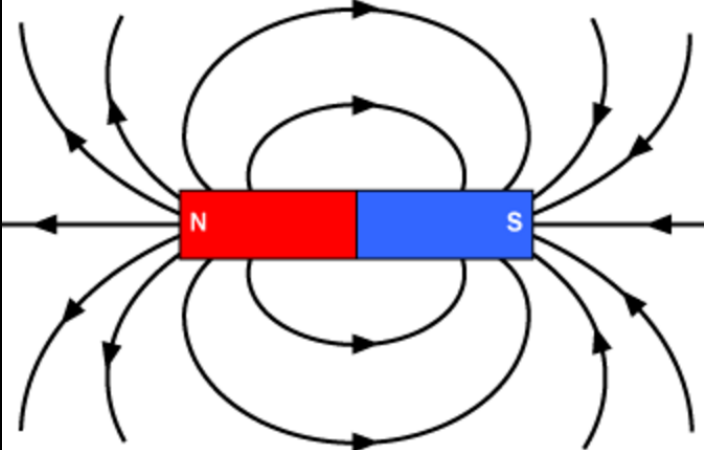
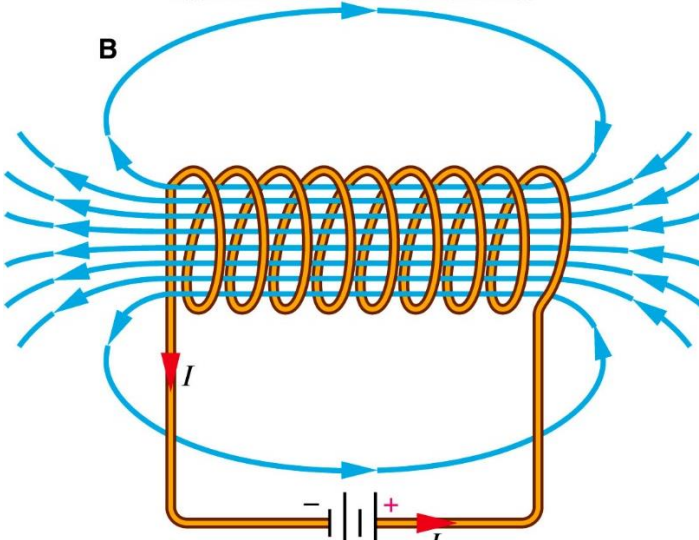
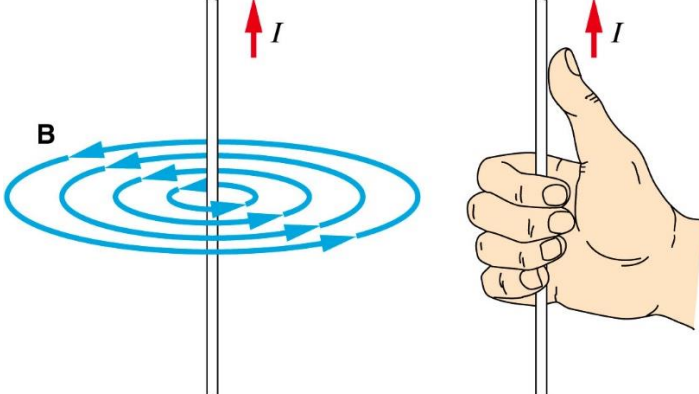


1.	What are the poles of a magnet?	The poles of a magnet are the places where the magnetic forces are strongest.
2.	When two magnets are brought close to each other, what happens?	They exert a force on each other.
3.	What happens when two like poles of magnets are brought close to each other?	They repel each other.
4.	What happens when two opposite poles of magnets are brought close to each other?	They attract each other.
5.	What type of force is this an example of ?	A non-contact force.
6.	What is a permanent magnet?	One which produces its own magnetic field.
7.	What is an induced magnet?	An induced magnet is a material that becomes a magnet when it is placed in a magnetic field. Induced magnetism always causes a force of attraction. When removed from the magnetic field an induced magnet loses most/all of its magnetism quickly.
8.	What is the magnetic field?	The region around a magnet where a force acts on another magnet or on a magnetic material (iron, steel, cobalt and nickel).
9.	What type of force exists between a magnet and a magnetic material?	Attractive force
10.	What does the strength of the magnetic field depend upon?	The strength of the magnetic field depends on the distance from the magnet. The field is strongest at the poles of the magnet.
11.	How do we define the direction of the magnetic field?	The direction of the magnetic field at any point is given by the direction of the force that would act on another north pole placed at that point. The direction of a magnetic field line is from the north (seeking) pole of a magnet to the south (seeking) pole of the magnet.
12.	How does a magnetic compass work?	It contains a small bar magnet. The Earth has a magnetic field. The compass needle points in the direction of the Earth's magnetic field.
13.	How can you use a compass to plot the magnetic field pattern of a magnet?	Place the compass in the field around the magnet. Draw a dot where the compass points. (North and South). Move the compass so that the South direction of the needle is at the dot you just drew. Repeat until the lines form a loop.
14.	Draw the magnetic field pattern of a bar magnet. Show how strength and direction of the field changes.	
15.	When current flows through a conducting wire...	A magnetic field is produced around the wire. The strength of the magnetic field depends on the current through the wire and the distance from the wire.
16.	What is a solenoid?	Shaping a wire to form a solenoid increases the strength of the magnetic field created by a current through the wire. The magnetic field inside a solenoid is strong and uniform.

17.	How can the strength of a solenoid be increased?	By adding an iron core.
18.	What is an electromagnet?	It is a solenoid with an iron core.
19.	Draw the magnetic field pattern of a solenoid.	
20.	Draw the magnetic field pattern around a current carrying wire.	
21.	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. This is called the motor effect.
22.	What does Fleming's left hand rule represent?	The relative orientation of the directions of the force, the current in the conductor and the magnetic field.
23.	What is the word equation from the Physics equation sheet that describes a conductor at right angles to a magnetic field and carrying a current?	force = magnetic flux density \times current \times length
24.	What is the symbol equation from the Physics equation sheet that describes a conductor at right angles to a magnetic field and carrying a current?	$F = B I l$
25.	What is the unit of magnetic flux density?	Tesla, T
26.	What happens to a coil of wire carrying a current in a magnetic field?	It rotates
27.	How do loudspeakers and headphones use the motor effect?	They convert variations in current in electrical circuits to the pressure variations in sound waves.
28.	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. This is called the generator effect.

29.	How does an induced current that generates a magnetic field affect the original scenario?	It opposes the change that generated the field.
30.	What does an alternator use the generator effect for?	To generate AC
31.	What does a dynamo use the generator effect for?	To generate DC
32.	How do microphones use the generator effect?	Microphones use the generator effect to convert the pressure variations in sound waves into variations in current in electrical circuits.
33.	What does a basic transformer consist of?	A primary coil and a secondary coil wound on an iron core.
34.	Why is iron used as the core of a transformer?	It is easily magnetised.
35.	What is the equation from the Physics Equation Sheet which describes how the potential difference across coils relates to the number of turns on each coil.	$\frac{V_p}{V_s} = \frac{N_p}{N_s}$
36.	In a step-up transformer, which potential difference is greater?	V_s
37.	In a step-down transformer, which potential difference is greater?	V_p
38.	If transformers were 100% efficient, what would the electrical power output be?	It would equal the electrical power input.
39.	What is the equation from the Physics equation sheet that relates the power input and output of transformers?	$V_s \times I_s = V_p \times I_p$
40.	What are the units of power?	Watts, W
41.	The places on a magnet where the magnetic forces are the strongest are called the...	poles
42.	What is the definition of a magnetic field?	The area around a magnet where a force acts on another magnet or magnetic material
43.	The area around a magnet where a force acts on another magnet or magnetic material in the...	Magnetic field
44.	Two like poles always _____	repel
45.	Two opposite poles always _____	attract
46.	What is a permanent magnet?	A magnet that produces its own magnetic field.
47.	What is an induced magnet?	A magnetic material which becomes a magnet when placed in a magnetic field.
48.	A magnetic material which becomes a magnet when placed in a magnetic field is a _____	induced magnet
49.	What type of magnet loses its magnetism when it is removed from a magnetic field?	induced magnet
50.	Which three elements are magnetic?	iron, cobalt and nickel
51.	Draw the magnetic field around a bar magnet	teacher to draw on board...
52.	Give the name for the magnet created using a coil of wire	solenoid
53.	Where is the strongest field in an electromagnet created by a coil of wire?	inside the coil
54.	What two words describe the magnetic field within the coil of a solenoid?	strong and uniform
55.	What is an electromagnet?	A solenoid containing an iron core which increases its strength
56.	What is an important property of a solenoid/electromagnet as a magnet	can be switched on and off with electric current

57.	Flemming's left hand rule shows the relative directions of what things?	Force, magnetic field and current
58.	In Flemming's LH rule, the thumb gives the direction of ...	Force
59.	In Flemming's LH rule, the second finger gives the direction of ...	Current
60.	In Flemming's LH rule, the first finger gives the direction of ...	Magnetic Field
61.	When a conductor carrying a current is placed in a magnetic field, the magnet and the conductor ...	exert an equal and opposite force on one another
62.	Give three ways of increasing the force of a solenoid.	Add iron core, increase number of coils of wire, increase current, move magnetic material closer
63.	Give three ways of increasing the force of a motor.	Increase the number of coils of wire, increase the strength of the magnetic field, increase the current
64.	What is the unit of magnetic flux density?	Tesla (T)
65.	What two methods can you use to observe the field around a bar magnet?	Iron filings or plotting compass
66.	Draw the magnetic field between two like poles.	teacher to draw on board...
67.	Draw the magnetic field between two unlike poles.	teacher to draw on board...
68.	The right hand thumb rule shows relative direction of...	current and magnetic field around a wire
69.	The strength of magnetic field surrounding a conducting wire depends on...	Size of current and distance from wire
70.	State the equation which links current, force, length of conductor and magnetic flux density	$F = BIl$
71.	Which rule can be used to determine the direction a motor will rotate?	Flemming's left hand rule.