

Magnets (3/3): what patterns can a magnetic field make?

Illustrating the activity exploration process

What you need:



A bar magnet



Charm compasses

Exploration:

Step 4: Form a loop of compasses.



Step 8: Remove the magnet but retain the compass loop.



Note – compass needles *are* magnets themselves, and they affect each other.

SCIENCE IS ACTIVITY

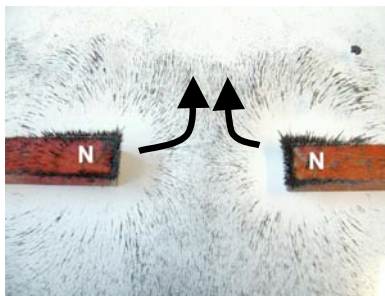
Steps 9–10: Place two magnets south to north. Compass needle is in line with magnets.



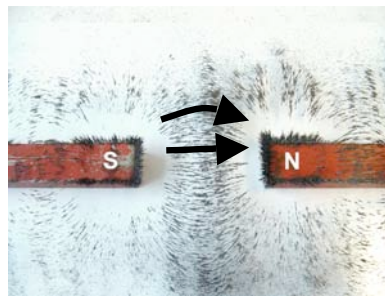
Step 11: Place two magnets north to north. Compass needle is at right angles to magnets.



Steps 12–13: Iron filings



North to north – lines bend outwards.



South to north – lines link magnets.

Step 14:

This shows that the compass needle also has a magnetic field around it. If possible, use a larger compass: e.g. orienteering type.

