

5.3 Magnetic fields and electromagnetism

Properties of magnets:

Magnetic materials:

- Ferromagnetic materials: these materials can be magnetized to form a retain their magnet. They retain their magnetization after the exposure of a magnetic field.
- Paramagnetic/diamagnetic materials are materials that have weaker magnetic properties. They do not retain magnetization after the removal of an external magnetic field.

Law of magnetic poles:

Like poles repel, unlike poles attract.

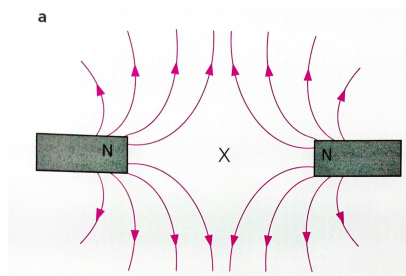
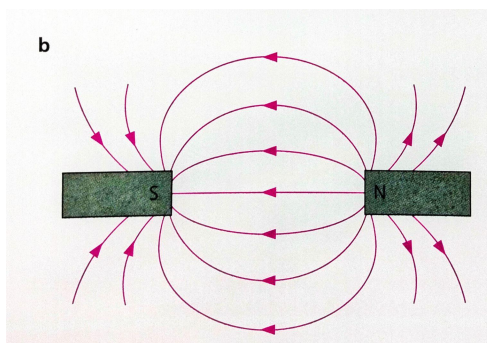
For example:

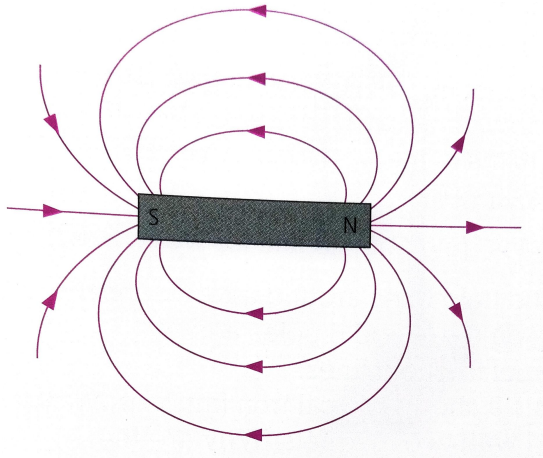
The South Pole and South Pole will repel while the South Pole and North Pole will attract.

Magnetic fields:

These are regions around a magnet or a moving electric charge where magnetic forces are exerted.

Note: Magnetic field is stronger in regions where the field lines are close together than when they are further apart.





Credit: Cambridge IGCSE™ Physics ForthEdition Hodder Education