	numbers mentally with	<ul> <li>solve problems</li> </ul>
	(columnar addition and	to use and why	<ul> <li>solve problems</li> </ul>	numbers, using the	increasingly large	involving similar shapes
	subtraction)	<ul> <li>solve problems</li> </ul>	involving number up to	concept of equivalent	numbers	where the scale factor is
	<ul> <li>add and subtract</li> </ul>	involving addition,	three decimal places	fractions	<ul> <li>use rounding to check</li> </ul>	known or can be found
	numbers mentally with	subtraction,	<ul> <li>read and write decimal</li> </ul>	• multiply simple pairs of	answers to calculations	<ul> <li>solve problems</li> </ul>
	increasingly large	multiplication and	numbers as fractions	proper fractions, writing	and determine, in the	involving unequal
	numbers	division	<ul> <li>add and subtract</li> </ul>	the answer in its	context of a problem,	sharing and grouping
	<ul> <li>use rounding to check</li> </ul>	<ul> <li>use estimation to</li> </ul>	fractions with the same	simplest form [for	levels of accuracy	using knowledge of
	accidantaling to circon			1	1	
	answers to calculations	check answers to	denominator and	example, 1/4 x 1/2 = 1/8]	<ul> <li>solve addition and</li> </ul>	fractions and multiples
	•	check answers to calculations and	denominator and denominators that are	example, 1/4 x 1/2 = 1/8] • divide proper fractions	<ul> <li>solve addition and subtraction multi-step</li> </ul>	fractions and multiples

context of a problem, levels of accuracy	of a problem, an appropriate degree of accuracy	multiples of the same number	example, 1/3 ÷ 2 = 1/6] • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	deciding which operations and methods to use and why • solve problems involving number up to three decimal places	
Week 3  • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000  • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)  • add and subtract numbers mentally with increasingly large numbers  • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Subtraction Strategies  • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why  • solve problems involving addition, subtraction, multiplication and division  • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Investigating Shapes  · identify 3-D shapes, including cubes and other cuboids, from 2-D representations  · draw given angles, and measure them in degrees (o)  · use the properties of rectangles to deduce related facts and find missing lengths and angles  · distinguish between regular and irregular polygons based on reasoning about equal sides and angles	• describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes	Mental and Written Subtraction  add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)  add and subtract numbers mentally with increasingly large numbers  use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why  solve problems involving number up to three decimal places	Fractions, Decimals and Percentages  • use common factors to simplify fractions; use common multiples to express fractions in the same denomination  • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]  • use written division methods in cases where the answer has up to two decimal places  • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts  • multiply one-digit numbers with up to two

						decimal places by whole numbers
Week 4	Measuring Shapes  • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres  • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes  • estimate volume and capacity	Calculating Compound Shapes  • recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles	Decimals and Fractions  compare and order fractions whose denominators are all multiples of the same number  identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths  add and subtract fractions with the same denominator and denominators that are multiples of the same number  multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams read and write decimal numbers as fractions	Parts and Percentages  • solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts  • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	Symmetry, Reflection and Coordinates • identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	• use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • enumerate possibilities of combinations of two variables

Week	Fractions and Proportion	Parts and Proportion	Let's Calculate	Mental Multiplication	Factors and Multiples	Geometric Shapes
5	• compare and order	• compare and order	<ul> <li>multiply and divide</li> </ul>	and Division	<ul> <li>identify multiples and</li> </ul>	draw 2-D shapes using
	fractions whose	fractions, including	numbers mentally	• perform mental	factors, including finding	given dimensions and
	denominators are all	fractions > 1	drawing upon known	calculations, including	all factor pairs of a	angles
	multiples of the same	• solve problems	facts	with mixed operations	number, and common	recognise, describe and
	number	involving similar shapes	solve problems	and large numbers	factors of two numbers	build simple 3-D shapes,
	<ul> <li>identify, name and write</li> </ul>	where the scale factor is	involving addition,	<ul> <li>identify common</li> </ul>	<ul> <li>multiply and divide</li> </ul>	including making nets
	equivalent fractions of a	known or can be found	subtraction,	factors, common	numbers mentally	<ul> <li>compare and classify</li> </ul>
	given fraction,	• solve problems	multiplication and	multiples and prime	drawing upon known	geometric shapes based
	represented visually,	involving unequal	division and a	numbers	facts	on their properties and
	including tenths and	sharing and grouping	combination of these,		• solve problems	sizes and find unknown
	hundredths	using knowledge of	including understanding		involving multiplication	angles in any triangles,
	<ul> <li>recognise mixed</li> </ul>	fractions and multiples	the meaning of the		and division including	quadrilaterals, and
	numbers and improper		equals sign		using their knowledge of	regular polygons
	fractions and convert		<ul> <li>solve problems</li> </ul>		factors and multiples,	<ul> <li>illustrate and name</li> </ul>
	from one form to the		involving multiplication		squares and cubes	parts of circles, including
	other and write		and division, including			radius, diameter and
	mathematical		scaling by simple			circumference and know
	statements > 1 as a		fractions and problems			that the diameter is
	mixed number		involving simple rates			twice the radius
	<ul> <li>add and subtract</li> </ul>					<ul> <li>recognise angles where</li> </ul>
	fractions with the same					they meet at a point, are
	denominator and					on a straight line, or are
	denominators that are					vertically opposite, and
	multiples of the same					find missing angles
	number					
Week	Methods for Multiplying	Practising Multiplication	Converting Measures	Measures	Percentage and	More Multiplication and
6	and Dividing	and Division	· convert between	• solve problems	Proportion	Division
	· multiply numbers up to	• multiply multi-digit	different units of metric	involving the calculation	• recognise the per cent	multiply multi-digit
	4 digits by a one- or two-	numbers up to 4 digits	measure (for example,	and conversion of units	symbol (%) and	numbers up to 4 digits
	digit number using a	by a two-digit whole	kilometre and metre;	of measure, using	understand that per cent	by a two-digit whole
	formal written seemethod,	number using the formal	centimetre and metre;	decimal notation up to	relates to 'number of	number using the formal
	including long	written method of long	centimetre and	three decimal places	parts per hundred', and	written method of long
	multiplication for two-	multiplication	millimetre; gram and	where appropriate	write percentages as a	multiplication
	digit numbers	• divide numbers up to 4	kilogram; litre and	• use, read, write and	fraction with	• divide numbers up to 4
	<ul> <li>multiply and divide</li> </ul>	digits by a two-digit	millilitre)	convert between	denominator 100, and as	digits by a two-digit
	numbers mentally	number using the formal	<ul> <li>understand and use</li> </ul>	standard units,	a decimal	number using the formal
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	drawing upon known facts • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	written method of short division where appropriate, interpreting remainders according to the context • solve problems involving addition, subtraction, multiplication and division	approximate equivalences between metric units and common imperial units such as inches, pounds and pints • use all four operations to solve problems involving measure using decimal notation, including scaling	converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • convert between miles and kilometres • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]	• solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25	written method of short division where appropriate, interpreting remainders according to the context  • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context  • solve problems involving addition, subtraction, multiplication and division
Week	Angles and Triangles	Using Money	Graphs and Diagrams	Mean, Mode and Median	Primes, Squares and	More About Algebra
7	• know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees (°) • identify angles at a point and one whole turn (total 360°) • identify angles at a point on a straight line and 1/2 a turn (total 180°)	solve problems involving addition, subtraction, multiplication and division     use negative numbers in context, and calculate intervals across zero     multiply one-digit numbers with up to two decimal places by whole numbers     use written division methods in cases where	solve comparison, sum and difference problems using information presented in a line graph	calculate and interpret the mean as an average     interpret and construct pie charts and line graphs and use these to solve problems	• recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • know and use the vocabulary of prime numbers, prime factors	<ul> <li>use simple formulae</li> <li>find pairs of numbers</li> <li>that satisfy an equation</li> <li>with two unknowns</li> <li>enumerate possibilities</li> <li>of combinations of two</li> <li>variables</li> </ul>

	• identify other multiples of 90°	the answer has up to two decimal places			and composite (non- prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19	
Week 8	• solve problems involving converting between units of time • complete, read and interpret information in tables, including timetables	Mental Methods  • perform mental calculations, including with mixed operations and large numbers  • use their knowledge of the order of operations to carry out calculations involving the four operations	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Using Subtraction and Addition  • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why  • solve problems involving addition, subtraction, multiplication and division  • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Formal Multiplication  • multiply numbers up to  4 digits by a one- or two- digit number using a formal written method, including long multiplication for two- digit numbers  • multiply and divide numbers mentally drawing upon known facts	Factors, Multiples and Primes  • round any whole number to a required degree of accuracy • multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting

						remainders according to
						the context
						• perform mental
						calculations, including
						with mixed operations
						and large numbers
						identify common
						factors, common
						multiples and prime
						numbers
						<ul> <li>solve addition and</li> </ul>
						subtraction multi-step
						problems in contexts,
						deciding which
						operations and methods
						to use and why
						solve problems
						involving addition,
						subtraction,
						multiplication and
						division
						• use simple formulae
Week	Squares, Cubes and	<u>Calculators</u>	Solving Multiplication	Difficult Division	Short Division	Charts and Graphs
9	<u>Factors</u>	<ul> <li>use their knowledge of</li> </ul>	and Division	<ul> <li>divide numbers up to 4</li> </ul>	<ul> <li>multiply and divide</li> </ul>	interpret and construct
	<ul> <li>identify multiples and</li> </ul>	the order of operations	<ul> <li>divide numbers up to 4</li> </ul>	digits by a two-digit	numbers mentally	pie charts and line
	factors, including finding	to carry out calculations	digits by a one-digit	whole number using the	drawing upon known	graphs and use these to
	all factor pairs of a	involving the four	number using the formal	formal written method of	facts	solve problems
	number, and common	operations	written method of short	long division, and	<ul> <li>divide numbers up to 4</li> </ul>	
	factors of two numbers	<ul> <li>solve addition and</li> </ul>	division and interpret	interpret remainders as	digits by a one-digit	
	<ul> <li>multiply and divide</li> </ul>	subtraction multi-step	remainders appropriately	whole number	number using the formal	
	numbers mentally	problems in contexts,	for the context	remainders, fractions, or	written method of short	
	drawing upon known	deciding which	solve problems	by rounding, as	division and interpret	
	facts	operations and methods	involving multiplication	appropriate for the	remainders appropriately	
	• recognise and use	to use and why	and division, including	context	for the context	
	square numbers and		scaling by simple	• solve problems	• solve problems	
	cube numbers, and the		fractions and problems	involving addition,	involving multiplication	
1	notation for squared (2)		involving simple rates	subtraction,	and division, including	

	and cubed (3) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes		• multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	multiplication and division  • use written division methods in cases where the answer has up to two decimal places	scaling by simple fractions and problems involving simple rates • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
Week 10	Length, Weight and Capacity  convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)  estimate volume and capacity  use all four operations to solve problems involving measure using decimal notation, including scaling	• interpret and construct pie charts and line graphs and use these to solve problems	Calendars, Timetables and Calculators • solve problems involving converting between units of time • complete, read and interpret information in tables, including timetables	• multiply one-digit numbers with up to two decimal places by whole numbers • solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places	• solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables	The Fibonacci Sequence