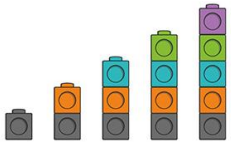
Whole School Overview

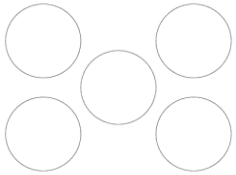
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Reception	Subitising 1-6	Counting, ordinality and cardinality 1-5	Composition of 5	Composition of 6 and 7	Comparison of quantities to 10	Counting, ordinality and cardinality 6-10	Comparison of quantities to 10	Composition of 7, describe parts of a whole set	Subitise doubles to 10	Composition to 10, focus on odds and evens	Shape and space – properties, recognition and naming	
Year 1	Number **Place value within 20**			Number **Addition and subtraction within 20**			Number **Place value within 50**		Measurement **Length and height**		Measurement **Mass and volume**	
Year 2	Measurement **Money**		Number **Multiplication and Division**					Measurement **Length and height**		Measurement **Mass, capacity and temperature**		
Year 3	Number **Multiplication and Division**			Measurement **Length and Perimeter**			Number **Fractions**			Measurement **Mass and capacity**		
Year 4	Number **Multiplication and Division**			Measurement **Length and Perimeter**		Number **Fractions**				Number **Decimals**		
Year 5	Number **Multiplication and Division**			Number **Fractions**		Measurement **Perimeter and Area**		Number **Decimals and Percentages**			**Statistics**	
Year 6	Number **Ratio**		Number **Decimals**		Number **Algebra**		Number **Fractions, Decimals and Percentages**		Measurement **Area, Perimeter and volume**		**Statistics**	

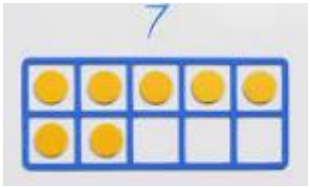
By the end of the Spring term, children will:

- Recognise die patterns to 6
- Recognise numerals 1-5 and match them to quantities
- Subitise linear and paired arrangements of up to 5 dots and use skills of conceptual subitising to describe parts of a whole set
- Order numbers from 1-5 and quantities to 10
- Know 5 can be partitioned into 4 & 1, 3 & 2.
- Understand and represent 6, 7 and 8 as '5 and a bit'
- Use 'more than', 'fewer than' and 'an equal number' to describe quantities and say when they can see more, fewer or an equal number.
- Describe the '1 more, 1 less' relationship of numbers to 10
- Notice when numbers are increased or decreased and explain their reasoning
- Say when a pattern is / is not a double and make, visualise, represent and conceptually subitise doubles patterns to double 5.
- Sort and re-sort objects according to attributes described by an adult (colour, size, function, shape etc) and that they choose themselves
- Sort Numberblocks according to 'odd tops' and 'even blocks'
- Show intentionality in selecting shapes for a purpose, such as cylinders to roll
- Make a range of constructions, including enclosures, and talk about the decisions they have made
- See shapes in different orientations and recognise that they are still that shape
- Recognise a range of triangles and say how they know what they are
- Begin to use common 2D shape names

Key representations:







St Denys Primary School

Reception Overview

Week	Focus	Focus numbers	Key objectives
1	Subitising	1-6	• Recognise die patterns to 6 • Recognise numerals 1-5 and match them to quantities • Subitise linear and paired arrangements of up to 5 dots
2	Counting, ordinality and cardinality	1-5	• Recognise numerals 1-5 • Order numbers from 1-5 • Match numerals to quantities in order • See the staircase pattern and recognise that each number is 1 more • Notice when we have 1 more and do not have 1 more.
3	Composition	5	• Understand that 5 can be partitioned into different parts • Show ways of making 5 on their fingers • Know 5 can be partitioned into 4 & 1, 3 & 2. • Use what they know about 5 to find a hidden number.
4	Composition	6, 7	• Use fingers and double dice frames to represent 6 as '5 and a bit', '5 and 1 more' • See that '5 and 2 more' make 7
5	Comparison	to 10	• use 'more than' and 'fewer than' to describe quantities • say when they can see that someone has more or fewer of the same kind of object • know that it is quantity – not colour, size or type of object – that determines if 1 set has more or fewer items than another. • Use the words 'an equal number' and say when they can see an equal number
6	Counting, ordinality and cardinality	6-8	• Count aloud and revisit the principles of counting • Explore and use generalised statements to describe the '5 and a bit' composition of numbers to 10 (special focus 6-8) • Describe the '1 more, 1 less' relationship of numbers to 10 • Work together to order numbers between 1 and 10, noticing the '5 and a bit' structure.
7	Comparison	8	• Explain how to order quantities to 10 • Understand that 8 is '5 and 3 more' • Reason about which numbers are 'more than' others • Notice when numbers are increased or decreased and explain their reasoning
8	Composition	7	• See that 7 can be composed in different ways; including using the '5 and a bit' structure • use skills of conceptual subitising to describe parts of a whole set • visualise arrangements and use gestures to describe the numbers within a whole set.
9	Subitising	to 10 especially doubles	• use conceptual subitising to derive dice patterns to 8 • Say when a pattern is / is not a double • Make doubles patterns • Visualise doubles patterns to 5 and 5
10	Composition	to 10 recognising odds and evens	• Recognise ways objects are similar and different to each other • Sort objects according to attributes described by an adult (colour, size, function, shape etc) • Sort and resort objects according to attributes they choose • Use their fingers to represent doubles and not doubles • Describe attributes of the Numberblocks • Sort Numberblocks according to 'odd tops' and 'even blocks' • Investigate patterns of doubles in models of the Numberblocks
11-12	Shape and space	-	• Show intentionality in selecting shapes for a purpose, such as cylinders to roll • Make a range of constructions, including enclosures, and talk about the decisions they have made • See shapes in different orientations and recognise that they are still that shape • Recognise a range of triangles and say how they know what they are • Begin to use common 2D shape names

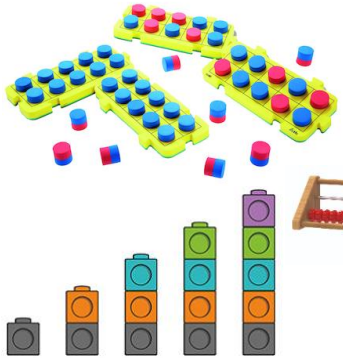
Autumn term consolidation:

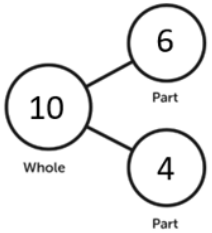
- Write numbers 0-10 in words
- Reading equations

By the end of the Spring term, children will:

- Fluently count forwards and backwards within 50 from any number
- Represent groups of objects with manipulatives and numerals (0-50)
- Write numbers 0-20 in words
- See and understand the '10 and a bit' structure of teen numbers: write teen numbers accurately in digits and say what each digit represents
- Find one more and one less than any number within 50
- Estimate, identify and represent numbers 0-50 on a numberline, including finding the midpoint
- Compare and order numbers to 50, including using inequality symbols
- Add and subtract by counting on/back within 20, using number bonds , using near doubles and finding the difference
- Find and make number bonds to 20
- Calculate, represent and recall doubles within 20 (up to double 10)
- Solve missing number problems with addition and subtraction
- Compare length, height, mass and capacity
- Measure length, height, mass and capacity using non-standard units
- Measure length in cm using a ruler

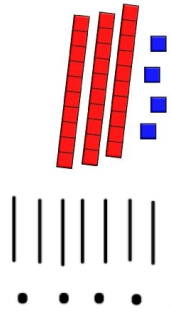
Key representations:

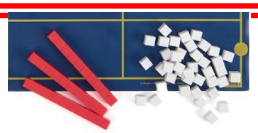




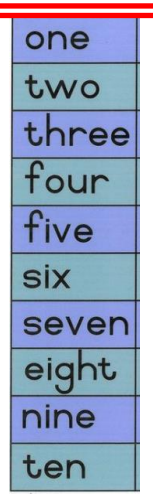
(any orientation)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50





Tens	Ones



St Denys Primary School

Year 1 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number **Place value within 20**			Number **Addition and subtraction within 20**			Number **Place value within 50**		Measurement **Length and height**		Measurement **Mass and volume** **Assessment**	
Key learning objectives	• Fluently count forwards and backwards within 20 from any number • Represent groups of objects with manipulatives and numerals (0-20) • Write numbers 0-20 in words • See and understand the '10 and a bit' structure of teen numbers • Write teen numbers accurately in digits and say what each digit represents • Know that 10 ones = 1 ten and 20 = 2 tens = 20 ones • Find 1 more and 1 less than any number within 20 • Estimate, identify and represent numbers 0-20 on a numberline, including finding the midpoint • Compare and order numbers to 20, including using inequality symbols			• Add by counting on within 20 • Add and subtract ones using number bonds • Find and make number bonds to 20 • Calculate, represent and recall doubles within 20 (up to double 10) • Represent when an addition is a near double and use this knowledge to calculate the total • Subtract by counting back within 20 • Subtract by finding the difference • Find and represent fact families for addition and subtraction • Solve missing number problems with addition and subtraction			• Fluently count forwards and backwards within 50 from any number • Represent groups of objects with manipulatives and numerals (0-50) • Count in multiples of 10 to and from 50 and know how many tens are in each multiple of 10 • Count large groups of objects by grouping into tens and ones • Partition numbers into tens and ones • Find 1 more and 1 less than any number within 50 • Estimate, identify and represent numbers 0-50 on a numberline, including finding the midpoint • Compare and order numbers to 50, including using inequality symbols		• Compare lengths and heights of pairs of objects using language such as "longer than", "shorter than", 'equal to' and "taller than". • understand that height is a type of length • measure the lengths and heights of objects, using non-standard units of measure, understanding the importance of using a consistent unit of measure • measure the lengths and heights of objects using a ruler and a standard unit of measure: centimetres. • Give an object's measurement to the nearest cm when needed		• Compare the mass of 2 objects including on a balance scale • Use non -standard units to measure mass and compare the mass of 2 objects measured in this way • describe the volume in a container using phrases such as "empty", "nearly empty", "nearly full" and "full" and understand that capacity is the maximum amount an object can hold • compare volumes held in containers which are the same and different • measure and compare the capacity of different containers using non-standard units of measure	
Additional resources / planning links	NCETM PD materials: 1.8, 1.10 1-20 Animals Aplenty by Katie Viggers Numberblocks 11-20 book (SEND resource) Numberblocks Teen episodes (Series 3 & 4) esp. Tween Scenes, I can count to 20			NCETM PD materials: 1.5, 1.6, 1.7 Numberblocks The Legend of Big Tum			NCETM PD materials: 1.8, 1.9 One is a Snail, Ten is a Crab		Measures questions to consolidate number and place value understanding across NCETM Y1 materials		Measures questions to consolidate number and place value understanding across NCETM Y1 materials **WR Spring Assessment Paper 1 & 2**	
Mastering Number focus	Pupils will continue to explore the composition of numbers within 10 and explore addition and subtraction structures and the related language (without the use of symbols). • explore the composition of each of the numbers 7 and 9 2 • explore the composition of odd and even numbers, seeing that even numbers can be made of two odd or two even parts, and that odd numbers can be composed of one odd part and one even part • identify the number that is two more or two less than a given odd or even number, identifying that two more/ less than an odd number is the next/ previous odd number, and two more/ less than an even number is the next/ previous even number						• explore the aggregation and partitioning structures of addition and subtraction through systematically partitioning and re-combining numbers within 10 and connecting this to the part-part-whole diagram, including using the language of parts and wholes • explore the augmentation and reduction structures of addition and reduction using number stories, including introducing the 'first, then, now' language structure					

Spring Term

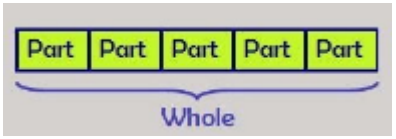
Autumn term consolidation:

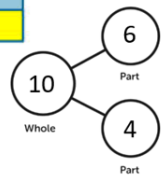
- finding the difference as a structure of subtraction
- Addition and subtraction problems, including missing number problems, determining which operation to use
- 2D and 3D shape including lines of symmetry

By the end of the Spring term, children will:

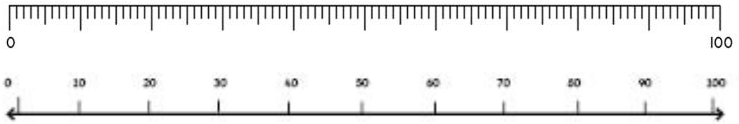
- Recognise coins and their value
- Recognise and use symbols for £ and p
- Count money in pounds and pence to 100
- Choose notes and coins to make a given value and find different combinations of coins that equal the same amount of money
- Compare amounts of money including using inequality symbols
- Using the knowledge that £1 = 100p, find different ways of making £1.
- Solve problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- Recognise and make equal groups and find their total using repeated addition
- Recognise the x symbol and use it to write calculations representing equal groups
- Identify and write multiplication equations and draw pictures to represent them
- Understand that multiplication is commutative
- Identify and represent multiplication equations in arrays
- Make equal groups by grouping and sharing
- Count accurately in 2s, 10s and 5s and link this to understanding and recalling the 2, 10 and 5 times table.
- Use their knowledge of times tables to divide by 2, 10 and 5.
- Double and halve numbers and understand that they are multiplying or dividing by 2
- Identify whether numbers are odd or even and understand that even numbers are divisible by 2
- Measure lengths and heights in cm and m; measure mass in g and kg; measure volume in ml and l. Choose the most appropriate unit of measure.
- Compare and order lengths, heights, mass and volume
- Solve one and two step problems involving length, height, mass, volume and capacity using all 4 operations
- Use the language of temperature and use thermometers to measure temperatures in degrees Celsius

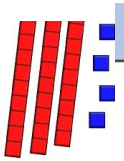
Key representations:

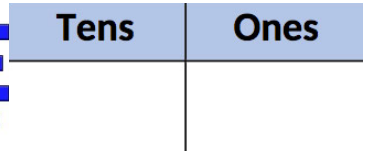


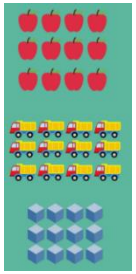


(any orientation)









St Denys Primary School

Year 2 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Measurement **Money**		Number **Multiplication and division**					Measurement **Length and height**		Measurement **Mass, capacity and temperature**		
Key learning objectives	• Recognise coins and their value • Recognise and use symbols for £ and p • Count money in pounds and pence to 100 • Choose notes and coins to make a given value • Find different combinations of coins that equal the same amount of money • Compare amounts of money including using inequality symbols • Use the knowledge that £1 = 100p, find different ways of making £1. • Solve problems in a practical context involving addition and subtraction of money of the same unit, including giving change		• Recognise and make equal groups and find their total using repeated addition • Recognise the x symbol and use it to write calculations representing equal groups • Identify and write multiplication equations and draw pictures to represent them • Understand that multiplication is commutative • Identify and represent multiplication equations in arrays • Make equal groups by grouping and sharing • Count accurately in 2s, 10s and 5s and link this to understanding and recalling the 2, 10 and 5 times table. • Use their knowledge of times tables to divide by 2, 10 and 5. • Double and halve numbers and understand that they are multiplying or dividing by 2 • Identify whether numbers are odd or even and understand that even numbers are divisible by 2 • Explore and identify links between the 5 and 10 times tables				• Measure lengths and heights in cm using a ruler • Measure lengths and heights in m using metre sticks and tape measures • Compare and order lengths and heights • Solve one and two step problems involving length and height, using all 4 operations		• Measure mass in g and kg (numbers to 100), including choosing which unit will be more appropriate, and compare the mass of different objects • Measure volume in ml and l (numbers to 100), including choosing which unit will be more appropriate, and compare volumes • Use the language of temperature and use thermometers to measure temperatures in degrees Celsius • Solve one and two step problems involving mass, volume and capacity, using all 4 operations	
Additional resources / planning links	NCETM 2.1 Measures questions to consolidate number and place value understanding across NCETM Y2 materials		NCETM: 2.2, 2.3, 2.4, 2.5, 2.6					Measures questions to consolidate number and place value understanding across NCETM Y2 materials		Measures questions to consolidate number and place value understanding across NCETM Y2 materials **WR Spring Paper 1 & 2**		
Mastering Number focus	Pupils will have an opportunity to use their knowledge of the composition of numbers within 10 to calculate within 20; they will explore the links between the numbers in the linear number system within 10 to numbers within 100, focusing on multiples of 10 and the midpoint of 50. Pupils will: • explore how the numbers 6 to 9 can be doubled using the '5 and a bit' and '10 and a bit' structure • use doubles to calculate near doubles • use bonds of 10 to reason about bonds of 20, in which the given addend is greater than 10 • use known number bonds within 10 to calculate within 20, working within the 10-boundary							• use their knowledge of bonds of 10 to find three addends that sum to 10 • use their knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary • use their understanding of the linear number system to 10 to position multiples of 10 on a 0 - 100 number line and reason about midpoints				

Spring Term

St Denys Primary School

Year 3 Overview

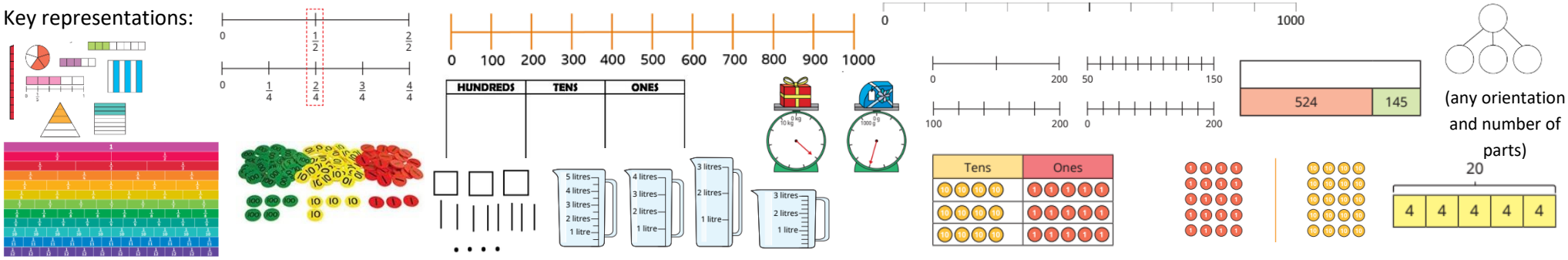
Autumn term consolidation:

- Multi-step problems & making decisions about which operation to use to solve a problem
- Identifying numbers as multiples of 2, 5, 10, 2, 4, 8, 3

By the end of the Spring term, children will:

- Recognise multiples of 10 and multiply 1 and 2 digit numbers by 10
- Use existing times tables knowledge to scale facts by 10 e.g. 3 x 4 = 12, 30 x 4 = 120; 12 ÷3 = 4, 120 ÷ 4 = 30
- Use the symbols < > and = to compare groups using multiplication and division structures, using knowledge of the structure of multiplication rather than calculating
- Multiply 2 digit by 1 digit numbers, including with exchanges, using the expanded column method
- Divide a 2-digit number by a 1 digit number, including where exchanges are required and with and without remainders, using standard and flexible partitioning and drawing on times tables knowledge
- Understand multiplication as scaling 'There are _ times as many'
- Solve correspondence problems by finding all possible combinations and by using multiplication to calculate the total number of possibilities.
- Measure accurately in metres, centimetre and millimetres, including combining more than 1 unit e.g. 1m 20cm
- Know there are 100cm in 1m and 10mm in 1cm and use this knowledge to convert lengths, including when they are not multiples of 10/100
- Choose the most appropriate unit of measure to use
- Compare and order lengths using comparison language and inequality symbols
- Add and subtract lengths, including where the units of measurement are different
- Know that perimeter is the distance around the outside of a closed 2-D shape and find perimeters by measuring and by calculating
- Know that a fraction is a part of a whole and the whole is divided into equal parts
- Correctly use the vocabulary of numerator and denominator, and understand the role of each
- Compare and order unit and non-unit fractions
- Understand that when the numerator of a fraction is equal to its denominator, then the fraction is equivalent to 1 whole and use this knowledge to make the whole with fractions with the same denominator
- Use fractions knowledge to interpret scales in measures contexts
- Represent and count fractions on a number line
- Find equivalent fractions by comparing number lines and bar models
- Use scales to read measurements – knowing the different group sizes when 100 is divided into 2, 4, 5, 10 equal parts and extend this to other multiples of 100.
- Measure mass in kg and g and capacity and volume in l and ml
- Know that 1kg = 1000g and that 1l = 1000ml and use this knowledge to make amounts of grams up to 1 kg and amounts of millilitres up to 1l using addition and subtraction
- Know that 1/2kg = 500g and 1/4kg is 250g. Know that 1/2l = 500ml and 1/4l is 250ml.
- Compare, add and subtract mass, volume and capacity including mixed units.

Key representations:



(any orientation and number of parts)

Spring Term

St Denys Primary School

Year 3 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number **Multiplication and Division**			Measurement **Length and Perimeter**			Number **Fractions**			Measurement **Mass and capacity**		
Key learning objectives	• Recognise multiples of 10 and multiply 1 and 2 digit numbers by 10 • Use existing times tables knowledge to scale facts by 10 e.g. 3 x 4 = 12, 30 x 4 = 120; 12 ÷3 = 4, 120 ÷ 4 = 30 • Use the symbols < > and = to compare groups using multiplication and division structures, using knowledge of the structure of multiplication rather than calculating • Multiply 2 digit by 1 digit numbers, including with exchanges, using the expanded column method • Divide a 2-digit number by a 1 digit number, including where exchanges are required and with and without remainders, using standard and flexible partitioning and drawing on times tables knowledge • Understand multiplication as scaling 'There are _ times as many' • Solve correspondence problems by finding all possible combinations and by using multiplication to calculate the total number of possibilities.			• Measure accurately in metres, centimetre and millimetres, including combining more than 1 unit e.g. 1m 20cm • Know there are 100cm in 1m and 10mm in 1cm and use this knowledge to convert lengths, including when they are not multiples of 10/100 • Choose the most appropriate unit of measure to use • compare and order lengths using comparison language and inequality symbols • Add and subtract lengths, including where the units of measurement are different • Know that perimeter is the distance around the outside of a closed 2-D shape and find perimeters by measuring and by calculating			• Know that a fraction is a part of a whole and the whole is divided into equal parts • Correctly use the vocabulary of numerator and denominator, and understand the role of each • Compare and order unit and non-unit fractions • Understand that when the numerator of a fraction is equal to its denominator, then the fraction is equivalent to 1 whole and use this knowledge to make the whole with fractions with the same denominator • Use fractions knowledge to interpret scales in measures contexts • Represent and count fractions on a number line • Find equivalent fractions by comparing number lines and bar models			• Use scales to read measurements – knowing the different group sizes when 100 is divided into 2, 4, 5, 10 equal parts and extend this to other multiples of 100. • Measure mass in kg and g • Know that 1kg = 1000g and use this knowledge to make amounts of grams up to 1 kg using addition and subtraction. • Know that 1/2kg = 500g and 1/4kg is 250g. • Know that 1l = 1000ml and use this knowledge to make amounts of millilitres up to 1 l using addition and subtraction. • Know that 1/2l = 500ml and 1/4l is 250ml. • Compare mass, volume and capacity including mixed units. • Add and subtract mass, volume and capacity including mixed units. • Measure capacity and volume in ml and l		
Additional resources / planning links	NCETM: 2.13, 2.14, 2.15, 2.17			NCETM: 2.16, 2.13 length questions to consolidate number and place value understanding across NCETM Y1-4 materials			NCETM: 3.1, 3.2, 3.3, 3.4, 3.7			NCETM: questions to consolidate number and place value understanding across NCETM Y1-4 materials **WR Spring paper 1 & 2**		
TTRS focus	Consolidate and develop fluency in all taught so far: 2x, 3x, 4x, 5x, 8x, 10x											11x

Spring Term

St Denys Primary School

Year 4 Overview

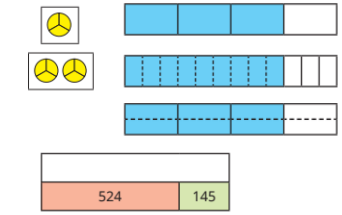
Autumn term consolidation:

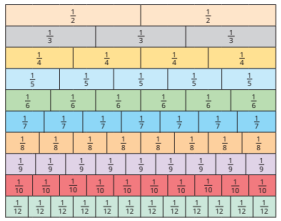
- Make decisions about which operation and which method to use to solve a problem, including identifying when mental strategies may be more efficient

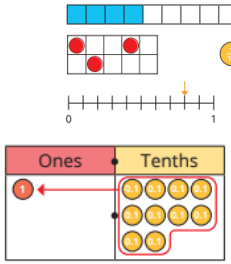
By the end of the Spring term children will:

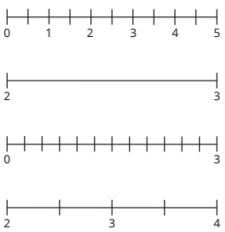
- Know that a factor of a number is a whole number that divides into it exactly and work systematically to find factor pairs
- Use factor pair knowledge to write equivalent calculations e.g. 5x12 = 5x3x4, making decisions about calculations they will be able to solve efficiently
- Multiply and divide whole numbers by 10 and 100
- Use existing times tables knowledge to scale facts by 10 and 100 e.g. 3 x 4 = 12, 30 x 4 = 120; 12 ÷3 = 4, 120 ÷ 4 = 30
- Multiply 2 & 3 digit numbers by 1 digit numbers, using short multiplication
- Divide 2- and 3- digit numbers by 1 digit numbers, including in calculations with a remainder, using flexible partitioning
- Solve correspondence problems by finding all possible combinations and by using multiplication to calculate the total number of possibilities, including with 3 sets of items.
- Make decisions about the most appropriate method to use to solve a multiplication calculation, in a range of contexts.
- Measure in metres and kilometres and use the fact that 1 km is equal to 1,000 m to derive related facts using numbers up to 10,000
- Calculate perimeters of rectangles, rectilinear shapes and regular and irregular polygons
- Find missing side lengths using the relationship between sides in a rectilinear shape, and when given the perimeter
- Identify how many equal parts a whole has been split into and say how many more parts are needed to make the whole
- Identify whether a fraction is a large or small amount of the whole
- Know that when the numerator is equal to the denominator then the fraction is equivalent to 1
- Count forwards and backwards in unit and non-unit fractions across whole number boundaries (count in fractions greater than 1)
- Partition mixed numbers in multiple ways
- Count, identify, label and place mixed numbers on number lines (including estimating their position on blank number lines).
- Compare and order mixed numbers
- Write mixed numbers and improper fractions and convert between the 2
- Find equivalent fractions within and greater than 1
- Add and subtract fractions and mixed numbers where the denominator is the same
- Subtract fractions from whole amounts
- Understand and represent tenths and hundredths as fractions and decimals, on place value charts and numberlines, including crossing the whole
- Understand that 10 tenths are equivalent to 1 whole, and therefore 1 whole is equivalent to 10 tenths and use this knowledge when counting forwards and backwards in tenths
- Divide 1- and 2- digit numbers by 10 and 100
- Partition hundredths into tenths and hundredths

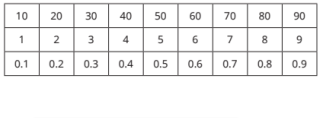
Key representations:

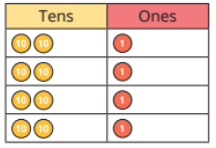


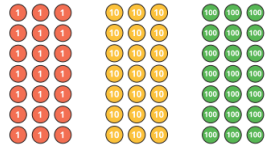




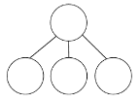








(any orientation and number of parts)



Spring Term

St Denys Primary School

Year 4 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number **Multiplication and Division**			Measurement **Length and perimeter**		Number **Fractions**				Number **Decimals**		
Key learning objectives	• Know that a factor of a number is a whole number that divides into it exactly and work systematically to find factor pairs • Use factor pair knowledge to write equivalent calculations e.g. 5x12 = 5x3x4, making decisions about calculations they will be able to solve efficiently • Multiply and divide whole numbers by 10 and 100 • Use existing times tables knowledge to scale facts by 10 and 100 e.g. 3 x 4 = 12, 30 x 4 = 120; 12 ÷3 = 4, 120 ÷ 4 = 30 • Multiply 2 & 3 digit numbers by 1 digit numbers, using short multiplication • Divide 2- and 3- digit numbers by 1 digit numbers, including in calculations with a remainder, using flexible partitioning • Solve correspondence problems by finding all possible combinations and by using multiplication to calculate the total number of possibilities, including with 3 sets of items. • Make decisions about the most appropriate method to use to solve a multiplication calculation, in a range of contexts.			• Measure in metres and kilometres and use the fact that 1 km is equal to 1,000 m to derive related facts using numbers up to 10,000 • Calculate perimeters of rectangles, rectilinear shapes and regular and irregular polygons • Find missing side lengths using the relationship between sides in a rectilinear shape, and when given the perimeter.		• Identify how many equal parts a whole has been split into and say how many more parts are needed to make the whole • Identify whether a fraction is a large or small amount of the whole • Know that when the numerator is equal to the denominator then the fraction is equivalent to 1 • Count forwards and backwards in unit and non-unit fractions across whole number boundaries (count in fractions greater than 1) • Partition mixed numbers in multiple ways • Count, identify, label and place mixed numbers on number lines (including estimating their position on blank number lines). • Compare and order mixed numbers • Write mixed numbers and improper fractions and convert between the 2 • Find equivalent fractions within and greater than 1 • Add and subtract fractions and mixed numbers where the denominator is the same • Subtract fractions from whole amounts				• Understand and represent tenths and hundredths as fractions and decimals, on place value charts and numberlines, including crossing the whole • Understand that 10 tenths are equivalent to 1 whole, and therefore 1 whole is equivalent to 10 tenths and use this knowledge when counting forwards and backwards in tenths • Divide 1- and 2- digit numbers by 10 and 100 • Partition hundredths into tenths and hundredths		
Additional resources / planning links	NCETM: 2.13, 2.10, 2.12, 2.14, 2.15 (partitioning only)			NCETM: 2.16		NCETM: 3.5, (3.2, 3.3, 3.4), 3.7				**WR Spring paper 1 & 2** NCETM: 1.23, 1.24		
TTRS focus	3x, 6x			3x, 6x, 9x, 12x		7x				Focus tables or all x tables mixed		

Spring Term

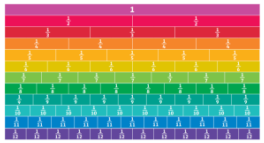
Autumn term consolidation:

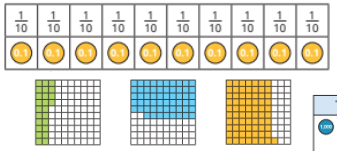
- Rounding
- Adding fractions with different denominators

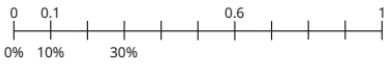
By the end of the Spring term, children will:

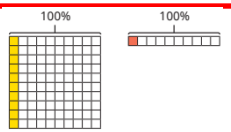
- Accurately use the formal method for short multiplication for 4 digit numbers x 1 digit
- Accurately use a formal method for multiplying by a 2 digit number
- Apply their knowledge of multiplication and division to solve problems, including choosing the most efficient method
- Accurately use the formal written method for short division, including with calculations that result in a remainder
- Multiply unit and non-unit fractions and mixed numbers by integers
- Calculate a fraction of a quantity
- Use a fraction of an amount to find the whole
- find the perimeters of rectangles by measuring the sides and by calculation
- calculate the perimeters of rectilinear shapes and polygons
- use the perimeter of shapes to find missing sides
- Calculate the area of rectangles and compound shapes, using times table knowledge and multiplication strategies
- Estimate the area of non-rectilinear shapes
- Order and compare decimals with up to 3 decimal places
- Round to the nearest whole number and to 1 decimal place
- Know that “per cent” relates to “number of parts per 100”
- Represent tenths, hundredths and thousandths (as fractions, decimals and on place value charts)
- Find and recall equivalent decimals, fractions and percentages, focussing on equivalents to halves, quarters, fifths and tenths.
- Draw and interpret line graphs, including conversion graphs
- read and interpret data presented in a table, including two-way tables
- Read and interpret time tables

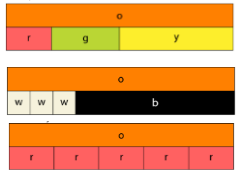
Key representations:

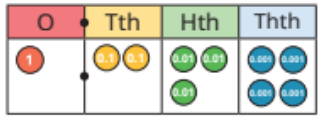


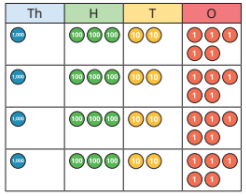


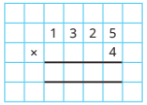






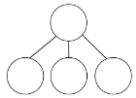






	KS1	KS2	Total
Walk		95	118
Car	45		70
Bus	9	27	
Bike		56	56
Total			

(any orientation and number of parts)



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number **Multiplication and division**			Number **Fractions**		Measurement **Perimeter and area**		Number **Decimals and Percentages**			**Statistics & consolidation**	
Key learning objectives	• Accurately use the formal method for short multiplication for 4 digit numbers x 1 digit • Accurately use a formal method for multiplying by a 2 digit number • Apply their knowledge of multiplication and division to solve problems • Accurately use the formal written method for short division, including with calculations that result in a remainder • Make decisions about which method is most efficient in different contexts			• Multiply unit and non-unit fractions and mixed numbers by integers • Calculate a fraction of a quantity • Use a fraction of an amount to find the whole • Recognise the connection between finding a fraction of an amount and multiplying a fraction by an integer and choose which method is most efficient in different contexts		• find the perimeters of rectangles by measuring the sides and by calculation • calculate the perimeters of rectilinear shapes and polygons • use the perimeter of shapes to find missing sides • Calculate the area of rectangles and compound shapes, using times table knowledge and multiplication strategies • Estimate the area of non-rectilinear shapes		• Represent tenths, hundredths and thousandths (as fractions, decimals and on place value charts) • Order and compare decimals with up to 3 decimal places • Round to the nearest whole number and to 1 decimal place • Know that “per cent” relates to “number of parts per 100” • Find and recall equivalent decimals, fractions and percentages, focussing on equivalents to halves, quarters, fifths and tenths.			Objectives taught in cross-curricular context where possible. • Draw and interpret line graphs, including conversion graphs • read and interpret data presented in a table, including two-way tables • Read and interpret time tables	
Additional resources / planning links	NCETM 2.14, 2.15, 2.23			NCETM 3.5, 3.6, 3.9		NCETM 2.16, 2.30		NCETM 3.10, 1.23, 1.24			Statistics questions to consolidate understanding across NCETM Y5 materials WR Spring Paper 1 & 2	
TTRS focus	Mixed all tables for speed recall Problem solving / non-routine problems using x table facts											

St Denys Primary School

Year 6 Overview

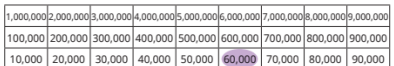
Autumn term consolidation:

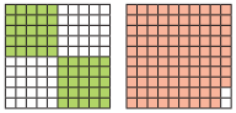
- Multiply and divide fractions
- Solve single and multi-step fractions problems
- Find fractions of amounts and the whole amount given a fraction of it.

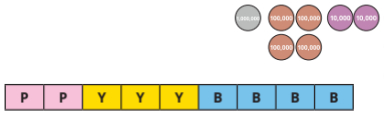
By the end of the Spring term, children will:

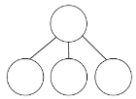
- Express the relationship between two numbers both additively and multiplicatively (& the inverse linking subtraction & division)
- Understand that ratio represents a multiplicative relationship between two amounts
- Use the ratio symbol : to represent the multiplicative relationship
- Identify equivalent ratios and simplify ratios
- Explore and understand similarities and differences between ratios and fractions
- Enlarge shapes and describe enlargements using scale factors
- Apply their understanding of ratio through recognising and making scale drawings: link this to identifying similar shapes
- Solve ratio and proportion problems including recipes
- represent numbers less and greater than 1 with up to 3 decimal places using counters and place value charts, identify the values of the digits in a decimal number and partition decimal numbers in a range of ways
- know the relationship between the different place value columns
- round numbers with up to 3 decimal places to the nearest integer, tenth and hundredth
- add and subtract decimals including with different numbers of decimal places
- Multiply and divide numbers with up to 3 decimal places by 10, 100 and 1000 and by integers
- solve problems involving decimals in a range of contexts
- Use and understand the terms “input”,“output”, “function” and “rule”
- Explore 1 and 2 step function machines, including using the inverse to find the input when the output is given and finding a missing function
- form algebraic expressions using letters to represent numbers and find values of expressions by substituting numbers in place of the letters
- Use formulae to work out values, recognising the difference between a formula and an expression
- Represent images and contexts with equations
- Solve 1 and 2 step equations and problems with up to 2 unknowns
- Find equivalent fractions, decimals and percentages
- Understand fractions as divisions and use this knowledge to convert between fractions and decimals
- Understand percentages as ‘number of parts per 100’ and make more complex percentages by combining others e.g. 65% = 50%+10%+5%
- Compare and order fractions, decimals and percentages
- Find percentages of amounts and find the whole number from a given percentage
- Find the area and perimeter of rectangles and rectilinear shapes, triangles and parallelograms, and the volume of cuboids, using appropriate formulae
- Draw, read and interpret line graphs, bar charts and pie charts

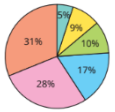
Key representations:

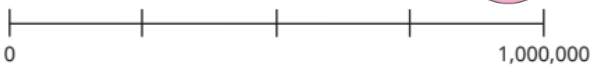


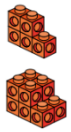


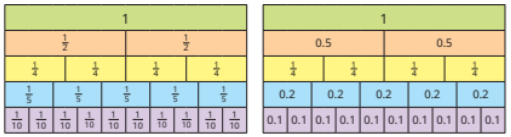


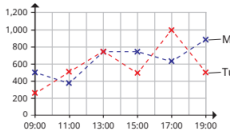


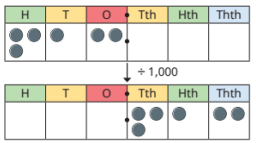












(any orientation and number of parts)

Spring Term

St Denys Primary School

Year 6 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number **Ratio**		Number **Decimals**		Number **Algebra**		Number **Fractions, Decimals and Percentages**		Measurement **Area, Perimeter and volume**		**Statistics**	
Key learning objectives	-Express the relationship between two numbers both additively and multiplicatively (& the inverse linking subtraction & division) -Understand that ratio represents a multiplicative relationship between two amounts -Use the ratio symbol : to represent the multiplicative relationship Identify equivalent ratios and simplify ratios -Explore and understand similarities and differences between ratios and fractions -Enlarge shapes and describe enlargements using scale factors -Apply their understanding of ratio through recognising and making scale drawings: link this to identifying similar shapes -Solve ratio and proportion problems including recipes		- represent numbers less and greater than 1 with up to 3 decimal places using counters and place value charts, identify the values of the digits in a decimal number and partition decimal numbers in a range of ways - know the relationship between the different place value columns -round numbers with up to 3 decimal places to the nearest integer, tenth and hundredth -add and subtract decimals including with different numbers of decimal places -Multiply and divide numbers with up to 3 decimal places by 10, 100 and 1000 - Multiply and divide decimals by integers. -solve problems involving decimals in a range of contexts		- Use and understand the terms “input”, “output”, “function” and “rule” -Explore 1 and 2 step function machines, including using the inverse to find the input when the output is given and finding a missing function -form algebraic expressions using letters to represent numbers -find values of expressions by substituting numbers in place of the letters -Use formulae to work out values, recognising the difference between a formula and an expression -Represent images and contexts with equations -Solve 1 and 2 step equations -Solve problems with up to 2 unknowns		- Find equivalent fractions, decimals and percentages -Understand fractions as divisions and use this knowledge to convert between fractions and decimals -Understand percentages as ‘number of parts per 100’ and make more complex percentages by combining others e.g. 65% = 50%+10%+5% -Compare and order fractions, decimals and percentages -Find percentages of amounts -Find the whole number from a given percentage.		- Find the area and perimeter of rectangles and rectilinear shapes - use the formula area = 1/2 × base ×perpendicular height to calculate the area of triangles -recognise that the area of a parallelogram can be found by using the formula area = base × perpendicular height and use this formula to find the area of parallelograms -Identify and use the formula volume of cuboid = length × width × height to calculate the volume of cuboids		-Draw, read and interpret line graphs, including with more than 1 line -Draw, read and interpret dual bar charts -Read and interpret pie charts including working out the total and values of other parts when given the value of 1 part -Link pie charts with percentages -Draw pie charts	
Additional resources / planning links	NCETM 2.27		NCETM 2.29, 1.24		NCETM 1.31		NCETM 3.10		NCETM 2.16, 2.30		Statistics contexts throughout NCETM materials	
TTRS focus	Mixed all tables for speed recall Using x tables in routine & non-routine problems											

Spring Term