


Learning Plan 5		Subject/Pwnc: Science	Year/Blwyddyn: 8				
<p><u>The Four Purposes in Science and Technology:</u></p> <p>Ambitious, capable learners, who: set themselves high standards; seek and enjoy challenge; are increasingly knowledgeable and skilful; ask questions; enjoy solving problems; can explain ideas and concepts; can use number effectively in different contexts; interpret data and apply mathematical concepts; use digital technologies creatively to communicate, find and analyse information; research and evaluate critically what they find.</p> <p>Enterprising, creative contributors, who: take measured risks.</p> <p>Ethical, informed citizens, who: find, evaluate and use evidence in forming views; consider the impact of their actions when making choices and acting; are committed to sustainability.</p> <p>Healthy, confident individuals, who: are establishing their ethical beliefs; face and overcome challenge.</p>							
<p>Knowledge focus/what matters:</p> <p>Being curious and searching for answers is essential to understanding and predicting phenomena. The world around us is full of living things which depend on each other for survival. Forces and energy provide a foundation for understanding our universe.</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			
Week 1 - 2 Heating & Cooling	Understand what temperature is in terms of atoms. Relate °C to real life examples. Be able to handle positive and negative numbers. Explain how solids expand when heated. I know that solids pass on (conduct) heat by Conduction. Apply heat transfer to real-life situations.	I can measure temperature for liquids. I can heat both solids and liquids and record the temperature changes. I can take part in the conduction demonstrations and explain my observations by using theory of conduction. I can make a prediction about the 'melting snowman' investigation using particle theory. I can calculate the mean and the range from a dataset. I can represent two sets of cooling data onto the same line graph and compare the results using values to do so.		Wk 1	Homework: Set: Due:		
Week 3 Heating & Cooling	Compare materials in terms of thermal conductivity. I know the terms 'conductor' and 'insulator'. 'Concept cartoon' on small versus large volume of liquid and colder versus hotter liquids.	Complete an investigation into how different materials pass on (conduct) heat differently. Compare the heat energy in different liquids by making a prediction and then testing that prediction.		Wk 3	Homework: Set: Due:		

<p>Week 4 Heating & Cooling</p>	<p>Understand that infra-red is thermal energy. Know that energy can travel as a wave</p>	<p>I can complete an investigation into insulation using insulators. I can model how heat transfer can be kept in a container and prevented from moving into the surroundings. I can explain my results from practical work and present the data in an appropriate table and graph. PROGRESSION FROM WEEK 1, should come up with own scale etc.</p>	<p>Wk 4</p>	<p>Homework: Set: Due:</p>
<p>Week 5 Waves</p>	<p>Compare the properties of transverse and longitudinal waves. Investigate the process of reflection. Categorise the sections of the EM spectrum.</p>	<p>I can predict the behaviour of waves in different circumstances. I can use waves to learn more about the world around me. Show understanding of and use the main ideas and significant details in texts.</p>	<p>Wk 5</p>	<p>Homework: Set: Due:</p>
<p>Week 6 Waves</p>	<p>Explain the risk and benefits associated with UV light. Describe the practical uses of ultrasound.</p>	<p>I can understand how my actions impact living things. I can engage with scientific and technological evidence to inform my own opinions. I can link the 'factor' of UV lotion to the strength of protection.</p>	<p>Wk 6</p>	<p>Homework: Set: Due:</p>