Science & Technology 404

Worksheet – Magnetism

1. What are the most common ferromagnetic substances?

2. a) You rubbed a bar magnet a few times along an iron nail. You then moved the nail away from the magnet and held it above a box of paperclips and a few of them stuck to the nail. Explain how this happened.

   b) What would have happened if you dropped the nail before getting to the paperclips?

   c) Why won't this work with a piece of plastic?

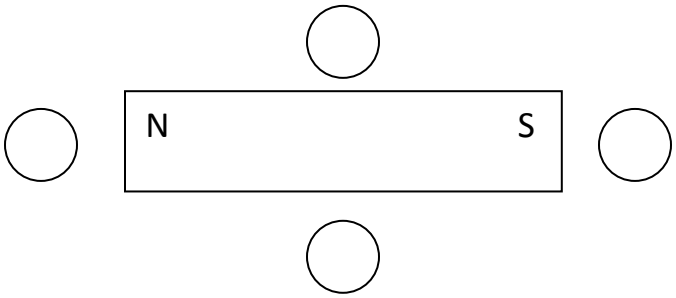
3. The end of a compass needle is magnetically a north pole. Why is a compass needle attracted to the Earth's North Pole?

4. Why are electromagnets often more useful than natural magnets?

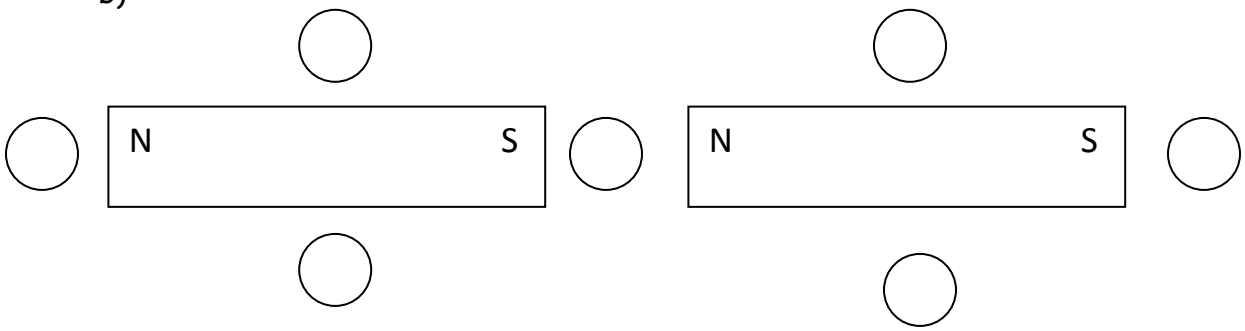
5. How do the magnetic "door-holders" in the hallways of the school work?

6. Draw an arrow to indicate the direction a compass needle would point in each location.

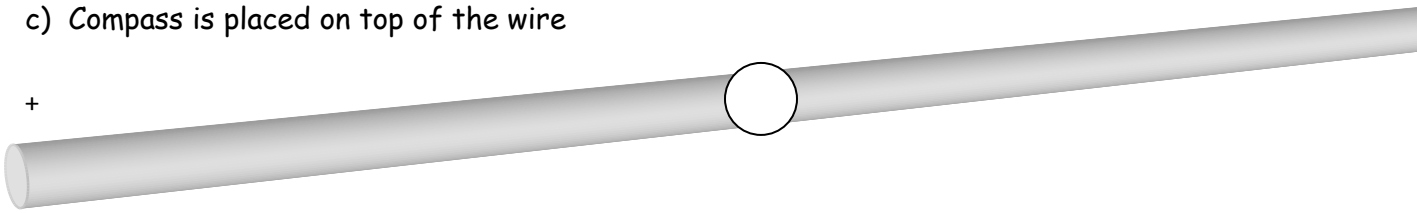
   a)



b)



c) Compass is placed on top of the wire



7. Draw the magnetic field in each of the following situations. Be sure to indicate both the ***shape*** and the ***direction*** of the field.

a)

b)

c)

d)