Revision List for 5th Year Physics November Exam 2025

Energy Section in OneNote	Learning Outcomes	revised
L1	 I can define temperature and am able to name 3 different temperature scales 	
	I know the SI Temperate Scale is Kelvin	
	I can define what a thermometric property is	
	I can give the thermometric property of	
	common thermometers such as the mercury	
	thermometer and a digital thermometer and a non-contact thermometer	
	a non-contact thermometer	
L2	I can define Heat Capacity and Specific Heat Capacity and be able to give one difference between them	
	I can complete calculations involving heat	
	capacity, energy and temperate change	
	 I can complete calculations involving Specific heat capacity, energy, mass and 	
	temperate change	
L3	I can define Specific Latent Heat of Fusion	
	and Specific Latent Heat of Vaporisation	_
	and be able to give one difference between them	
	I can complete calculations involving both	
	Specific Latent Heats, energy and mass	
	I can calculate how much energy is	
	needed to change a certain mass of ice to	
	steam	
L4/L5	I can draw a labelled diagram of the	
	experiment to find the specific heat	
	capacity of water	
	 I can draw a labelled diagram of the experiment to find the Latent heat of 	
	fusion of ice.	
	 I know 2 reasons why I crush the ice for the Latent Heat experiment 	
L6	I can define Conduction, Convection and Radiation as the three methods of heat	
	transfer.	
	I can give an everyday example of where	
	we see each method of heat transfer	
	I can briefly describe an experiment to	
	demonstrate each method of heat	
	transfer	
	I can define what a Heat Pump is	

	 I can give 2 everyday examples of where we use a heat pump I can briefly explain how heat is moved via laten heat of vaporisation in a heat pump I can explain why we lose heat by sweating via latent heat of vaporisation 	
L7	 I can define U-Value and the Solar Constant 	
	 I can perform calculation involving U- Value, temp difference, rate of energy flow (or power) and area 	
	I can explain how I can decrease the U- value of a house	
	 I know that good insulators have low U- Values 	

Optics Section in OneNote	Learning Outcomes	revised
L1	 Do I know the 2 laws of reflection off by heart 	
	 Can I draw a ray diagram of a reflected ray with the correct labels? 	
	 Can I draw a ray diagram of how a virtual image is formed in a plane mirror? 	
	 Do I know the definitions for the following: 	
	Real imageVirtual image	
L2/L3	Can I define refraction	
	 Can I explain what refractive index is? 	
	 Give the refractive index of glass, can I 	
	calculate the refractive index going from glass to air?	
	 Can I state both laws of refraction 	
	 Can I use the 1st law to do calculations to find missing angles or refractive index 	
	values?	
	 Can I state Snell's Law 	
	 Can I calculate the speed of light in a 	
	material if given the refractive index and vice versa.	
	 Can I calculate the refractive index of a material from a graph of Sin i vs Sin r. 	
	• Can I draw a graph to verify Snell's Law?	

L4	 Can I define what Total Internal Reflection (TIR) is 	
	 Can I draw a ray diagram showing TIR 	
	Can I define the Critical Angle	
	Can I use the correct formula to find the	
	Critical Angle or find the refractive index if	
	given the critical angle	
	Can I give 2 everyday examples of the	
	application of TIR and draw ray diagrams	
	to show how it works	
L5	 Can I draw a diagram showing how fibre 	
	optic cables transmit light	
	 Can I give 2 uses of fibre optic cables 	
	 Can I give 3 advantages fibre optics have 	
	over copper cables in telecommunications	
	 Can I explain why fibre optic cables have a 	
	cladding and how it works	
L6	 Can I draw a ray diagram of how a real 	
	and virtual image is formed in a convex	
	lens	
	 Can I draw a ray diagram of how a virtual 	
	image is formed in a concave lens	
	 Do I know what a converging and 	
	diverging lens is?	
	 Can I use the optics formula to complete 	
	calculations for both lenses	
	 Can I define The Power of a Lens 	
	 What is the difference between powers 	
	for concave and convex lenses?	
	Can I calculate the power of a lens from	
	the focal length	
	 Do I know the unit for lens power? 	
	Can I calculate the power of a	
	combination of lenses	
	combination of letises	
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