Learning Plan 4	Subject/Pwnc: Gwyddoniaeth	Year/Blwyddyn: 7

The Four Purposes in Science and Technology:

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:

Being curious and searching for answers. The world around us is full of living things which depend upon each other for survival.

Learning intention/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	
Weeks 1 - 3: What makes up all matter?	Describe what atoms are and how they are arranged into various states of matter. Compare and contrast the arrangement of atoms in the states and how they transition from one state to another.	I can model how atoms are arranged into states of matter. I can explain how changes of state happen in terms of arrangement & movement. I can interpret how particle diagrams will alter during a change of state.	Wk 1	Set: Due:

	Model how movement of particles is linked to temperature by a kinesthetic activity. Link particle theory to real life examples i.e. wires on telegraph poles. Measure and record the changing temperature of water. Produce a line graph to show results. Demonstrate the concept of diffusion. Compare what temperature is best for making tea in comparison writing task. Appreciate the concept of density, linking mass to unit volume. Use the density equation.	I can link how particle theory is used to design objects & systems for everyday life. I can measure and record the temperature of heated water in a timely and accurate method. I can plot and draw a line of best fit, given the scales. I can demonstrate diffusion using $KMnO_4$ in both cold and hot water. I can complete an extended writing task *comparing* the results. I can calculate density from the equation and include the correct unit.	Wk 2	Set: Due:
Week 4 - 5: How Science Works: Enrichment Activities	Plan a practical to prove a theory based on scientific evidence. I can create an appropriate methodology to perform practical work. Given scales, plot results on a graph and use this to draw conclusions.	I can ask inquisitive questions based on prior knowledge. I can create my own strategies and use them to find solutions. I can interpret data collected and draw accurate conclusions.	Wk 3	Set: Due: