Science Knowledge Organiser

Year:	**11**
Term:	**Sp1**

	Topic:	**Magnetism (P.38)**
1	Define "poles" on a magnet	The place where the magnetic force is the strongest
2	What do two magnets next to each other do?	Exert a force on each other
3	What is the effect of two like poles on each other? (e.g. N-N)	Repel
4	What is the effect of two different poles on each other? (e.g. N-S)	Attract
5	What type of force are attraction and repulsion?	Non-contact
6	Define "permenant" magnet	Produces it's own magnetic field
7	Define "induced" magnet	A material that becomes a magnet when placed in a magnetic field
8	What happens to an induced magnet when it is removeed from the magnetic field?	Loses all of it's magnetism
9	What is the region around a magnet where magnetic force has an effect called?	Magnetic field
10	Name 4 magnetic materials	Iron, steel, cobalt, nickel
11	Describe the force between a magnet and a magnetic material	Attraction
12	State one factor that effects the strength of a magnetic field	Distance from magnet
13	What direction do the magnetic field lines go when drawn around a magnet?	North (seeking) pole to south (seeking) pole
14	How do you plot magnetic field lines around a magnet?	Use a compass to identify north and join dot to dot
15	How does a compass work for navigation?	The core of the Earth is magnetic!

	Topic:	**Motor effect (P.39)**
1	What happens when a current flows through a wire?	A magnetic field is produced around wire
2	State two factors that effect the strength of the magnetic field around a wire	Current & distance from the wire
3	How do you determine the direction of the magnetic field around a wire?	Flemings right hand rule (thumb = current direction, fingers = magnetic field direction)
4	What is a solenoid?	A coil of wire
5	Describe the shape of the magnetic field around a solenoid	Same as a bar magnet
6	How can you increase the strength of a solenoid?	Increase current, increase number of coils, add iron core
7	Define an "electromagnet"	A solenoid (coil of wire) with an iron core
8	What is the term given to "the force exerted by a conductor and a permenant magnet on each other"? (HT only)	The motor effect
9	What does each part of Fleming's left-hand rule stand for? (HT only)	ThuMb - thrust (motion), First finger - Field, seCond finger - Current
10	What is the equation used to work out the force acting on a conductor? (HT only)	Force = magnetic flux density x current x length
11	What tends to happen to a coil of wire when placed into a magnetic field?	It rotates
12	Name two pieces of equipment that use the motor effect	Loudspeakers and headphones
13	Describe how a speaker works	Oscilations in electrical current -> vibrations of a speaker cone -> oscillations of air particles (sound
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