

6.6. Interaction between a magnet and a coil carrying an electric current

Aim: to investigate the interaction between a magnet and a coil carrying an electric current.

Apparatus: from the Low-Tech kit you will need:

- universal stand,
- brass support for universal stand,
- plexi tube 250 mm long,
- bar magnet,
- 2 paper clips,
- 4.5 V battery,
- 4 crocodiles,
- 2 cables,
- coil.

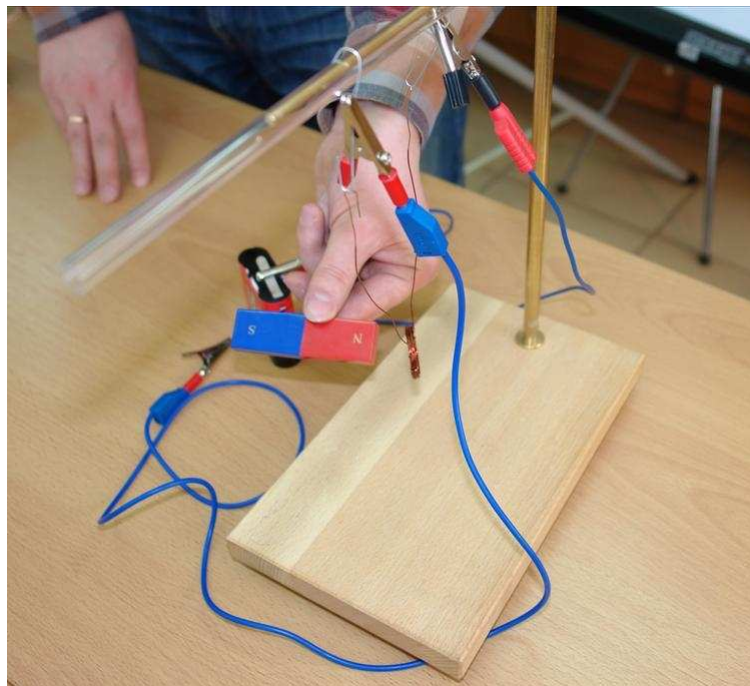


Photo 1. The experimental set-up for presentation the interaction between a bar magnet and a coil.

Procedure:

We hang the coil at the universal stand using two paper clips and two crocodiles. We place the bar magnet close to the coil and connect electrical circuit to the 4.5 V battery. What happens with the coil carrying an electric current? Please change the direction of the current and investigate the phenomena. What can you observe now?

Explanation:

A coil carrying a current is attracted or repelled by a bar magnet according to the direction of the current. A coil carrying an electric current produces a magnetic field and behaves as a bar magnet.