



putting together two magnets just makes another

sawing up a magnet just makes two smaller

magnets always have two poles

magnets are made-up of mini-magnets

magnetising is about aligning the mini-magnets

by stroking, placing in a static magnetic field

demagnetising is about randomising the alignment of the mini-magnets

by striking, warming, placing in a changing magnetic field

Earth's magnetic field is shaped like that of a bar magnet, but thought to be electromagnetic in origin

magnets exert forces without contact

where the forces are exerted is shown by a field

each mini-magnet has a field like a bar magnet

fields can be explored with iron filings and with compasses

the field of a bar magnet is a common pattern

more complex fields are the result of adding simpler fields

electromagnets always have two poles

electromagnets produce fields only when there is a current

the field around a current carrying wire is very simple

the fields of electromagnetic coils are of a similar shape to the fields of bar magnets

the forces get smaller with increasing distance from the magnets, but not in a simple or symmetrical way

electromagnetic devices depend on these forces

electromagnetic devices rely on being able to switch the field on or off