

P7 Magnetism REVISION TRIPLE

Types of Wave	
1. Where are the magnetic forces strongest on a magnet?	The poles
2. What happens when magnets are brought close to each other?	Two like poles repel each other. Two unlike poles attract each other.
3. Attraction and repulsion between two magnetic poles are examples of what kind of force?	Non-contact force
4. What is an induced magnet?	A material that becomes a magnet when it is placed in a magnetic field. (When removed from the magnetic field an induced magnet loses most/all of its magnetism quickly)
5. State 4 magnetic materials	iron, steel, cobalt and nickel
6. Is the force between a magnet and a magnetic material always attraction or repulsion?	attraction
7. What does the strength of the magnetic field depend on?	The distance from the magnet
8. Describe the direction of a magnetic field line	From the north (seeking) pole of a magnet to the south(seeking) pole of the magnet.
Electromagnets	
9. Explain how the behaviour of a magnetic compass is related to evidence that the core of the Earth must be magnetic.	<ul style="list-style-type: none"> • A magnetic compass contains a small bar magnet. • The Earth has a magnetic field. • The compass needle points in the direction of the Earth's magnetic field.
10. Describe how to increase the strength of the magnetic field in an electromagnet	Increase the current through the wire Shorten the distance from the wire. Shaping a wire to form a solenoid Adding an iron core
11. Describe the magnetic field inside a solenoid	strong and uniform
HT ONLY	
12. What is the motor effect?	When a conductor carrying a current is placed in a magnetic field the magnet producing the field and the conductor exert a force on each other
13. What 3 things does Fleming's left-hand rule represent?	The relative orientation of the force, the current in the conductor and the magnetic field.
14. What is an electric motor?	A coil of wire carrying a current in a magnetic field tends to rotate
15. How do Loudspeakers and headphones use the motor effect?	They convert variations in current in electrical circuits to the pressure variations in sound waves.
Physics only	
16. What is the generator effect	If an electrical conductor moves relative to a magnetic field or if there is a change in the magnetic field around a conductor, a potential difference is induced across the ends of the conductor. If the conductor is part of a complete circuit, a current is induced in the conductor.
17. How is the generator effect used?	<ul style="list-style-type: none"> • In an alternator to generate ac • In a dynamo to generate dc.
18. How do Microphones use the generator effect?	To convert the pressure variations in sound waves into variations in current in electrical circuits.
19. A basic transformer consists of what?	A primary coil and a secondary coil wound on an iron core. Iron is used as it is easily magnetised.
20. The ratio of the potential differences across the primary and secondary coils of a transformer V_p and V_s depends what?	The ratio of the number of turns on each coil, n_p and n_s

