				1					
Beckfoot Subject: Scie		: Scie	ence Topic: Magnetism and Electrom		nagnetis	sm Year	r Group: 10	succeed	
Magnets			Fields		Electromagnets				
I	Permanent magnets produce the	roduce their		Field lines always point away from a	1	Current flowing in a wire produces a magnetic field			
2	Induced magnets become magnets when placed into another field, I lose this quickly when removed	ome magnets ther field, but ו removed			2	 Strength of an electromagnet is affected by: i) Current ii) No. of turns of wire iii) Iron core 			
3	Materials that are magnetic: i) Iron ii) Steel iii) Nickel			S N	3	Fleming's Left hand rule: • First Finger = Field • Second Finger = Current • Thumb = Thrust			
	iv) Cobalt They are always attracted to a magnet			Field Lines Around a Bar Magnet Where the field lines are closer together, the field is strongest i.e. at the	4	 Force = Magnetic Flux Density x Current x Length of wire F = BIL A coil of wire in a magnetic field will start to rotate. This is how a motor works. 			
4	A compass contains a small bar	nth'a			5				is
	magnetic field		3		Key V	Key Vocabulary			
5	To show a magnetic field patter	 \	4	poles		Magnetic field	d	A region where a magnetic material experiences a force	
		1				T			

Earth's magnetic field looks like a bar

2

3

4

5

Solenoid

Induced

Motor effect

Magnetic Flux Density

A wire coiled around an iron core

How strong a magnetic field is

The electromagnetic force on a

Produced/made a magnetic field or

wire

current

- Scatter iron filings on a piece of paper and they will line up with the field.
- Use a compass to plot the direction of the field in different positions around the magnet

5

magnet