


Learning Plan 3		Subject/Pwnc: Mathemateg	Year/Blwyddyn: 8
<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>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:</p> <p>Using mathematical equipment accurately</p>	<ul style="list-style-type: none"> Use a protractor to measure and draw angles Measure and accurately draw: <ul style="list-style-type: none"> - a straight line - an angle of any size. I can accurately draw, using a ruler and a protractor: <ul style="list-style-type: none"> - an angle bisector - a perpendicular line bisector - 2-D shapes given side lengths and, if appropriate, angles 	<p>Understanding: I can explain the reasoning behind constructions and angle work, showing how the steps connect. I can choose representations (diagrams, symbols, digital tools) that make angle relationships clear.</p> <p>Communicating & Skills: I can present accurate, well-structured constructions using correct notation and geometric language. I can use tools such as protractors, rulers, or graphing software confidently and appropriately.</p> <p>Fluency: I can carry out multi-step constructions and measurements accurately and efficiently. I can apply known angle facts and methods reliably in new contexts.</p> <p>Reasoning: I can justify why a construction works and explain each step logically. I can use angle relationships to check whether a result is sensible.</p> <p>Problem Solving: I can use angle facts and constructions to model real or abstract situations. I can work independently through unfamiliar geometric problems and reflect on my approach.</p>	<p>Wk 1-2</p> <p>Mathswatch homework</p> <p>Set:</p> <p>Due:</p>

<p>Week 3:</p> <p>Understand, use and describe properties of 2D shapes</p>	<ul style="list-style-type: none"> Recall and use geometric terms Know vocabulary and essential properties of 2-D shapes, including: triangles, quadrilaterals, polygons, circles Describe and draw shapes with line symmetry Draw lines of symmetry on a shape Understand order of rotational symmetry and describe and draw shapes with rotational symmetry 	<p>Understanding: I can explain how properties such as symmetry, angles, and side lengths define different shapes. I can recognise patterns and relationships within and between families of shapes.</p> <p>Communicating & Skills: I can use precise geometric vocabulary and clear diagrams to describe shapes. I can represent symmetry and shape properties accurately using symbols or digital tools.</p> <p>Fluency: I can recall key properties of common 2D shapes and use them confidently. I can identify and draw lines of symmetry and rotational symmetry accurately.</p> <p>Reasoning: I can justify why a shape fits a particular category using clear, structured arguments. I can explain how symmetry or other properties help solve a problem.</p> <p>Problem Solving: I can apply shape properties to unfamiliar diagrams or classification tasks. I can use shape knowledge to interpret or construct diagrams in real-world contexts.</p>	<p>Wk 3-4</p>	<p>Mathswatch homework</p> <p>Set:</p> <p>Due:</p>
<p>Week 4:</p> <p>Use and interpret maps, scales and scale drawings</p>	<ul style="list-style-type: none"> Read and interpret scales Interpret and use mathematical information presented in written or visual form, including infographics, schedules, timetables, calendars and charts Use and interpret maps Interpret and produce scale drawings; scales may be written in the form 1 cm represents 5 m, or 1:500 	<p>Understanding: I can explain how scale represents real distances and why different scales are useful. I can interpret information from maps, diagrams, and visual data by choosing effective representations.</p> <p>Communicating & Skills: I can produce clear, accurate scale drawings using appropriate tools. I can interpret written and visual information (maps, charts, timetables) and communicate findings clearly.</p> <p>Fluency: I can convert between real distances and scaled distances accurately. I can read and interpret scales and map features confidently.</p> <p>Reasoning: I can justify whether a scale or measurement is appropriate for a given situation. I can explain how I know my interpretation or drawing is correct.</p> <p>Problem Solving: I can use scale drawings and maps to solve practical problems independently. I can apply scale reasoning to new contexts, such as diagrams, plans, or models.</p>		
	<p>SYL: use and interpret maps, scales and scale drawings</p>	<p>Success criteria in the box above</p>		

<p>Weeks 5-6:</p> <p>Understand, use and interpret compound measures and their graphs</p>	<ul style="list-style-type: none"> • Draw and interpret travel graphs and other graphs that describe real-life situations • Make sensible estimates of metric measurements in everyday situations, recognising the appropriateness of units in different contexts • Recall and use compound measures for speed and fuel consumption, such as m/s, km/h, mph and mpg. 	<p>Understanding: I can explain how graphs represent changes over time and how compound measures describe relationships. I can connect ideas like distance, time, and speed to wider mathematical patterns.</p> <p>Communicating & Skills: I can draw and interpret graphs clearly using correct labels, units, and structure. I can use calculators, spreadsheets, or graphing tools to explore relationships between variables.</p> <p>Fluency: I can calculate speed and other compound measures accurately using appropriate units. I can interpret real-life graphs efficiently and extract key information.</p> <p>Reasoning: I can explain how I know whether a graph or calculation is reasonable. I can justify the methods I use when interpreting or constructing graphs.</p> <p>Problem Solving: I can apply compound measures and graph interpretation to unfamiliar real-world situations. I can work independently through multi-step problems involving distance, time, speed, or other measures.</p>	<p>Wk 5-6</p>	<p>Mathswatch homework</p> <p>Set:</p> <p>Due:</p>
---	---	---	---------------	--