Learning Plan 5	Subject/Pwnc: Mathemateg	Year/Blwyddyn: 9

The Four Purposes in Maths and Numeracy:

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

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

Ethical, informed citizens

Healthy, confident individuals who:
face and overcome challenge; have the skills and knowledge to manage everyday life

Knowledge focus/what matters:

Multiplicative and proportional relationships:
The number system is used to represent and compare relationships between numbers and quantities.
Area and volume:
Geometry *focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world.*

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	
Week 1: Understand and use multiplicative relationships (continued from last LP)	Recall and use equivalences between fractions, decimals and percentages, and simplify fractions. Express one number as a fraction or percentage of another. Find a fraction or percentage of a quantity. Solve problems with repeated proportional changes. Calculate using ratios in a variety of situations. Solve numerical problems involving direct and inverse proportion. Calculate the original quantity given the result of a proportional change.	**Understanding:** I understand how fractions, decimals, percentages, ratio, and proportion are connected. I can explain why different proportional methods work and when to use each one. I can interpret repeated percentage change and proportional relationships in real situations. **Communicating & Skills:** I use correct notation for fractions, ratios, and percentages. I can set out proportional calculations clearly, label steps, and choose language that explains methods effectively. I can communicate solutions using structured working, diagrams, ratio tables, or bar models. **Fluency:** I can recall key equivalences (fractions–decimals–percentages), simplify fractions, and convert between forms accurately. I can calculate fractions or percentages of quantities, express one value as a fraction or percentage of another, and use ratios and proportional change methods efficiently. **Logical Reasoning:** I can justify proportional methods—for example, why scaling a ratio works or why a percentage increase leads to a specific result. I can identify incorrect assumptions such as mixing additive and multiplicative reasoning and use examples or counterexamples to check validity. **Problem Solving:** I can apply proportional reasoning flexibly in unfamiliar contexts, including reverse percentage problems, repeated percentage	Wk 1-2	Mathswatch homework Set: Due:

		change, ratio-based tasks, and direct or inverse proportion scenarios. I can plan multi-step approaches, choose suitable representations, and adjust strategies when needed.		
Weeks 2-4: How is mathematics used in the context of money?	Recognise the difference between simple and compound interest and be able to perform calculations with both Understand the basic principles of personal/ household finance and enterprise in order to solve problems relating to: • income tax • savings and investments • loans/repayments • appreciation/depreciation • finance schemes, including buying by instalments • discount/price increase • buying and selling • profit and loss • travel including foreign currencies, exchange rates and commission.	**Understanding:** I can explain what is meant by: tax; savings; investments; appreciation; depreciation; discount; profit; loss; currency **Communicating:** I can communicate with symbols and numbers in the context of household and personal finance I can present my method and solution in an organised and efficient way **Fluency:** I can fluently calcluate with percentages in the context of real-world finances **Reasoning:** I can reason and make justifications when solving problems and calculating in the context of finance **Problem-solving:** I can strategically solve problems involving budgeting, bills, wages and finance	Wk 3-4	Mathswatch homework Set: Due:
Weeks 5-6: Investigate and use angle properties	Recall and use angle properties of shapes: • Angle properties of right-angled, isosceles and equilateral triangles • Sum of angles in a triangle and quadrilateral • Angle properties of special quadrilaterals, including rectangles, parallelograms and kites. Recall, apply and solve problems involving other angle properties: • Sum of angles at a point • Sum of angles on a straight line • Opposite angles at a vertex • Alternate, corresponding and interior angles within parallel lines	**Understanding:** I can explain angle properties of shapes and other geometrical figures **Communicating:** I can communicate with symbols and numbers effectively, using appropriate units and geometrical notation **Fluency:** I can determine or calculate missing angles by choosing the correct angle property to apply in each situation **Reasoning:** I can reason mathematically and use angle properties to make justifications **Problem solving:** I can strategically solve problems involving angles and their properties	Wk 5-6	Mathswatch homework Set: Due:
SYL - Week 6	Solve problems involving missing angles	I can communicate with symbols and numbers effectively, using appropriate units and geometrical notation I can clearly show my method and solution in an efficient and mathematically correct way I can determine or calculate missing angles by choosing the correct angle property to apply in each situation I can justify my solutions using angle properties I can strategically solve problems involving angles and their properties		