


Learning Plan 4		Subject/Pwnc: Mathemateg		Year/Blwyddyn: 10 (B)	
<p><u>The Four Purposes in Maths and Numeracy:</u></p> <p>Ambitious, capable learners who: set themselves high standards; seek and enjoy challenge; are increasingly knowledgeable and skilful; are questioning; enjoy solving problems; can communicate effectively; can explain the ideas and concepts; can use number effectively; understand how to interpret data and apply mathematical concepts</p> <p>Enterprising, creative contributors who: connect and apply their knowledge and skills to create ideas; think creatively to reframe and solve problems; identify and grasp opportunities; take measured risks</p> <p>Ethical, informed citizens</p> <p>Healthy, confident individuals who: face and overcome challenge; have the skills and knowledge to manage everyday life</p> <p>Knowledge focus/what matters:</p> <p><i>The number system is used to represent and compare relationships between numbers and quantities.</i> <i>Algebra uses symbol systems to express the structure of mathematical relationships.</i> <i>Geometry focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world.</i></p>				 <p>CHRIST THE WORD CATHOLIC SCHOOL CRIST Y GAIR</p>	
Learning objective/key question	What will I know and be able to do? I can...	How will I develop my skills? (Success Criteria)	Homework/Gwaith cartref to support progress		
<p>Weeks 1-2: Miss Duffy/Mrs MacKenzie-Chadwick</p> <p>Feedback and review of mock exam</p>	<ul style="list-style-type: none"> Respond to feedback from mock exam Make corrections to mock exam paper Identify areas to improve Make an improved attempt at an exam style paper 	<p>Recall and use mathematical knowledge</p> <p>Select and apply mathematical methods</p> <p>Demonstrate strategic competence by making connections between different aspects of mathematics and using mathematical skills in unfamiliar contexts</p>	Week 1	<p>HW:</p> <p>Set: 23/2/26 Due: 2/3/26</p>	
<p>Weeks 1-2: Mrs Draper</p> <p>Understanding and using the 4 operations</p>	<ul style="list-style-type: none"> understand and use number operations and the relationships between them, including inverse operations and the hierarchy of operations add, subtract, multiply and divide whole numbers, including large whole numbers add, subtract, multiply and divide decimals, fractions and negative numbers understand and use operations written as number machines 	<p>Understanding: I understand how the four operations connect, including inverse operations and order of operations. I can explain why particular methods work and when they are efficient.</p> <p>Communicating and skills: I set out calculations clearly using correct notation, including number machines and structured steps for decimals, fractions and negatives.</p> <p>Fluency: I can add, subtract, multiply and divide whole numbers, decimals, fractions and negative numbers accurately and efficiently.</p>	Week 2	<p>HW:</p> <p>Set: 2/3/26 Due: 9/3/26</p>	

		Reasoning: I can explain why a method or operation is appropriate, check for errors using inverses, and justify each step logically. Problem Solving: I can choose effective methods for multi-step calculations and apply the four operations confidently in unfamiliar contexts.		
SYL on using the 4 operations (weeks 1-2 in Mrs Draper's book). Success Criteria as above.				
Weeks 3-4: Miss Duffy/Mrs MacKenzie-Chadwick Exam preparation	<ul style="list-style-type: none"> Independently attempt the first half of a Unit 2 style paper Identify areas for improvement Read and respond to whole-class feedback on Unit 2 Topic specific focus informed by areas requiring improvement in Unit 2 	<p>Recall and use mathematical knowledge (AO1)</p> <p>Select and apply mathematical methods (AO2)</p> <p>Demonstrate strategic competence by making connections between different aspects of mathematics and using mathematical skills in unfamiliar contexts (AO3)</p>	Week 3	<p>HW:</p> <p>Set: 9/3/26 Due: 16/3/26</p>
Weeks 3-4: Mrs Draper	<ul style="list-style-type: none"> Recall and use the common properties of numbers, including knowledge of odd, even, integers, multiples, factors, primes Explain the meaning of the terms square, square root, cube and cube root. Understand the meaning of the term reciprocal Express numbers as the product of their prime factors in index form Find the least common multiple (LCM) and highest common factor (HCF) using prime factor decomposition or other appropriate methods Use prime factor decomposition to help solve other numerical problems, including links to square numbers Recall and interpret the notation for positive integral indices Use the rules of indices to perform calculations with numbers written in index form for positive integral indices 	<p>Understanding: I understand key number properties (factors, multiples, primes, reciprocals) and how indices represent repeated multiplication. I can explain why methods like prime factorisation work.</p> <p>Communicating and skills: I use correct notation for indices, factor trees and prime products. I present structured working for HCF, LCM and index calculations.</p> <p>Fluency: I can recall number properties, use prime factor decomposition, find HCF/LCM, and apply index rules accurately for positive integer powers.</p> <p>Reasoning: I can justify why a number is prime, square or composite, and explain how factorisation or index laws support a calculation.</p> <p>Problem Solving: I can use prime factors, indices and number properties to tackle unfamiliar numerical problems, including those linking squares or powers.</p>	Week 4	<p>HW:</p> <p>Set: 16/3/26 Due: 23/3/26</p>
Week 5: Miss Duffy/Mrs MacKenzie-Chadwick	<ul style="list-style-type: none"> Form and simplify expressions Collect like terms Expand expressions – single bracket Multiply and divide terms by applying rules of indices 	<p>Understanding: I understand how expressions represent mathematical situations and how simplifying or expanding them makes structures clearer.</p> <p>Communicating and skills: I use correct algebraic notation, organise work clearly, and present simplified or expanded expressions accurately.</p>	Week 5	<p>HW:</p> <p>Set: 23/3/26 Due: 14/4/26</p>

		<p>Fluency: I can form and simplify expressions, collect like terms, expand single brackets, and apply index rules in algebraic contexts.</p> <p>Reasoning: I can explain why terms can be combined or expanded in certain ways and justify each algebraic step.</p> <p>Problem Solving: I can apply algebraic manipulation to unfamiliar problems, choosing efficient strategies and adapting methods when needed.</p>		
<p>Week 5: Mrs Draper</p>	<ul style="list-style-type: none"> • Understand, use and convert between notation for 12- and 24-hour clock • Recall and use the number of seconds in a minute, minutes in an hour, hours in a day, days in a week and months in a year • Carry out calculations involving time • Recall and use standard metric units for length, mass and capacity and the relationships between them 	<p>Understanding: I understand how time and metric units relate, and why we convert between them. I can interpret time notation in different contexts.</p> <p>Communicating and skills: I write time correctly in 12- and 24-hour formats and label metric units clearly in calculations or diagrams.</p> <p>Fluency: I can convert between time units and metric units accurately, and carry out time and measurement calculations confidently.</p> <p>Reasoning: I can explain why a unit or conversion is appropriate and check whether a time or metric calculation is sensible.</p> <p>Problem Solving: I can apply time and metric conversions in real-world problems, working through multi-step tasks and choosing efficient methods.</p>		