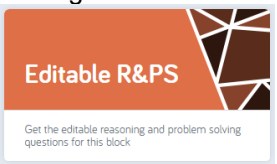
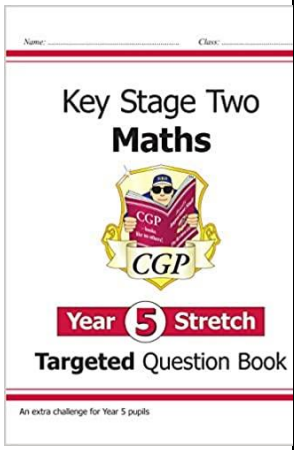
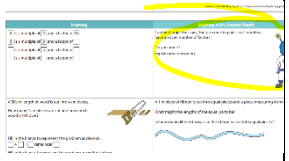
	Essentials Planning	DfE core guidance	NCETM PD spine materials	Challenge
5LS1	**Place Value and Rounding of Large Numbers**	Not covered in DfE Core Guidance until year 6 as part of up to 10 million **6NPV–2** Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.	Not covered in DfE Core Guidance until year 6 as part of up to 10 million 1.30 Composition and calculation: numbers up to 10,000,000 https://www.ncetm.org.uk/classroom-resources/primm-1-30-composition-and-calculation-numbers-up-to-10-000-000/	**Option 1:** Click on relevant White Rose link in previous column e.g. https://resources.whiterosemaths.com/resources/year-5/autumn-block-1-place-value/ and click on editable reasoning and problem solving: 
5LS3	**Place Value of Numbers with up to Three Decimal Places**	**5NPV–1** Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	1.23 Composition and calculation: tenths https://www.ncetm.org.uk/classroom-resources/primm-1-23-composition-and-calculation-tenths/ 1.24 Composition and calculation: hundredths and thousandths https://www.ncetm.org.uk/classroom-resources/primm-1-24-composition-and-calculation-hundredths-and-thousandths/	**Option 2:** Recommended books: 
		5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning		
		5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system,		

		including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each	
5LS4	**Multiply and Divide by 10, 100 and 1,000**	5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size	2.13 Calculation: multiplying and dividing by 10 or 100 https://www.ncetm.org.uk/classroom-resources/primm-2-13-calculation-multiplying-and-dividing-by-10-or-100/
5LS2	**Interpret Negative Numbers**		
5LS40	**Roman Numerals**		
5LS5	**Properties of Number – Multiples, Factors and Common Factors**	5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	2.9 Times tables:7 and patterns within or across times tables https://www.ncetm.org.uk/classroom-resources/primm-2-09-times-tables-7-and-patterns-within-across-times-tables/ 2.21 Factors, multiples, prime numbers and composite numbers https://www.ncetm.org.uk/classroom-resources/primm-2-21-factors-multiples-prime-numbers-and-composite-numbers/
5LS6	**Prime and Composite Numbers**		
5LS7 5LS8	**Multiply and Divide Mentally Solve Problems Involving Knowledge of Key Facts**	5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).	
5LS9	**Add and Subtract Using a Range of Strategies**		
5LS10	**Add and Subtract Using Formal Written Methods**		
5LS11	**Formal Written Method for Multiplication**	5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	2.14 Multiplication: partitioning leading to short multiplication https://www.ncetm.org.uk/classroom-resources/primm-2-14-multiplication-partitioning-leading-to-short-multiplication/

Option 3: NCETM primary assessment materials for Year 5 which have a master with greater depth column

https://www.ncetm.org.uk/classroom-resources/assessment-materials-primary/



Option 4: NRICH– use the

Year 5 long term plan mapping document

5LS12	**Formal Written Method of Short Division**	**5MD–4** Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.	2.15 Division: partitioning leading to short division https://www.ncetm.org.uk/classroom-resources/primm-2-15-division-partitioning-leading-to-short-division/
5LS29	**Formal Methods for Division**		
5LS30	**Multiplication in Increasingly Complex Problems Strategies for Multiplication and Division (Mental and Written)**		
5LS20	**Area**	**5G–2** Compare areas and calculate the area of rectangles (including squares) using standard units.	2.16 Multiplicative contexts: area https://www.ncetm.org.uk/classroom-resources/primm-2-16-multiplicative-contexts-area-and-perimeter-1/
5LS16	**Problem Solving – All Four Operations**		
5LS13	**Equivalent Fractions**	**5F–2** Find equivalent fractions and understand that they have the same value and the same position in the linear number system	3.7 Finding equivalent fractions and simplifying fractions https://www.ncetm.org.uk/classroom-resources/primm-3-07-finding-equivalent-fractions-and-simplifying-fractions/ VIDEOS Upper Key Stage 2 fractions video lessons, lessons 1 – 9 https://www.ncetm.org.uk/classroom-resources/vl-upper-key-stage-2-fractions-video-lessons/
5LS14	**Compare and Order Fractions**		
5LS15	**Adding and Subtracting Fractions**		
5LS17	**Multiply Fractions by Whole Numbers**	**5F–1** Find non-unit fractions of quantities.	3.6 Multiplying whole numbers and fractions https://www.ncetm.org.uk/classroom-resources/primm-3-06-multiplying-whole-numbers-and-fractions/
5LS18	**Fraction Problem Solving** Incorporate problem solving into		

National Curriculum tracking document to locate relevant material https://docs.google.com/spreadsheets/d/1j6RPbZA1i0tdJDZtwBjiNtwJQE-1NcmtHYgQJdJrvDM/edit#gid=694489868

	apply and challenge questions in other units		
5LS22	**Percentages**	**5F–3** Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$, and for multiples of these proper fractions.	3.10 Linking fractions, decimals and percentages https://www.ncetm.org.uk/classroom-resources/primm-3-10-linking-fractions-decimals-and-percentages/ Upper Key Stage 2 linking fractions, decimals and percentages video lessons, lessons 1 – 4 https://www.ncetm.org.uk/classroom-resources/vl-upper-key-stage-2-linking-fractions-decimals-and-percentages-video-lessons/
5LS23	**Problem Solving – Percentages**	**5NPV–4** Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	1.23 Composition and calculation: tenths https://www.ncetm.org.uk/classroom-resources/primm-1-23-composition-and-calculation-tenths/ 1.24 Composition and calculation: hundredths and thousandths https://www.ncetm.org.uk/classroom-resources/primm-1-24-composition-and-calculation-hundredths-and-thousandths/
		5NPV–5 Convert between units of measure, including using common decimals and fractions	3.10 Linking fractions, decimals and percentages https://www.ncetm.org.uk/classroom-resources/primm-3-10-linking-fractions-decimals-and-percentages/
5LS19	**Converting Units of Measure**		
5LS32	**Conversion of Imperial and Metric Units of Measure**		
5LS21	**Volume and Capacity**		
5LS24	**3-D Shapes from 2-D Representations**		
5LS25	**Reflection and Translation**		
5LS26	**Perimeter**		2.16 Multiplicative contexts: area and perimeter 1

			https://www.ncetm.org.uk/classroom-resources/primm-2-16-multiplicative-contexts-area-and-perimeter-1/	
5LS27	**Estimate, Compare, Measure and Draw Angles**	5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.		
5LS28	**Identify Unknown Angles**			
5LS31	**Solving Problems involving Scaling by Simple Fractions and Rates**			
5LS33	**Fractions, Decimals and Percentages Problem Solving** LEAVE OUT – incorporate problem solving into apply and challenge questions in other units			
5LS34	**Reading Timetables and Calculating with Time** drip into maths meetings			
5LS35	**Solve Problems involving the Four Operations** Incorporate problem solving into apply and challenge questions in other units			
5LS36	**Distinguish between Regular and Irregular Polygons**			
5LS37	**Use Properties of Rectangles**			
5LS38	**Statistics – Solve Comparison, Sum and Difference Problems using Information in a Line Graph** Incorporated into Science lessons			
5LS39	**Statistics – Interpreting and Evaluating Information Presented in Charts and Tables** Incorporated into Science lessons			

Year 5 long term plan mapping document