Prior Learning		Students have learned about electricity, basic circuit components, and forces including magnetic forces and their effects at KS3. At KS4 (P2 -Electricity) they have learned the role of generators and transformers in the generation and transmission of electricity.		
Lesson Number	**AQA Spec**	**Title**	**Content**	**Assessment**
1	4.7.1.1 4.7.1.2	Magnetism and magnetic forces	• Explain what is meant by the poles of a magnet. • Plot the magnetic field around a bar magnet. • Describe magnetic materials and induced magnetism.	
2	4.7.1.2 4.7.2.1	Compasses and magnetic fields	• Describe the Earth's magnetic field. • Describe the magnetic effect of a current.	
3	4.7.2.1 4.7.2.2	The magnetic effect of a solenoid	• Draw the magnetic field around a conducting wire and a solenoid. • Describe the force on a wire in a magnetic field.	**Assessment 1:** Multiple choice Quiz 25 Marks Feedback: Auto/Self-assessed
4 **TRIPLE ONLY**	4.7.2.1	Electromagnets in action	• Describe simple uses of electromagnets. • Explain how an electric bell works. • Interpret diagrams of other devices that use electromagnets to explain how they work.	

5 **HIGHER TIER ONLY**	4.7.2.2	Calculating the force on a conductor	• Explain the meaning of magnetic flux density, *B*. • Calculate the force on a current-carrying conductor in a magnetic field.	
6 **HIGHER TIER ONLY**	4.7.2.3	Electric motors	• List equipment that uses motors. • Describe how motors work. • Describe how to change the speed and direction of rotation of a motor.	**Assessment 2:** Written assessment 15 Marks Feedback: Teacher
9	4.7	Key concept: The link between electricity and magnetism	• Explore how electricity and magnetism are connected. • Trilogy students do not need to know the content in the last section: **Electromagnetic induction**	
10 **HIGHER TIER ONLY**	4.7.3.2 4.7.3.3		• Explain how moving-coil microphones use the generator effect. • For a dynamo and alternator, draw and interpret graphs of potential difference generated in the coil against time.	

11	4.7.3.4 *(see also Lesson 2.11)*	Transformers	• Explain how a transformer both uses and produces alternating current. • Calculate the current that needs to be provided to produce a particular power output.	
HIGHER TIER ONLY				
12	4.7.2.2 4.7.3.4	Maths skills: Rearranging equations	• Change the subject of an equation. • Trilogy students do not need to know the Transformer Equation	
End of Unit test Assessment: Teacher				
Where we will use these ideas again	In the summer GCSE exams: Paper 1 – P2 electricity Paper 2 – P7 electromagnetism			