Physics – Waves **Points in bold are HT only**

Content	End
Describe the origin and properties of longitudinal and transverse waves and give examples	
Calculate frequency of waves using frequency = number of waves/time and use Hz as the unit	
Use the wave equation to calculate wave speed, frequency or wavelength including using standard form	
Describe properties of all EM waves	
Name the 7 EM waves and describe their uses and dangers	
Link uses of EM waves to their properties	
Describe ways of measuring wave speed– e.g ripple tank, waves on a string	
Describe how to measure the speed of sound and know it's approximate value in air	
Describe the electromagnetic spectrum	
Different substances may absorb, transmit, refract or reflect electromagnetic waves in ways that vary with wavelength.	
Some effects, for example refraction, are due to the difference in velocity of the waves in different substances.	
Students should be able to 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 uses of electromagnetic waves.	
Give brief explanations why each type of electromagnetic wave is suitable for the practical application	
Explain how IR radiation emission and absorption is affected by surface and describe an investigation to measure this	
Explain some of the dangers of EM waves and how the radiation dose is measured	
Explain how radio waves are generated by oscillating charges in the transmitter and how this generates a current in the receiver	