CP10 Magnetism and the Motor Effect

CP10a Magnets and magnetic fields

Step	Learning outcome	Had a look	Nearly there	Nailed it!
3rd	Describe how magnets affect each other.	☐	☐	☐
4th	Explain the difference between permanent and induced magnets.	☐	☐	☐
4th	Describe the uses of permanent and temporary magnetic materials.	☐	☐	☐
4th	Describe the shapes of magnetic fields, including variations in strength.	☐	☐	☐
4th	Describe how the shape of magnetic fields can be shown using plotting compasses.	☐	☐	☐
5th	Explain how a magnetic compass can be used as evidence for the Earth's magnetic core.	☐	☐	☐

CP10b Electromagnetism

Step	Learning outcome	Had a look	Nearly there	Nailed it!
6th	Recall that a current can create a magnetic effect.	☐	☐	☐
7th	Relate the shape and direction of the magnetic field around a straight wire to the direction of the current.	☐	☐	☐
6th	Recall the factors that affect the strength of the magnetic field around a wire.	☐	☐	☐
7th	Describe the magnetic field inside and outside a coil of wire carrying a current.	☐	☐	☐
8th	Explain the shape and strength of the magnetic field around a solenoid.	☐	☐	☐

CP10c Magnetic forces

Step	Learning outcome	Had a look	Nearly there	Nailed it!
6th	**H** Recall that forces are produced when a current flows in a magnetic field.	☐	☐	☐
7th	**H** Explain what causes the forces produced when a current flows in a magnetic field.	☐	☐	☐
6th	**H** Recall Fleming's left-hand rule.	☐	☐	☐
7th	**H** Use Fleming's left-hand rule.	☐	☐	☐
8th	**H** Use the formula relating force, magnetic field strength, current and length.	☐	☐	☐

CP11 Electromagnetic Induction (Paper 6)

CP11a Transformers

Step	Learning outcome	Had a look	Nearly there	Nailed it!
5th	Recall the law of conservation of energy.	☐	☐	☐
5th	Recall that the power of an electrical current is given by the current multiplied by the voltage.	☐	☐	☐
8th	Use the formula relating the input and output current and voltage for a transformer.	☐	☐	☐

CP11b Transformers and energy

Step	Learning outcome	Had a look	Nearly there	Nailed it!
6th	H Recall the factors that affect the size and direction of an induced potential difference.	☐	☐	☐
7th	H Describe how the magnetic field produced by an induced potential difference opposes the original change.	☐	☐	☐
8th	H Explain how a transformer works.	☐	☐	☐
6th	Recall that transformers can change the voltage of an alternating current.	☐	☐	☐
6th	Describe how the national grid transmits electricity around the country.	☐	☐	☐
7th	Explain why step-up and step-down transformers are used in the national grid.	☐	☐	☐