St. Stephen's School and Children's Centre
Learning for life

Year 2 Maths

Annual Overview, Breath of Study, Planning and Resources

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Learning for life

Year 2 Annual 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
Autumn	**Number** Place Value			**Number** Addition and Subtraction				**Measurement** Money		**Geometry** Properties of Shape		**Autumn Assessment**
Spring	**Number** Multiplication and Division				**Number** Fractions			**Measure** Length, Height, Capacity, Temperature and Time				**Spring Assessment**
Summer	**Geometry** Position and Direction		**Statistics**	**SATS** Revision and Summer Assessment		**Consolidation** Review all Year 2 Objectives		**Geometry** Properties of shapes (Y3)		**Number and Place Value** (Y3)		

N.B: This overview has been structured differently to the White Rose annual overview to ensure all content is covered pre SATs.

Number Fluency

- All Year 1 number Fluency Facts
- Number bonds to 100
- Number bonds to 20
- Adding/Subtracting 9 to any number to 10
- Number bonds to 11/12
- Doubles of 6-10
- Near doubles of 6-10
- 2, 5 and 10 Times Tables including related division facts
- 3 and 4 Times Table Multiplication Facts

Arithmetic

- Add 2 digit and 1 digit numbers
- Subtract 2 digit and 1 digit numbers
- Add 2 digit by 2 digit numbers
- Subtract 2 digit by 2 digit numbers
- Add three 1 digit numbers
- Subtract three 1 digit numbers
- Find missing numbers in addition and subtraction calculations using the inverse
- Multiply numbers by 2, 5 and 10
- Divide single digit numbers
- Fractions: Find $\frac{1}{2}$, $\frac{1}{4}$, ⅓ and $\frac{3}{4}$ of a given number

Mental Maths

- Adding/Subtracting 1 to any number to 100
- Adding/Subtracting 10 to any number below 100
- Adding/Subtracting a 1 digit to 2 digit (no bridging)(e.g. 24 +5)

Spoken Language

The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Unicef RRS Article 13
Every child must be free to express their thoughts and opinions and to access all kinds of information, as long as it is within the law.

Unicef RRS Article 29
Every child has the right to an education that should help them to use and develop their talents and abilities.

Unicef RRS Article 32
Every child has the right to find out things and share what they think of others, by talking, drawing, writing or in any other way unless it harms or offends other people.

Year 2 Termly 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
Autumn	**Block 1**			**Block 2**				**Block 3**		**Block 4**		**AUTUMN ASSESSMENT**
	Number Place Value			**Number** Addition and Subtraction				**Measurement** Money		**Geometry** Properties of Shape		
	• *Read and write numbers to at least 100 in numerals and in words.* • *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.* • *Compare and order numbers from 0 up to 100; use <, > and = signs.* • *Use place value and number facts to solve problems.* • *Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.*			• *Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.* • *Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers.* • *Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.* • *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 number problems.*				• *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.*		• *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 number of edges, vertices and faces.* • *Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.]* • *Compare and sort common 2-D and 3-D shapes and everyday objects.*		
Vocabulary	*Number: Numbers one to one hundred, tens, hundreds, estimate, represent, partition* *Measure - Money: Pounds, pence, currency, coins, notes, pay, change, equal, symbol* *Geometry - Shape - 2D shape, 3D shape, size, bigger, larger, smaller , symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern*											

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring	**Block 1**				**Block 2**			**Block 3**				
	Number Multiplication and Division				**Number** Fractions			**Measure** Length, Height, Capacity, Temperature and Time				
	Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. *Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) sign.* *Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.* ***End of Block Assessment***				*Recognise, find, name and write fractions 1/3, $\frac{1}{2}$, $\frac{3}{4}$ of a length, shape, set of objects or quantity.* *Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognize the equivalence of 2/4 and $\frac{1}{2}$.* *Introduce multiplication and division facts for the 3 and 4 times tables* ***End of Block Assessment***			*Length and Height* • *Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers* • *Compare and order lengths and record the results using >, < and =* *Mass, Capacity and Temperature* • *Choose and use appropriate standard units to estimate and measure mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, scales, thermometers and measuring vessels* • *Compare and order mass, volume/capacity and record the results using >, < and =* *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.* • *Know the number of seconds in a minute and the number of days in each month, year and leap year.* • *Compare and sequence intervals of time* ***End of Block Assessment***				**SPRING ASSESSMENT**
Vocabulary	*Number: Product, multiples, odd, even, arrays, repeated addition, mental methods* *Fractions: Numerator, denominator, quarter, half, three quarters, third, equivalent* *Measure: Units, compare, sequence, estimate, direction, record results, intervals*											

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	**Block 1**		**Block 2**					**Geometry** Properties of shape (Y3)		**Number and Place Value** (Y3)		
	Geometry Position and Direction		**Statistics**									
	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 anti-clockwise). *Order and arrange combinations of mathematical objects in patterns and sequences* ***End of Block Assessment***		*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.* ***End of Block Assessment***	**SATs** Revision and Summer Assessment		**Consolidation** Year 2 Objectives		Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Recognise angles as a property of shape or a description of a turn Identify regular and irregular polygons Identify symmetry in shapes 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		*Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)* *Read and write numbers up to 1000 in numerals and in words* *Compare and order numbers up to 1000* *Find 10 or 100 more or less than a given number* *Identify, represent and estimate numbers using different representations including number lines.*		
Vocabulary	*Geometry - Position & Direction: Rotation Clockwise, anticlockwise, straight line, ninety degree turn, right angle, clockwise, anti-clockwise, combinations* *Statistics: Count, tally, sort, vote, graph, pictogram, represent, group, set, list, table, label, title, popular, common* *Geometry - shape: Size, bigger, larger, smaller, symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern*											

Autumn Block 1 - Place Value				
Small Step	**Learning Objective**	**Teaching Slides**	**Worksheet**	**Reasoning and Problem Solving**
Count Objects to 100	➔ Children build on skills to count objects to 100 in words and represent the numbers as numerals. ➔ Children do this in a variety of ways i.e. numerals, words, images and missing numbers which are non-consecutive.	Teaching Slides	Worksheet Slides	Reasoning Slides
Represent Numbers to 100	➔ Children represent numbers to 100 using a range of concrete materials such as bead strings, straws, Base 10 equipment etc. ➔ Children can state how a number is made up e.g. 42 is 4 tens and 2 ones or 42 ones.	Teaching Slides	Worksheet Slides	
Tens and Ones (Part-Whole)	➔ Children understand what each digit represents when partitioning a number. ➔ Children can partition numbers in a variety of ways, not just as tens and ones. E.g. 58 is made up of 5 tens and 8 ones or 4 tens and 18 ones etc.	Teaching Slides	Worksheet Slides	
Tens and Ones (Addition)	➔ Children continue to use a part-whole model to explore how tens and ones can be partitioned and recombined to make a total. ➔ Children see numbers partitioned in different ways e.g. 20+19=39 ➔ Children use + to express numbers to 100 e.g. 70+3=73	Teaching Slides	Worksheet Slides	
Place Value Charts	➔ Children formally present their work in the correct place value columns to aid understanding of place value. ➔ Children use different representations in their charts including concrete, pictorial and abstract.	Teaching Slides	Worksheet Slides	
Compare Objects	➔ Children compare a variety of objects using the vocabulary 'more than' 'less than' and 'equal to' and the symbols <,>,=	Teaching Slides	Worksheet Slides	
Compare Numbers	➔ Children compare numbers using 'more than' 'less than' and 'equal to' and the symbols <,>,=	Teaching Slides	Worksheet Slides	
Order Objects and Numbers	➔ Children order numbers and objects from smallest to greatest and greatest to smallest.	Teaching Slides	Worksheet Slides	
Count in 2s, 5s and 10s	➔ Children count forwards and backwards in 2s 5s and 10s, not always starting from 0. ➔ Children identify patterns.	Teaching Slides	Worksheet Slides	
Count in 3s	➔ Children count forwards and backwards in 3s from any multiple of 3.	Teaching Slides	Worksheet	

	➔ Children identify patterns and use resources to help them.			Slides	
Place Value Assessment	**Assessment**	Link	Please add end of unit assessment to Class Assessment Sheet		
	Answers	Link			

Autumn Block 2 - Addition and Subtraction

Small Step	Learning Objective	Teaching Slides	Worksheet	Reasoning and Problem Solving
Fact Families	➔ Children apply their understanding of known addition and subtraction facts within 20 to identify all related facts. ➔ Children understand the relationship between addition and subtraction and know the purpose of the equals sign, as well as the addition and subtraction signs.	Teaching Slides	Worksheet Slides	Reasoning Slides
Check Calculations	➔ Children discuss and share strategies for checking addition and subtraction calculations. ➔ Children understand checking calculations is not restricted to using the inverse but also includes using concrete resources, number lines and estimating.	Teaching Slides	Worksheet Slides	
Compare Number Sentences	➔ Children examine number sentences using structure rather than calculation. ➔ Children use numbers within 20 to explore mathematical relationships. ➔ Children spot patterns while working with familiar numbers. ➔ Children compare similar calculations using greater than, less than and equal to symbols.	Teaching Slides	Worksheet Slides	
Related Facts	➔ Children understand calculations with similar digits e.g. 2+5=7, so 20+50=70. For both addition and subtraction. ➔ Children use the vocabulary of 'tens' and 'ones' to aid understanding. ➔ Children use Base 10 to help them understand the relationships.	Teaching Slides	Worksheet Slides	
Bonds to 100	➔ Using their understanding of tens and ones children link single bonds and tens bonds. ➔ Children use a 10 frame to represent 100 to aid this link.	Teaching Slides	Worksheet Slides	
Add and Subtract 1s	➔ Children start seeing the pattern when we add and subtract 1 and comment on what happens. ➔ Children proceed to notice this pattern when adding 2 and adding 3.	Teaching Slides	Worksheet Slides	
10 More 10 Less	➔ Children understand the importance of the tens digit. ➔ Children use a 100 square to explore what happens to the numbers in the	Teaching Slides	Worksheet	

	columns, noticing that the tens digit changes while the ones digit remains the same. ➔ Children see this pattern with concrete materials first before linking to the hundred square.		Slides
Add and Subtract 10s	➔ Children use place value understanding to add and subtract 10s from a given number within 100. ➔ Children understand the importance of the tens digit within the given numbers and spot this relationship e.g. **64+20=84**	Teaching Slides	Worksheet Slides
Add 2 digit and 1 digit numbers (crossing ten)	➔ Children secure their understanding of place value by exploring the idea that ten ones are the same as ten. ➔ Children count to 20 and partition two digit numbers in order to add them. ➔ Children understand the difference between one digit and two digit numbers and line them up in columns.	Teaching Slides	Worksheet Slides
Add 2 digit numbers (not crossing ten)	➔ Children focus on the language of tens and ones and look at different methods to add the numbers including the column method. ➔ Children know that they must always start with the ones when adding using the column method.	Teaching Slides	Worksheet Slides
Add 2 digit numbers (crossing ten)	➔ Children use Base 10 and partition to add together 2 digit numbers including an exchange. ➔ Children understand that when there are more than 10 ones they exchange the 10 ones for one 10.	Teaching Slides	Worksheet Slides
Subtract 2 digit numbers (not crossing ten)	➔ Children secure their understanding of place value by exploring the idea that ten ones are the same as ten. ➔ Children count to 20 and partition two digit numbers in order to subtract them. ➔ Children understand the difference between one digit and two digit numbers and line them up in columns.	Teaching Slides	Worksheet Slides
Subtract 2 digit numbers (crossing ten)	➔ Children use concrete materials as well as drawing Base 10 to independently solve problems. ➔ Children understand that when subtracting they don't need to 'build' bot numbers.	Teaching Slides	Worksheet Slides
Bonds to 100	➔ Children build on their earlier work with number bonds to 100 with tens together with number bonds to 10 and 20. ➔ Children use their new knowledge of exchange to find number bonds to 100 with tens and ones. ➔ Using hundred squares, base 10, bead strings etc. children develop their understanding.	Teaching Slides	Worksheet Slides
Add three 1 digit numbers	➔ Children use their knowledge of commutativity to find the most efficient	Teaching Slides	Worksheet

	and quick way to add three one digit numbers. ➔ Children look for number bonds to 10 to help them add more efficiently.			Slides	
Addition and Subtraction Assessment	**Assessment**	Link	Please add end of unit assessment to Class Assessment Sheet		
	Answers	Link			

Autumn Block 3 - Money				
Small Step	**Learning Objective**	**Teaching Slides**	**Worksheet/ Worksheet Slides**	**Reasoning and Problem Solving**
Count Money - Pence	➔ Children are introduced to the £ and p symbols for the first time. ➔ Children count in 1p, 2p, 5p and 10p ➔ Children can use related facts to count in 20p coins.	Teaching Slides	Worksheet Slides	Reasoning Slides
Count Money - Pounds (notes and coins)	➔ Children continue counting but this time it is in pounds note pence. The £ symbol is introduced ➔ Children are aware that both coins and notes are used to represent amounts in pounds. ➔ Children count in £1, £2, £5, £10 and £20	Teaching Slides		
Count Money - Notes and Coins	➔ Children build on counting by bringing pounds and pence together. ➔ Decimal notation is not used until KS2 so children record totals using 'and' e.g. £5 and 30p not £5.30.	Teaching Slides		
Select Money	➔ Children select coins to make an amount from a set of coins given to them. ➔ Children continue to use both pounds and pence to embed previous learning.	Teaching Slides		

	➔ Children recognise money by selecting the correct coins or notes from a wide range.			
Make the Same Amount	➔ Children explore the different ways of making the same amount. ➔ Children count pounds and pence separately. (This should not bridge £1)		Teaching Slides	
Compare Money	➔ Children compare two different values in either pounds or pence. ➔ Children see examples with both pounds and pence, but this must be the same e.g. £3 and 10p >£2 and 10p where 10p is consistent.		Teaching Slides	
Find the Total	➔ Children build on their knowledge of addition to add money. ➔ Children use different methods to add the amounts of money, such as count on, partitioning and regrouping.		Teaching Slides	
Find the Difference	➔ Children expand their knowledge of addition and subtraction strategies by specifically finding the difference between two amounts.		Teaching Slides	
Find Change	➔ Children build on their subtraction skills by finding change from a given amount. They identify amounts from the coins given, write the calculations and choose the most efficient methods. (chn convert £1 to 100p)		Teaching Slides	
Two-Step Problems	➔ Children consolidate their previous learning including addition and subtraction skills to answer word problems. ➔ Children use Bar Models to support their understanding.		Teaching Slides	
Money Assessment	**Assessment**	Link	Please add end of unit assessment to Class Assessment Sheet	
	Answers	Link		

Autumn Block 4 - Properties of Shape				
Small Step	**Learning Objective**	**Teaching Slides**	**Worksheet**	**Reasoning and Problem Solving**
Recognise 2D and 3D shapes	➔ Before learning about their properties, children need to recognise and name both 2-D and 3-D shapes and to be able to differentiate between them. They begin to understand that 2-D shapes are actually flat and the manipulatives they handle in class are representations of the shapes. Children also need to be able to recognise 2-D shapes in different orientations and proportions.	Teaching Slides	Worksheet Slides	Reasoning Slides
Count sides on 2D shapes	➔ Children should be encouraged to develop strategies for accurate counting of sides, such as marking each side as it has been counted.	Teaching Slides		

	➔ Children also need to understand that not all same-sided shapes look the same, such as irregular 2-D shapes.			
Count vertices on 2D shapes	➔ Children are introduced to the terms vertex and vertices. They understand that a vertex is where two lines meet at a point. They recognise that corners are vertices and will be able to identify and count them on shapes. Ensure from this point forwards the word vertex is used in place of corner throughout all content.	Teaching Slides		
Draw 2D shapes	➔ Children use their knowledge of properties of shape to accurately create 2-D shapes. Children could use geoboards to make shapes with elastic bands and look carefully at the number of sides and vertices. Using geo-boards is a practical step to take before children draw their own shapes on dotted or squared paper.	Teaching Slides		
Lines of Symmetry	➔ Children are introduced to the concept of vertical lines of symmetry. They should be exposed to examples that are symmetrical and also examples that are not. ➔ Children use a range of practical resources (mirrors, geoboards, paper folding) to explore shapes being halved along their vertical line of symmetry.	Teaching Slides		
Sort 2D Shapes	➔ Children recognise and sort 2-D shapes including circle, square, triangle, rectangle, pentagon, hexagon and octagon using a range of different orientations. ➔ Children should be encouraged to sort the shapes in more than one way. They can then describe how they have sorted them using key language including side, vertex and symmetrical	Teaching Slides		
Make patterns with 2D Shapes	➔ Children use their knowledge of the properties of 2-D shapes to create patterns. ➔ They are encouraged to place the shapes in different orientations when making patterns and recognise that it is still the same shape. In particular, squares do not become diamonds when turned sideways.	Teaching Slides		
Count faces on 3D shapes	➔ Children use their knowledge of 2-D shapes to identify the shapes of faces on 3-D shapes. To avoid miscounting the faces children need to mark each face in some way. ➔ Children identify and visualise 3-D shapes from 2-D representations. Cones should be described as having 1 face and 1 curved surface; cylinders as having 2 faces and 1 curved surface and spheres having 1 curved surface.	Teaching Slides		
Count edges on 3D shapes	➔ Children use their knowledge of faces and curved surfaces to help them to identify edges on 3-D shapes. ➔ They learn that an edge is where 2 faces meet or where a face and a curved surface meet. To avoid over-counting the edges children need to mark each	Teaching Slides		

	edge in some way. ➔ Children identify and visualise the 3-D shape from a 2-D representation.				
Count vertices on 3D shapes	➔ Children use their knowledge of edges to help them to identify vertices on 3-D shapes. They understand that a vertex is where 2 or more edges meet. To avoid overcounting the vertices children need to mark each vertex in some way. The point at the top of a cone can be referred to as an apex or a vertex.		Teaching Slides		
Sort 3D shapes	➔ Children use their knowledge of shape properties to sort 3-D shapes in different ways e.g. faces, shapes of faces, edges, vertices, if they roll, if they stack… ➔ They should have access to a range of real life objects to sort and compare. Before sorting it may be useful to give children the opportunity to match the object e.g. a can of pop to a cylinder etc.		Teaching Slides		
Make patterns with 3D shapes	➔ Children use their knowledge of the properties of 3-D shapes to create patterns. They are encouraged to place the shapes in different orientations. ➔ A wide range of examples of shapes should be used, including, construction shapes, cereal boxes, different sized balls etc.		Teaching Slides		
Properties of Shape Assessment	**Assessment**	Link	Please add end of unit assessment to Class Assessment Sheet		
	Answers	Link			