



CP11 Electromagnetic induction

Personal learning checklist | 1 of 1

GCSE Edexcel Combined Science | Physics Paper 2

Name _____ Class _____ Date _____

Tick one box for each statement. Red: need help. Amber: partly confident.
Green: can do independently.

I can	Red	Amber	Green
Induction (Higher)			
Explain induced voltage from changing fields or relative motion and distinguish voltage from closed-circuit current (Higher).	☐	☐	☐
Predict effects of magnet speed, strength, coil turns, motion reversal and pole reversal (Higher).	☐	☐	☐
Explain induced-field opposition and why mechanical work supplies electrical energy (Higher).	☐	☐	☐
Plan controlled induction investigations using signed voltage measurements, stationary comparisons and repeatable movements (Higher).	☐	☐	☐
Transformer operation (Higher)			
Explain transformer operation through alternating primary current, linked changing fields and induced secondary voltage (Higher).	☐	☐	☐
Explain why steady DC fails and distinguish step-up from step-down alternating-voltage changes (Higher).	☐	☐	☐
Transformer power			
Calculate missing transformer voltages and currents using equal input and output power for 100% efficiency.	☐	☐	☐
Distinguish ideal power equality from real losses and calculate useful or dissipated power from efficiency.	☐	☐	☐
National Grid			
Explain step-up and step-down transformer locations and high-voltage transmission for lower current and heating losses.	☐	☐	☐
Calculate transmission current and cable heating and explain the squared-current loss relationship.	☐	☐	☐
Describe the grid's energy-transfer role and distinguish transmission voltages from domestic supply and safe access.	☐	☐	☐

My next revision priority _____