GCSE Checklist – Electromagnetism

Combined Science		Page(s)
Describe the relationships between magnetic poles		289
Describe the pattern of magnetic field lines around a bar magnet.		289
Describe what induced magnetism is		290
Know the different magnetic elements		Notes
Explain how magnets exerts a force on other materials		290
Describe the difference between magnets and magnetic materials		290
Explain how the Earth's magnetic field effects compasses		Notes
Describe the magnetic field around a wire		291
Explain the 'right hand thumb' rule		291
Describe and explain how electromagnets work and their properties		292
HT Explain the motor effect		295
HT Explain and use Flemings 'left hand rule'		297
HT Describe the factors that affect the size of the force on a conductor		296
HT Calculate force using [*force = magnetic flux density x current x length] (F = BIL)*		296
HT Describe how magnetic fields cause motors to rotate		299

Physics Only (Triple)		Page(s)
Interpret diagrams of electromagnets		293
HT Describe and explain the applications of the motor effect		302
HT Explain how a generator generates electricity		303
HT Describe how you can increase the potential difference induced by a generator		304
HT Explain the opposing forces and magnetic fields in generators		304
HT Investigate the factors that reverse the induced potential difference and current		305
HT Describe the uses of generators, alternators and dynamos		305
HT link the generator to microphones		307
HT Explain what a transformer is		308
HT Describe how transformers induce a potential difference		308
HT Use the transformer equation for potential difference and turns $[V_p / V_s = n_p / n_s]$		310
HT Explain the equation to show if transformers were 100% efficient ($V_s \times I_s = V_p \times I_p$)		312
HT Explain how transformers are used on the national grid		95