Combined Science: Higher Revision list

Physics Paper 1

Topic	Tick
Chapter 1:	
State the energy stores https://www.youtube.com/watch?v=lBKjThIlOUA	
Describe how energy changes in different situations https://www.youtube.com/watch?v=gj1tu8bTKjI	
Use the kinetic energy equation https://www.youtube.com/watch?v=WrFCHt21kVA	
Use the elastic potential energy equation https://www.youtube.com/watch?v=8Z8jUW03z3s	
Use the gravitational potential energy equation https://www.youtube.com/watch?v=63OTIdNb-TE	
Use the specific heat capacity equation https://www.youtube.com/watch?v=4rT7-5yE4pQ	
RPA specific heat capacity https://www.youtube.com/watch?v=loeRLKNeUsc	
Use the power equations https://www.youtube.com/watch?v=kCJUzdCBOk0	
Use the word done equation	
Chapter 2:	
Use the power equations https://www.youtube.com/watch?v=LOyJdI41aCU	
Describe how different domestic appliances transfer energy from batteries or ac mains to the kinetic energy of electric motors or the energy of heating devices https://www.youtube.com/watch?v=gj1tu8bTKjI	
Use the energy transferred equations	
Describe the National grid https://www.youtube.com/watch?v=VTAFjhO1HNo	
Use the transformer calculation https://www.youtube.com/watch?v=IxqUjM8cOcU	
RPA IV graphs https://www.youtube.com/watch?v=ksPfzUjMbBk	
Chapter 3:	
Use the density equation https://www.youtube.com/watch?v=pgGzVdau1Bw	
Draw particle diagrams of solid, liquid and gases https://www.youtube.com/watch?v=OTksau0_VoI	

Explain density in terms of particles	
Describe changes of state https://www.youtube.com/watch?v=xYU7RSoOZ0U	
Explain how the motion of the molecules in a gas is related to both its temperature and its pressure. https://www.youtube.com/watch?v=9PwzPDJ7GYc	
Explain qualitatively the relation between the temperature of a gas and its pressure at constant volume	
Chapter 4:	
Describe the structure of the atom https://www.youtube.com/watch?v=KwOHJbE4Tro	
Define the term isotope	
Describe the history of the atom https://www.youtube.com/watch?v=Q8y4x5EElm8	
Describe the properties of alpha, beta and gamma https://www.youtube.com/watch?v=nW0S1C6wVrg	
Write radioactive decay questions https://www.youtube.com/watch?v=CaYoDxWxww8	
Define the term "half-life" https://www.youtube.com/watch?v=zXw2cOSBB8E	
Determine the half-life on a graph https://www.youtube.com/watch?v=IDkNlU7zKYU	
Calculate the net decline as a ratio, in radioactive emission after a given number of half lives	
Compare contamination and irradiation https://www.youtube.com/watch?v=teGu0VAPlOo	

Physics Paper 2

Topic	Tick
Chapter 5	
Define scalar and vectors with examples https://www.youtube.com/watch?v=P1lSWWUkMdQ	
Define contact and non-contact forces with examples https://www.youtube.com/watch?v=WCPTKRaScgE	
Define weight and use the equation https://www.youtube.com/watch?v=W2aBVbcHr_k	
Define resultant force and calculate it in different situations https://www.youtube.com/watch?v=YGGxf6cp3Lo	
Draw and interpret vector diagrams https://www.youtube.com/watch?v=U8z8WFhOQ_Y	
Define distance and displacement https://www.youtube.com/watch?v=QaU9jMHh7gE	
Calculate speed https://www.youtube.com/watch?v=M_0FRIX8wIM	
Explain the difference between velocity and speed	
Explain qualitatively, with examples, that motion in a circle involves constant speed but changing velocity https://www.youtube.com/watch?v=rTx-wwRUnec	
Interpret distance-time graphs https://www.youtube.com/watch?v=RM02SnuJ0MY	
Interpret velocity-time graphs https://www.youtube.com/watch?v=b0VKlpetP9A	
Calculate acceleration https://www.youtube.com/watch?v=Kzx8GBTl5VM	
Describe Newton's Laws https://www.youtube.com/watch?v=i5PtaCJJFjw https://www.youtube.com/watch?v=DpQ_ikFKru0	
Use the momentum calculation https://www.youtube.com/watch?v=F8DnNqBhUfQ https://www.youtube.com/watch?v=ZU6rJQTz7FI	
Explain the conservation of momentum with calculations	
Chapter 6:	
State the electromagnetic spectrum waves in order https://www.youtube.com/watch?v=u5vkYjV1V1A	
State properties and uses of electromagnetic waves	
Describe how different substances absorb, reflect and transmit the electromagnetic waves	

Use wave front diagrams to explain refraction in terms of the change of speed that happens when a wave travels from one medium to a different medium	
Describe how radio waves are produced https://www.youtube.com/watch?v=Ldnh0XlMVc0	
Describe the problems of using UV, x rays and gamma rays https://www.youtube.com/watch?v=dBFGjdgbpno	
RPA infrared radiation https://www.youtube.com/watch?v=LFwio38EK9s	
Chapter 7:	
Describe how the magnetic effect of a current can be demonstrated https://www.youtube.com/watch?v=tiBmSeKdFxg	
Draw the magnetic field pattern for a straight wire carrying a current and for a solenoid	
Explain how a solenoid arrangement can increase the magnetic effect of the current.	
Use Fleming's Left Hand Rule https://www.youtube.com/watch?v=qvB1mmfo7MQ	
Use the magnetic flux density calculation https://www.youtube.com/watch?v=5SwMJDvfVyw	
Explain how electric motors work https://www.youtube.com/watch?v=evWpDrRAyCc	