

One scientist found a way. In 1820, Hans Oersted placed a compass near an electrical current. He saw that the needle on the compass moved. The current had made a magnetic field. Oersted studied this some more. He found that electrical currents have magnetic fields.

## Electromagnetism

This showed that there is a close link between electricity and magnetism. It also led to a new discovery. That was the electromagnet.

A simple electromagnet is a coil of wire that is attached to a battery. Electricity flows through the wire. It makes a magnetic field. An electromagnet can be made stronger. One way to make it stronger is to use more turns in the coil. Another way is to add more current in the circuit. A piece of soft iron like a nail through the coil makes the electromagnet stronger still. Electromagnets are used in many things. Telephones and washing machines are just two of those things.



an early electromagnet

## Comprehension Question

Describe electromagnetism.