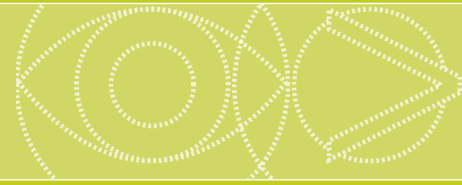


Electromagnets



CREATE A MAGNETIC FIELD



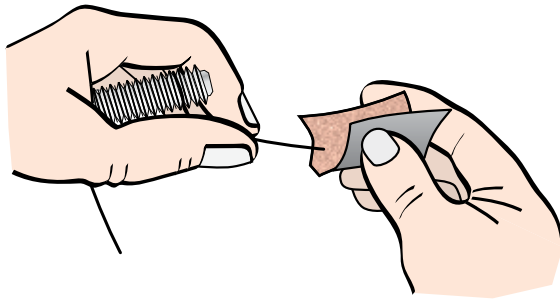
what you will need

- A steel bolt or large iron nail
- Iron filings or paper clips
- 1 D-cell battery
- Masking tape (to hold coil in place)
- 1 metre of resin copper wire (light duty wire 0.5 mm diameter)
- Fine sandpaper (only if wire is enamelled)

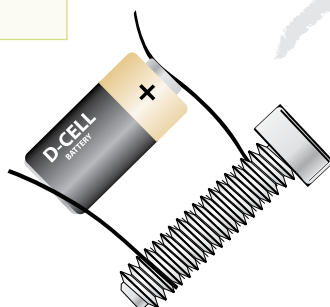
1 Wrap the wire around the bolt. Allow 10 cm at each end for connections.



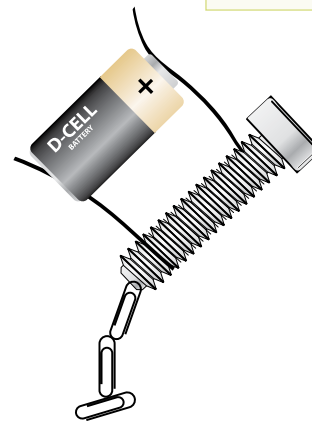
2 Sandpaper 1.5 cm at ends of the wire if necessary.



3 Connect the ends to the battery.



4 Test your electromagnet using paper clips.



your observations

1 What effect does the electrical current in the coil have on the bolt?

2 Does the bolt remain magnetised once it is taken out of the coil?

conclusion

3 Write a statement about electricity and magnetism that agrees with your observations.
