

### P3 – Magnetism and Electromagnetism Key Questions

	Question	Answer
1	What is a magnet?	Object containing material that produces its own magnetic field.
2	What is a magnetic field?	Area around a magnet or current carrying wire, where there is a force on magnetic Materials.
3	What does a magnetic field show?	It shows the direction or strength of the field around a magnet
4	Name three magnetic materials?	Iron, cobalt and nickel.
5	What are magnetic poles?	The ends of a magnetic Field.
6	What names are given to magnetic poles?	North-seeking (N) and South-seeking (S).
7	What happens if two like poles are brought together?	Repel.
8	What happens if two opposite poles are brought together?	Attract.
9	How do we add to the field lines drawn around a magnet?	With the arrows going from north to south.
10	What is an electromagnet?	A non-permanent magnet turned on and off by controlling the current through it.
11	What is a solenoid?	A solenoid is a wire wound into a tight coil, (part of an electromagnet).
12	What is a core in an electromagnet?	Core: Soft iron metal which the solenoid is wrapped around.
13	What happens when current is passed through a wire?	A current through a wire causes a magnetic field.
14	How does an electromagnet work?	When current is passed through the solenoid, the iron core becomes a magnet. When the current turns off, the iron core loses its magnetism.
15	In what three ways can the strength of an electromagnet be increased?	1) increasing the number of turns of the coil 2) Increase the current through the wire 3) Add an iron core
16	What are the advantages of using electromagnets?	It can be switched on and off, the strength can be changed.
17	What is a permanent magnet?	A magnet which produces its own magnetic field.
18	Give two uses for electromagnets.	Bells, loudspeakers, circuit breakers.

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