OBHS Core Questions:

Subject: Science

Year and Term: Year 11 Autumn Term

Topic: P7 Magnetism and Electromagnetism

Learn these questions to build a strong foundation of knowledge for this half-term. Ask family or friends to test you regularly, or practise on your own using the 'Look, Say, Cover, Write' method.

Question	Answer
1. What are the names of the two poles of a magnet?	North and south
2. What happens when two like poles of magnets are brought together?	They repel each other
3. What happens when you opposing poles of a magnet are brought together?	They attract
4. What type of force occurs between two magnetic poles?	Magnetism (non-contact force)
5. What is the difference between permanent and induced magnets?	Permanent magnets always produce a magnetic field; induced magnets only become magnetic in a magnetic field
6. What causes a material to become an induced magnet?	Being placed in a magnetic field
7. What happens to an induced magnet when removed from a magnetic field?	It quickly loses most or all of its magnetism
8. What is a magnetic field?	The area around a magnet where it can exert a force
9. Where is the magnetic field strongest around a magnet?	At the poles
10. What is the direction of a magnetic field line?	From the north pole to the south pole of a magnet
11. What does a magnetic compass contain?	A small bar magnet
12. Why does a magnetic compass point north?	Because of the Earth's magnetic field
13. What are the three magnetic metals on the periodic table?	Cobalt, copper and iron

14. What happens when current flows through a wire?	A magnetic field is produced around the wire
15. How does the magnetic field strength vary with current and distance?	It increases with current and decreases with distance from the wire
16. What is a coil of wire that produces a magnetic field when current flows through it called?	A solenoid
17. What is an electromagnet?	A solenoid with an iron core
18. How can you increase the magnetic field of a solenoid?	Increase the current, add more coils, or use an iron core.
19. What is the motor effect?	The force on a wire carrying a current in a magnetic field.
20. What does Fleming's left-hand rule show?	The direction of force, current, and magnetic field.
21. What equation is used to calculate the force on a current-carrying conductor in a magnetic field?	force = magnetic flux density × current × length F = B × I × l
22. Which factors affect the size of the force in the motor effect?	Magnetic field strength (B), current (I), and length of conductor in the field (l).
23. What causes a coil in a magnetic field to rotate?	Force
24. What flows through the coil in an electric motor?	Current
25. What field interacts with the current in the coil?	Magnetic