Aim

To do a investigation in which to find out if increasing the number of turns on the coil will increase the magnetism

Predication

Magnetic field is an area of magnetism around a magnet, which is made of magnetic field lines. You can see the shape of the field lines if you put some paper over a magnet and sprinkle some iron filings onto the paper. If you put a compass on a field line then it points in the direction of the line.

An electromagnet is a coil of wire with electricity flowing through it. This electric current turns the coil into a magnet with a magnetic field of exactly the same shape as a bar magnet. The good thing about an electromagnet is that you can turn it off if you switch off the current flowing through it, unlike a bar magnet.

If you want to make the electromagnet stronger (in which we do) then you need to put an IRON bar through the middle of the coils. This increases its strength greatly. The bar must not be made of steel because steel keeps its magnetism and so you would not be able to turn the magnet off.

You can also make an electromagnet stronger by increasing the number of turns or by increasing the current flowing through it. We trough that may be if you double the number of turns it may double the magnetism

Equipment

Iron bar
Scissor
Power pack
Wire

Wire cutters

Meathod

First of all we set the investigation up at five turns (we decided to go up in 5 as then we get a fair reading) which look like the flowing

Results

Conclusion

Electricity is the flow of moving electrons along a wire (or more accurately, the transfer of energy from one vibrating electron to the next).

As the electrons move they produce a magnetic field (magnetism), which can be detected using a compass needle

If you use more turns of wire on the coil, the current will get stronger which mean the electrons will get quicker so the felid will be greater the number of electrons flowing along a certain length of wire will increase .

How we made it fair by

By always using the same power pack and iron bar and keep the coil turns the same size *5 as then we get a fair reading*

Second results

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Magnetism investigation

Why I was right in my predication

There has got to be a point in which the magnetism can not be doubled