

AQA Physics Paper 2		Covered in Lesson	Diagnosis			Revised		
P4.7. Magnetism and electromagnetism			R	A	G	1	2	3
4.7.1 Permanent and induced magnetism, magnetic forces and fields	Describe the attraction and repulsion between unlike and like poles of permanent magnets and explain the difference between permanent and induced magnets							
	Draw the magnetic field pattern of a bar magnet, showing how field strength and direction are indicated and change from one point to another							
	Explain how the behaviour of a magnetic compass is related to evidence that the core of the Earth must be magnetic							
	Describe how to plot the magnetic field pattern of a magnet using a compass							
4.7.2 The motor effect	State examples of how the magnetic effect of a current can be demonstrated and explain how a solenoid arrangement can increase the magnetic effect of the current							
	Draw the magnetic field pattern for a straight wire carrying a current and for a solenoid (showing the direction of the field)							
	PHY ONLY: Interpret diagrams of electromagnetic devices in order to explain how they work							
	HT ONLY: State and use Fleming's left-hand rule and explain what the size of the induced force depends on							
	HT ONLY: Calculate the force on a conductor carrying a current at right angles to a magnetic field by applying, but not recalling, the equation: [$F = BIL$]							
	HT ONLY: Explain how rotation is caused in an electric motor							
	PHY & HT ONLY: Explain how a moving-coil loudspeaker and headphones work							
4.7.3 Induced potential, transformers and the National Grid	PHY & HT ONLY: Describe the principles of the generator effect, including the direction of induced current, effects of Lenz' Law and factors that increase induced p.d.							
	PHY & HT ONLY: Explain how the generator effect is used in an alternator to generate a.c. and in a dynamo to generate d.c.							
	PHY & HT ONLY: Draw/interpret graphs of potential difference generated in the coil against time							
	PHY & HT ONLY: Explain how a moving-coil microphone works							
	PHY & HT ONLY: Explain how the effect of an alternating current in one coil inducing a current in another is used in transformers							
	PHY & HT ONLY: Explain how the ratio of the potential differences across the two coils depends on the ratio of the number of turns on each							
	PHY & HT ONLY: Apply the equation linking the p.d.s and number of turns in the two coils of a transformer to the currents and the power transfer							
	PHY & HT ONLY: Apply but not recalling the equations: [$V_s \times I_s = V_p \times I_p$] and [$v_p / v_s = n_p / n_s$] for transformers							