

## St Bridget's CE Primary Maths Progression Map

**REFERENCING: NC14, NCETM PD MATERIALS, KS1/KS2 DFE TEST FRAMEWORK, DFE Ready To Progress Guidance**

**MNP DFE/NCETM ACCREDITED TEXTBOOK**

*Specific NCETM PD Materials have been referenced but the whole spine for each area should be studied to ensure sequencing and progression of ideas*

*Please use the non statutory guidance (Ready to Progress materials) to support identifying key learning at each stage*

### Addition and Subtraction

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>NUMBER BONDS</b>						
<p><b>Automatically recall (without reference to rhymes, counting or other aids) number bonds to 5 (including subtraction facts) and some number bonds to 10, including double facts</b></p> <p><b>Substis up to 5</b> NCETM LINK <i>Children need opportunities to see small numbers within a larger collection. 'Number talks' allow children to discuss what they see ie. There are 5 spots altogether. I can see 4 and 1, I can see 3 and 2, I can see 1 and 1 and 1 and 1 and 1.</i> <i>Explore all the ways that e.g five can be and look to encourage conservation.</i> <i>Partition a number of things into two groups and recognise that those groups can be recombined to make the same total.</i></p>	<p><b>Represent and use number bonds and related subtraction facts within 20</b></p> <p><i>MNP Chapter 1 Link In this chapter, pupils will be exploring the building blocks of numbers. In the first lesson, pupils are exploring different ways of making numbers using the number bond diagrams. In the second lesson, they are using their understanding of number bonds to create number stories using pictorial representations. This unit is designed to support pupil understanding of number and the versatility of numbers for later use in mental methods</i> <i>MNP Chapter 3 Link In this chapter, pupils will come across different ways of adding to 10. They will encounter the part-whole</i></p>	<p><b>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</b></p> <p><i>MNP Chapter 2 link This chapter looks at addition and subtraction using number bond diagrams as well as the standard column method. Pupils will be taken through each lesson with slight variations in the learning objects so that they can reach a level of mastery</i> <i>Chapter 9 In this chapter, pupils will be looking at using addition and subtraction to help them solve word problems. Initially, pupils will be looking at when addition and subtraction are most appropriate: teaching them decision making. The bar model method emphasis in this</i></p>				

<p>Explore a range of ways to partition a whole number and identify the pairs of numbers that make a total. Recognise and explore how a number can be partitioned into more than two groups. Know which pairs make a given number even when one part is 'hiding' in a known number of things.</p>	<p>diagram and begin to lay the foundations of the inverse of addition. They will also begin to make their own addition equation in order to support the deeper understanding of the processes of addition  <b>Chapter 4 Link</b>  <i>In this chapter, pupils will learn that subtraction equations can be done in three ways: by crossing out, by using number bonds and by counting back. They will continue to use manipulatives and pictorial representations to support their understanding and use vocabulary appropriately</i>  <b>Chapter 2</b>  <b>Lesson 1 making Number Bonds</b>  <b>Lesson 2 making Number Stories</b>  <b>Chapter 4</b>  <b>Lesson 1 Subtract by crossing out</b>  <b>Lesson 2 Subtract by using number bonds</b>  <b>Lesson 3 Subtract by counting back</b>  <b>Chapter 7</b>  <b>Lesson 4 Subtract by counting back</b>  <b>Lesson 5 Subtract by subtracting ones</b>  <b>Lesson 6 Subtract from 10</b>  <b>Lesson 7 Addition and Subtraction Facts</b>  <b>Chapter 11</b>  <b>Lesson 2 Solving Word Problems</b></p>	<p>chapter focuses on modelling two different amounts by recognising what is the same about the two amounts (two equal bars) plus the difference (the greater amount). This is important for later constructions involving more complex problems  <b>Chapter 2</b>  <b>Lesson 5 adding with renaming</b>  <b>Lesson 6 Adding with renaming</b>  <b>Lesson 11 Subtracting with renaming</b>  <b>Chapter 9</b>  <b>Lesson 1 Solving word problems</b></p>				
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	Lesson 3 Solving Word Problems Lesson 6 Solving Word Problems					
<b>MENTAL CALCULATION</b>						
<p><b>Have a deep understanding of number to 10, including the composition of each number</b></p> <p><i>NCETM LINK</i> <i>begin to generalise the one more one less relationship between sequential numbers</i> <i>If shown two numerals, children can say which is larger by counting or matching one to one.</i> <i>Children can compare numbers that are far apart, near to each other and next to each other.</i> <i>Children recognise that if they add one, they will get the next number, or if one is taken away they will have the previous number.</i></p>	<p><b>Add and subtract one-digit and two digit numbers to 20, including zero</b> <i>NCETM PD MATERIALS LINK</i> <i>1.5 Additive structures: introduction to aggregation and partitioning</i> <i>1.6 Additive structures: introduction to augmentation and reduction</i> <i>1.7 Addition and subtraction: strategies within 10</i></p> <p><i>MNP Chapter 3,4 links as before</i> <i>Plus</i> <i>Chapter 7</i> <i>In this chapter pupils will learn different ways to add and subtract numbers within 20</i> <i>Chapter 11</i> <i>Addition and Subtraction Word Problems</i> <b>Chapter 3</b> <b>Lesson 1 Add by using number bonds</b> <b>Lesson 2 Add by counting on</b> <b>Chapter 4</b> <b>Lesson 1 Subtract by crossing out</b> <b>Lesson 2 Subtract by using number bonds</b></p>	<p><b>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</b> <b>A two- digit number and ones</b> <b>A two-digit number and tens</b> <b>Two two-digit numbers</b> <b>Adding three one-digit numbers</b> <i>NCETM PD MATERIALS LINK</i> <i>1.11 Addition and subtraction: bridging 10</i> <i>1.12 Subtraction as difference</i> <i>1.13 Addition and subtraction: two-digit and single-digit numbers</i> <i>1.14 Addition and subtraction: two-digit numbers and multiples of ten</i> <i>1.15 Addition: two-digit and two-digit numbers</i> <i>1.16 Subtraction: two-digit and two-digit numbers</i> <i>MNP Chapter 2 and 9 link as above</i> <b>Chapter 2</b> <b>Lesson 1 Simple Adding</b> <b>Lesson 2 Simple Adding</b> <b>Lesson 3 Simple Adding</b> <b>Lesson 6 Adding with renaming</b> <b>Lesson 7 Simple subtracting</b></p>	<p><b>Add and subtract numbers mentally, including:</b> <b>A three-digit number and ones</b> <b>A three- digit number and tens</b> <b>A three-digit number and hundreds</b> <i>NCETM PD MATERIALS LINK</i> <i>1.17 Composition and calculation: 100 and bridging 100</i> <i>1.18 Composition and calculation: three-digit numbers</i> <i>1.19 Securing mental strategies: calculation up to 999</i> <i>MNP Chapter 2 Link</i> <i>This chapter covers addition and subtraction.</i> <i>The chapter starts off with simple addition before moving on to addition where renaming is required. Subtraction is also covered in a similar way where simple subtraction is mastered before moving to subtraction where renaming is required. Once pupils master addition and subtraction, they start to look at problem solving questions and practice using bar models</i> <b>Chapter 2</b></p>		<p><b>Add and subtract numbers mentally with increasingly large numbers</b> <i>NCETM PD MATERIALS LINK</i> <i>1.26 Composition and calculation: multiples of 1,000 up to 1,000,000</i></p> <p><i>MNP Chapter 2 Link</i> <i>In this unit, pupils will be exploring addition and subtraction of numbers to 1 000 000. They will begin the unit by using simple strategies to add and subtract, such as counting on and counting back. They will then focus on adding within 1 000 000 and subtracting within 1 000 000. Pupils will use multiple key methods, such as the column method and number bonds to add and subtract numbers. Pupils will have access to concrete materials throughout the unit, improving their visualisation and mental skills. The unit ends with consolidation activities with number cards, putting pupils' knowledge and understanding into practice</i> <b>Chapter 2</b> <b>Lesson 1 Counting on to add</b></p>	<p><b>Perform mental calculations, including with mixed operations and large numbers</b> <i>NCETM PD MATERIALS LINK</i> <i>1.30 Composition and calculation: numbers up to 10,000,000</i></p>

	<p>Lesson 3 Subtract by counting back Chapter 7 Lesson 4 Subtract by counting back Lesson 5 Subtract by subtracting ones Lesson 6 Subtract from 10 Lesson 7 Addition and Subtraction facts Chapter 11 Lesson 1 Solving Word Problems Lesson 4 Solving Word Problems Lesson 6 Solving Word Problems</p>	<p>Lesson 8 Simple subtracting Lesson 10 Simple subtracting Lesson 12 Subtracting with renaming Lesson 13 Addition of 3 numbers Chapter 9 Lesson 3 Solving word problems Lesson 4 Solving word problems</p>	<p>Lesson 1 addition and Subtraction facts Lesson 2 Simple adding Lesson 3 Simple Adding Lesson 4 Simple Adding Lesson 11 Simple Subtracting Lesson 12 Simple Subtracting Lesson 13 Simple Subtracting Lesson 14 Simple Subtracting</p>		<p>Lesson 2 Counting backwards to subtract Lesson 3 Adding within 1000000 Lesson 4 Adding and subtracting within 1000000 Lesson 5 Adding within 1000000 Lesson 6 Subtracting within 1000000 Lesson 8 Adding within 1000000</p>	
	<p><b>Read, write and interpret mathematical statements involving addition and subtraction and equal signs</b> NCETM PD MATERIALS LINK 1.5-1.7 above <i>MNP Chapter 2,3,4,7 link plus Chapter 11</i> <i>This chapter provides a context for concepts previously taught in counting, addition and subtraction. It provides the foundations for the visual and proportional representation required for using bar modelling as the primary strategy for solving word problems. In this chapter, pupils will be reinforcing and contextually using number bonds and simple bars to</i></p>	<p><b>Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</b> <i>MNP Chapter 2 link as above</i> <b>Additional teaching objective to be included in all addition and subtraction lessons rather than a specific lesson</b></p>				<p><b>Use their knowledge of the order of operations to carry out calculations involving the four operations</b> <i>NCETM PD MATERIALS LINK</i> <i>1.30 as above</i>  <i>MNP Chapter 2 Link</i> <i>In this unit, pupils will be exploring the four operations, in combination and in isolation. The unit begins with lessons on creating and solving expressions involving brackets, exponents, multiplication, division, addition and subtraction. Pupils are then multiplying 3- and 4-digit numbers by 2-digit numbers using number bonds and column multiplication as the key methods. After this, they</i></p>

	<p><i>represent word problems. In addition, they will be putting into practice concepts previously taught in number comparison, specifically looking at how many more or how many fewer/less</i></p> <p><b>Chapter 3</b>  <b>Lesson 1 Add by using number bonds</b>  <b>Lesson 2 Add by counting on</b></p> <p><b>Chapter 4</b>  <b>Lesson 1 Subtract by crossing out</b>  <b>Lesson 2 Subtract by using number bonds</b>  <b>Lesson 3 Subtract by counting back</b>  <b>Lesson 4 Making Subtraction stories</b>  <b>Lesson 5 Solving Picture Problems</b>  <b>Lesson 6 Addition and Subtraction</b></p> <p><b>Chapter 7</b>  <b>Lesson 1 add by counting on</b>  <b>Lesson 2 Add by making 10</b>  <b>Lesson 3 Add by adding ones</b>  <b>Lesson 7 Addition and Subtraction facts</b></p> <p><b>Chapter 11</b>  <b>Lesson 1 Solving word problems</b>  <b>Lesson 2 Solving word problems</b>  <b>Lesson 5 solving word problems</b></p>					<p><i>are estimating the product of multiplication sentences before moving on to division. Pupils are dividing 3- and 4-digit numbers by 2-digit numbers using a variety of methods, including number bonds and long division. Pupils then begin solving more complex word problems involving multiple operations, including multiplication and division, with bar models being a main heuristic in addition to other pictorial methods. Pupils are then challenged by finding common multiples and common factors before ending the unit exploring prime numbers</i></p> <p><b>Chapter 2</b>  <b>Lesson 1 using mixed operations</b>  <b>Lesson 2 using mixed operations</b>  <b>Lesson 4 Multiply by 2 digit numbers</b></p>
<b>WRITTEN METHODS</b>						

	<p><b>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</b>  <i>NCETM PD MATERIALS LINK</i>  <i>1.5-1.7 above</i>  <i>MNP Links as above</i>  <b>Chapter 3</b>  <b>Lesson 1 Add by using number bonds</b>  <b>Lesson 2 Add by counting on</b>  <b>Chapter 4</b>  <b>Lesson 1 Subtract by crossing out</b>  <b>Lesson 2 Subtract by using number bonds</b>  <b>Lesson 3 Subtract by counting back</b>  <b>Lesson 4 Making Subtraction stories</b>  <b>Lesson 5 Solving Picture Problems</b>  <b>Lesson 6 Addition and Subtraction</b>  <b>Chapter 7</b>  <b>Lesson 1 add by counting on</b>  <b>Lesson 2 Add by making 10</b>  <b>Lesson 3 Add by adding ones</b>  <b>Lesson 7 Addition and Subtraction facts</b>  <b>Chapter 11</b>  <b>Lesson 1 Solving word problems</b>  <b>Lesson 2 Solving word problems</b>  <b>Lesson 5 solving word problems</b></p>	<p><i>NCETM PD MATERIALS LINK</i>  <i>1.11-1.16 above</i>  <i>MNP Chapter 2 Links as above</i></p>	<p><b>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</b>  <i>NCETM PD MATERIALS LINK</i>  <i>1.20 Algorithms: column addition</i>  <i>1.21 Algorithms: column subtraction</i>  <i>MNP Chapter 2 Link as above plus</i>  <b>Chapter 8</b>  <i>This is a large chapter on money. It allows pupils to consolidate previous learning on recognising different denominations (both notes and coins) and the simple addition and subtraction of money. It further develops the concepts related to addition and subtraction of money using number bonds as a key method. Pupils are then expected to apply their new knowledge to solve word problems using bar modelling as a key strategy</i>  <b>Chapter 2</b>  <b>Lesson 5 Simple Adding</b>  <b>Lesson 6 Adding with renaming</b>  <b>Lesson 7 Adding with renaming</b>  <b>Lesson 8 Adding with renaming</b>  <b>Lesson 9 Adding with renaming</b>  <b>Lesson 10 Adding with renaming</b></p>	<p><b>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</b>  <i>NCETM PD MATERIALS LINK</i>  <i>1.22 Composition and calculation: 1,000 and four-digit numbers</i>  <i>MNP Chapter 2 Link</i>  <i>In this chapter pupils will be taught to add and subtract with numbers up to 10 000. They will use the column method for addition and subtraction and they will also learn mental methods for addition and subtraction. Pupils will be encouraged to think about when is the most appropriate time to use each method. They will use the methods taught to solve word problems: visualising the problems using the bar model</i>  <b>Chapter 2</b>  <b>Lesson 1 Finding Sums</b>  <b>Lesson 2 Addition without renaming</b>  <b>Lesson 3 Addition with renaming</b>  <b>Lesson 4 Addition with renaming</b>  <b>Lesson 5 Addition with renaming</b>  <b>Lesson 6 Addition using mental strategies</b>  <b>Lesson 7 Addition using mental strategies</b></p>	<p><b>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</b>  <i>NCETM PD MATERIALS LINK</i>  <b>1.26 as above and</b>  <i>1.28 Common structures and the part-part-whole relationship</i>  <i>1.29 Using equivalence and the compensation property to calculate</i>  <i>MNP Chapter 2 link as above plus</i>  <b>Chapter 4</b>  <i>In this chapter, pupils are solving word problems that involve multiple steps and a variety of operations. Pupils begin the unit by simply choosing the correct operation before moving onto representing the key information using bar models. Applying the strategies learned in previous units is key in solving the challenges. The chapter ends with complex representations of numbers and change using advanced bar models</i>  <b>Chapter 2</b>  <b>Lesson 1 Counting on to add</b>  <b>Lesson 2 Counting backwards to subtract</b>  <b>Lesson 3 Adding within 1000000</b>  <b>Lesson 4 Adding and subtracting within 1000000</b></p>	
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<b>INVERSE OPERATIONS , ESTIMATING and CHECKING ANSWERS</b>						
<p><i>NCETM LINK</i> Partition a number of things into two groups, and recognise that those groups can be recombined to make the same total.</p>		<p>Recognise and use the inverse relationships between addition and subtraction and use this to check calculations and solve missing number problems MNP Chapter 2 and 9 link as above Chapter 9 link Lesson 2 Solving Word Problems</p>	<p>Estimate the answer to a calculation and use inverse operations to check answers MNP Chapter 2 Chapter 2 Lesson 7 Addition with renaming</p>	<p>Estimate and use inverse operations to check answers to a calculation MNP Chapter 2 Chapter 2 Lesson 3 Addition with renaming Lesson 4 Addition with renaming Lesson 5 Addition with renaming Lesson 16 Solving Word Problems</p>	<p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy  MNP Chapter 1 Link In this chapter, pupils will be looking at numbers and their place value to 1 000 000. The chapter begins reviewing how to read and write numbers to 100 000, quickly moving onto numbers to 1 000 000. Time is spent using concrete materials to represent numbers to 1 000 000, including number discs and place-value charts. Pupils then compare numbers to 1 000 000 using their knowledge of place value in addition to bar model supports to assist them. Pupils complete the unit by making number patterns and rounding numbers to</p>	<p>Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy  MNP Chapter 1 Link In this first unit of Year 6, pupils are refining their knowledge of place value, working with numbers between 1 000 000 and 10 000 000. They begin the chapter reading and writing numbers to 10 000 000 using number discs, numerals and words. An additional lesson using an abacus is provided to deepen and extend their sense of number and place value. Pupils are then asked to round and compare numbers to 10 000 000, followed by placing them in order from smallest to greatest. The unit ends with pupils rounding numbers to</p>

					<p>the nearest 10, 1000, 10 000 and 100 000 Chapter 2 link as above <b>Chapter 2</b> Lesson 3 adding within 1000000 Lesson 5 Adding within 1000000 Lesson 6 Subtracting within 1000000 Lesson 8 Adding within 1000000 Lesson 9 Subtracting within 10000000 Lesson 10 Subtracting within 1000000</p>	<p>various values and determining when it is appropriate to round numbers Chapter 2 link as above <b>Chapter 2</b> Lesson 5 Multiply by 2 digit numbers Lesson 6 Multiply by 2 digit numbers Lesson 7 Multiply by 2 digit numbers</p>
<b>PROBLEM SOLVING</b>						
<p>NCETM LINK Children need opportunities to apply their understanding. Look for reasoning in the response they by comparing actual numbers and explaining which is more eg. A child is shown two boxes and told one has 5 sweets in and one has 3 sweets in. Which box would they pick to keep and why? Look for reasoning in the response they give.</p>	<p><b>Solve one- step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = \square - 9</math></b> NCETM PD MATERIALS LINK 1.5-1.7 above MNP Chapter 3,4,7,11 link as above <b>Chapter 3</b> <b>Lesson 3 Completing number sentences</b> <b>Lesson 4 Making Addition Stories</b> <b>Lesson 5 Solving Picture Problems</b> <b>Chapter 4</b> <b>Lesson 4 Making Subtraction stories</b> <b>Lesson 5 Solving Picture Problems</b> <b>Lesson 6 Addition and Subtraction</b> <b>Chapter 7</b></p>	<p><b>Solve problems with addition and subtraction: Using concrete objects and pictorial representations, including those involving numbers, quantities and measures</b> <b>Applying their increasing knowledge of mental and written methods</b> <b>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</b> NCETM PD MATERIALS LINK 1.11-1.16 above MNP Chapter 2 link as above plus MNP Chapter 5 Link In this chapter pupils will get a better understanding of how to measure length. They will begin by understanding what a metre is and what</p>	<p><b>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</b> NCETM PD MATERIALS LINK 1.17-1.21 as above MNP Chapter 8 link as above plus Chapter 5 This chapter looks at length in metres and centimetres before moving on to kilometres. Pupils will learn to measure different items using centimetres, metres and kilometres. They will also be able to convert different units of measurement as well as compare different lengths. The chapter ends with five lessons on problem solving involving length, in which pupils use their mental and procedural skills to solve problems with the aid of</p>	<p><b>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</b> NCETM PD MATERIALS LINK 1.22 as above and 1.25 Addition and subtraction: money  MNP chapter 2 as above link plus Chapter 9 In this chapter, pupils will learn how to count and record in pounds and pence. They will make links between tenths and hundredths and decimal notation for money. They will learn how to compare amounts of money by looking at significant digits and by converting amounts from pounds to pence and vice versa. Pupils will be</p>	<p><b>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</b> NCETM PD MATERIALS LINK 1.26-1.29 as above  MNP Chapter 2 and 4 Link as above <b>Chapter 2</b> <b>Lesson 7 Addition and Subtraction within 1000000</b> <b>Lesson 8 Adding within 1000000</b> <b>Lesson 9 Subtracting within 1000000</b> <b>Lesson 10 Subtracting within 1000000</b></p>	<p><b>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</b> <b>Solve problems involving addition, subtraction, multiplication and division.</b> NCETM PD MATERIALS LINK 1.30 as above 1.31 Problems with two unknowns  MNP Chapter 5 link In this chapter, the focus is on converting units of measurement using fractions and decimals. Pupils begin by converting units of length and distance followed by exploring units of mass, volume and time. While most of the chapter considers metric conversions, time is</p>



	<p><b>Lesson 6 Subtract from 10</b>  <b>Chapter 11</b>  <b>Lesson 3 Solving word problems</b>  <b>Lesson 4 Solving word problems</b>  <b>Lesson 5 Solving word problems</b>  <b>Lesson 6 Solving word problems</b></p>	<p><i>centimetres are and then progress to using them in real-life contexts</i>  <i>Chapter 6</i>  <i>In this chapter, pupils will be learning about mass in the context of kilograms and grams. They will learn how to read a scale, to compare the weight of different objects and to solve word problems relating to mass</i>  <i>Chapter 9</i>  <i>In this chapter, pupils will be looking at using addition and subtraction to help them solve word problems. Initially, pupils will be looking at when addition and subtraction are most appropriate: teaching them decision making. The bar model method emphasis in this chapter focuses on modelling two different amounts by recognising what is the same about the two amounts (two equal bars) plus the difference (the greater amount). This is important for later constructions involving more complex problems</i>  <i>Chapter 10</i>  <i>This is the final chapter on money in Year 2. Pupils will be reviewing concepts on writing and counting money in addition to extending their knowledge of how to represent money using £ and p. They will be reinforcing previous counting methods using</i></p>	<p><i>the bar model method for visualisation</i>  <i>Chapter 6</i>  <i>This chapter looks at length in metres and centimetres before moving on to kilometres. Pupils will learn to measure different items using centimetres, metres and kilometres. They will also be able to convert different units of measurement as well as compare different lengths.</i>  <i>The chapter ends with five lessons on problem solving involving length, in which pupils use their mental and procedural skills to solve problems with the aid of the bar model method for visualisation</i>  <b>Chapter 2</b>  <b>Lesson 6 Add with renaming</b>  <b>Lesson 16 Subtracting with renaming</b>  <b>Lesson 17 Subtracting with renaming</b>  <b>Lesson 18 Subtracting with renaming</b>  <b>Lesson 19 Subtracting with renaming</b>  <b>Lesson 20 Using models</b>  <b>Lesson 21 Using Models</b>  <b>Lesson 22 Using Models</b>  <b>Lesson 23 Using Models</b></p>	<p><i>taught how to round money to the nearest pound and understand contexts in which this would be a useful skill to know. They will use this skill to estimate amounts and totals. They will apply these skills to problem-solving situations, finding totals and calculating change. They will also learn how to visualise a money problem using a bar model and begin to explore unequal sharing in the context of money</i>  <b>Chapter 2</b>  <b>Lesson 15 Solving word problems</b>  <b>Lesson 16 Solving word problems</b>  <b>Lesson 17 Solving word problems</b></p>		<p><i>challenging as it does not follow multiples of 10, 100 or 1000</i>  <i>MNP Chapter 6 Link</i>  <i>In this chapter, pupils solve complex word problems using the four operations and bar model diagrams. To start the unit, pupils learn that making bar models of the same size can be helpful, but that one must remember to change the information in the problem to match. The second lesson reinforces the idea that models of the same size can make solving word problems more simple. In the third lesson, pupils find common representations in each diagram and add or subtract time to solve for a unit's value. The fourth lesson is slightly different in that a traditional bar model will not be helpful. The In Focus task requires high-order reasoning and picture drawing. In the last two lessons, pupils create and solve word problems</i>  <b>Chapter 2</b>  <b>Lesson 3 Multiply by 2 digit numbers</b>  <b>Lesson 4 Multiply by 2 digit numbers</b>  <b>Lesson 5 Multiply by 2 digit numbers</b>  <b>Lesson 6 Multiply by 2 digit numbers</b>  <b>Lesson 7 Multiply by 2 digit numbers</b></p>
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		<p>fives and tens to count quickly and efficiently. They will be required to show equal amounts of money and how to exchange money. By the end of the unit, they will be using bar modelling to calculate the total amount of money spent and then working out how much change is required from amounts below £100</p> <p><b>Chapter 2</b></p> <p><b>Lesson 4 Simple adding</b></p> <p><b>Lesson 5 adding with renaming</b></p> <p><b>Lesson 9 Simple subtracting</b></p> <p><b>Lesson 12 Subtracting with renaming</b></p> <p><b>Chapter 9</b></p> <p><b>Lesson 1 Solving word problems</b></p> <p><b>Lesson 2 Solving word problems</b></p> <p><b>Lesson 3 Solving word problems</b></p> <p><b>Lesson 4 Solving word problems</b></p> <p><b>Chapter 10</b></p> <p><b>Lesson 7 Comparing amounts of money</b></p> <p><b>Lesson 8 Calculating total amount</b></p> <p><b>Lesson 9 Calculating change</b></p> <p><b>Lesson 10 Solving word problems</b></p>				<p><b>Lesson 9 Divide by 2 digit numbers</b></p> <p><b>Lesson 10 Divide by 2 digit numbers</b></p> <p><b>Lesson 11 Divide by 2 digit numbers</b></p> <p><b>Lesson 12 Divide by 2 digit numbers</b></p> <p><b>Lesson 13 Divide by 2 digit numbers</b></p> <p><b>Lesson 14 Solve Word Problems</b></p> <p><b>Lesson 15 Solve Word problems</b></p> <p><b>Lesson 16 Solve Word Problems</b></p>
<b>Concrete Resources/ Manipulatives : Identifying and Representing</b>						
<i>Objects for counting Counters Linking cubes</i>	<i>Objects for counting (10)</i>	<i>0–9 digit cards (one between two)</i>	<i>Whiteboards and pens (between two)</i>	<i>Base 10 materials (between two)</i>	<i>Place-value charts (between two)</i>	<i>Counters (between two) Six-sided dice (one between four)</i>

<p>Ten frames Part whole laminated diagrams Numicon Digit cards Number tracks</p>	<p>Part-whole diagram (made from three paper plates) (one between two) Linking cubes (10 between two) Paper plates (three between two) Number discs (10 between two) Counters Laminated part-whole diagrams (one between two) Linking cubes counters Bead strings (one between two) Number bonds within 10 flashcards 0–10 number lines (one between two) A bag/box for hiding objects Subtraction equation cards within 10 (one set between four) Whiteboards and pens (between two) Subtraction flashcards within 10 (one between two) 0–20 number tracks (one between two) Nine-sided dice (one between two or three) Six-sided dice (one between two or three) Ten frames (two between two) 0–9 digit cards (two sets between two) Square tiles (20 between two) 1–4 and 10–15 digit cards (one set between groups of three to four)</p>	<p>Place-value charts (one between two) Laminated part-whole diagrams (one between two) Objects for counting Baskets/boxes Number lines/tracks Tens and ones (to 100) (one set between two) Blank number tracks Six-sided dice (two between two) Base 10 materials Strips of paper (for bar modelling) Whiteboards and pens (between two) Coins and notes (set between two) Cards showing amounts of money to match coins (set between two) Sterling notes set (between two) Coins (set between two) Envelopes with pre-made amounts of money enclosed (set between two) Labelled 'shop' objects (set between four)</p>	<p>0–9 digit cards (between two) Blank number tracks (between two) Base 10 materials (between two) Place-value charts (between two) 0, 2 and 4–9 digit cards (one set between two) 2–4 and 7–9 digit cards (one set between two) Number line to 100 Number lines (increments marked) (between two) Linking cubes Coins and notes (full set or more between two) Priced items 'for sale' (set between two) Coins (full set or more between two) Price list/shopping list (between four) Leaflet displaying shop prices (between four) Newspapers (between four) Magazines (between four) Catalogues (between four)</p>	<p>Place-value charts (between two) Place-value discs 2–8 digit cards (between two) Base 10 materials/place-value discs (useful but not essential) Whiteboards and pens (between two) Card strips divided into tenths (between two) Card strips (between two) £2; £1; 10p coins (between two) Coins (set between two) Pennies (between two) Coins and notes (set between two) Laminated number lines (10 increments) (between two) Bar model strips (between two) Place-value charts (between two)</p>	<p>Place-value discs (between two) 1–9 digit cards (each) Number cards (one set between two) Blank number lines (increments marked)</p>	<p>Operations cards 1–6 digit cards (set between four) Place-value discs (between two) 1–9 digit cards (set between three or four) Square coloured tiles (between two)</p>
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	<i>0-9 and 1-20 digit cards (one set between three to four)</i>					
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