Magnetism: independent written practice

Teacher / technician

YEAR 11 / LESSON 85 / PHYSICS + SCIENCE (DOUBLE AWARD)

Staff preparation and answer guidance. Keep separate from student sheets. Record actual measurements separately from labelled practice examples.

Coverage and delivery

Shared Physics / Double Award: Review of shared magnetism and motor-effect specification points.

Allow about 60 minutes. Follow the student sequence and use the answers to check reasoning.

Requisition • class of 30, working in 15 pairs

Item	Per pair / setup	Class total
Booklets	1 per learner	30
Rulers	1 per pair	15

Immediate safety

Independent paper-based work only; no practical equipment is required.

Preparation and delivery

Read alongside the student method

YEAR 11 / LESSON 85 / PHYSICS + SCIENCE (DOUBLE AWARD)

1. Prepare a fifteen-minute interval and give feedback only after the independent attempt.

2. Check diagrams for consistent three-dimensional directions rather than a memorised unlabelled hand sketch.

Close of lesson

• Retain original answers and corrections.

Check before teaching

Check the cards, reference data and quantities against this requisition. Keep the staff answer guide separate until the checking stage. Supplied numerical practice datasets are labelled examples; they are not class measurements.

Answers and teaching notes

Expected explanations • do not give as experimental observations

YEAR 11 / LESSON 85 / PHYSICS + SCIENCE (DOUBLE AWARD)

- The direction of force on a north pole at that position.
- Its north-seeking end shows the local resultant field direction.
- A material becomes magnetised in an external magnetic field.
- The magnetic force reverses.
- It reverses coil current each half-turn to maintain the turning sense.
- The changing force vibrates the coil and cone, which produces pressure variations in air.

References and provenance

Pearson Physics specification

IOP: electromagnetism

Prepared 22 November 2026. Original wording, tables and questions. Sources inform the concepts and technique; the lesson scope and classroom quantities are explicitly described here. No laboratory trial or final school risk approval is claimed.