

# What is a magnetic field?

Magnetic fields are invisible yet every magnet produces one.

To see a magnet's magnetic field lines there is a really simple and interesting experiment you can do.

# For this experiment you will need:

- A piece of A4 white card
- A magnet
- A tube of iron filings or iron powder

## **Step one**

Lay the piece of white paper flat on a desk or table.

#### **Step two**

Carefully remove the lid from the tube of iron filings or powder.

## **Step three**

Pour the iron filings or powder onto the sheet of paper, taking care not to drop any.

# **Step four**

Here's the tricky part. You need to lift up the piece of card and place the magnet directly underneath the card. You will see all the iron filings or powder move and line up along the magnet's magnetic field lines making them clear to see. Just like in the images below.



Try different shaped magnets and see what different shapes they produce. Can you identify what shape of magnets produce the magnetic field patterns below?





