Electromagnets Homework Name …….

1. Draw a diagram of an electromagnet showing its magnetic field.

2. How can the strength of an electromagnet be increased?

3. Find four different uses of electromagnets.

4. In an experiment to investigate how the strength of an electromagnet varies with current level the following results were obtained:

Current /A	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Paper clips held	0	4	9	12	17	20	23	25	25

(a) Draw a graph of 'paper clips held' against 'current /A' on the other side of this sheet. You should draw a best-fit curve on your graph. Remember which variable goes on which axis.

(b) Use your graph to predict:

(i) the current level required to hold 10 paper clips;

(ii) the number of paper clips expected to be held by a current of 2.2A.

(c) The student obtaining the above results expected the strength of the electromagnet to double if the current was doubled. How well do the results back up this prediction?

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