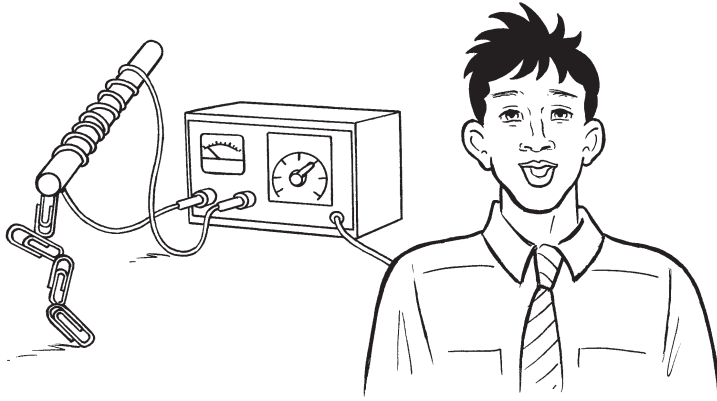


# Electromagnets

Joe made an electromagnet. He did this by coiling some insulated wire around a bar made of soft iron. He connected the two ends of the wire to the DC terminals of a power supply. When Joe turned the power supply on he found he could pick up some paper clips. He decided to do an investigation. He predicted what would happen.

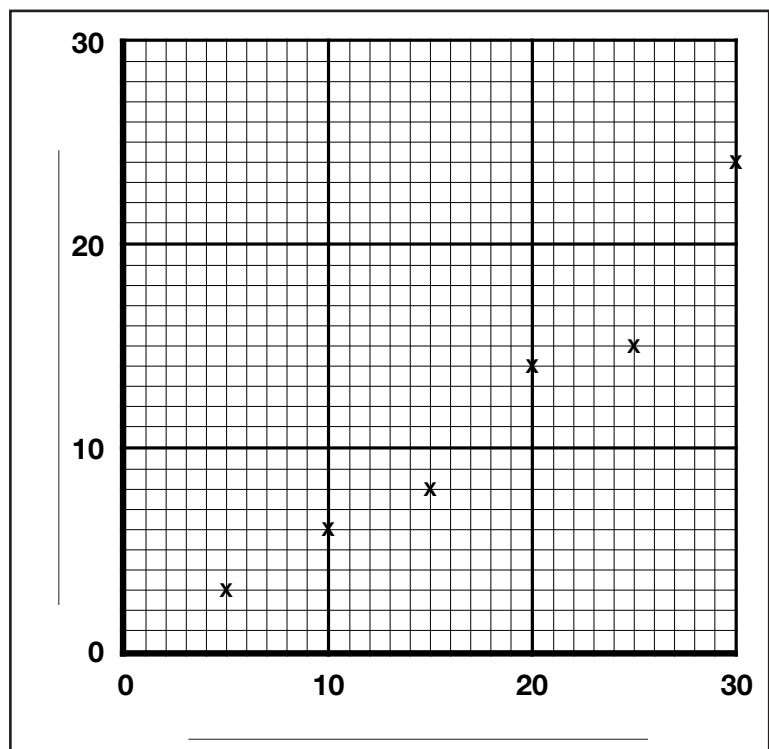


The more coils around the iron bar, the stronger the electromagnet will be. If the electromagnet is stronger it will pick up more paper clips.

Here are Joe's results:

| Number of coils | Number of paper clips picked up |
|-----------------|---------------------------------|
| 5               | 3                               |
| 10              | 6                               |
| 15              | 8                               |
| 20              | 14                              |
| 25              | 15                              |
| 30              | 24                              |

Joe's results are plotted as a line graph below:



1. Add labels to each axis on the graph.
2. Joe thinks one of his results is anomalous (odd). On the graph, draw a ring around the result you think is odd.
3. Draw a line of best fit through the points Joe has plotted. Miss out the odd result.
4. Complete this conclusion:

As the number of coils increases, the number of paper clips picked up \_\_\_\_\_.

This means that \_\_\_\_\_ the number of coils makes the electromagnet \_\_\_\_\_.

5. Was Joe's prediction correct?