Physics

Science Y3: Forces and Magnets

Vocabulary

magnetic field the area around a magnet where its magnetic force exists

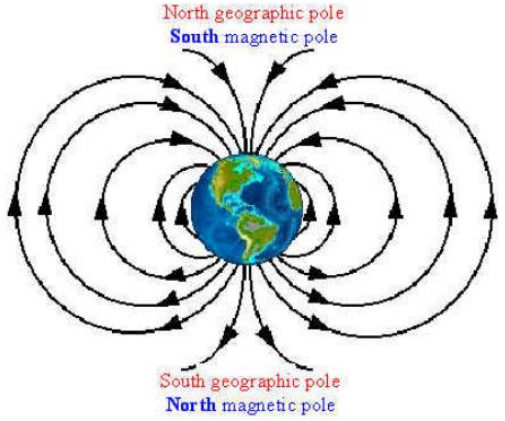
attract to draw or pull toward a magnet

repel to push away from a magnets pole

gravity a force that pulls all objects and materials toward the Earth

The compass

A compass is north-seeking. There is a little magnet in it which seeks out the North Pole.



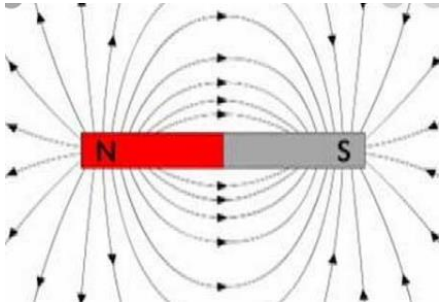
Key diagrams and knowledge

A force is a push, pull or twist that can make an object start moving, speed up, slow down, stop or change direction.

Magnets are mostly made from iron or alloys of iron (mixtures of iron and other materials). Magnets provide a force which can push or pull over a distance. The stronger the magnet the greater the distance this force can be felt.

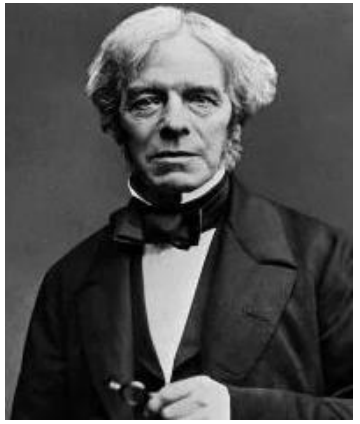
Magnets attract magnetic materials. Iron and materials containing iron (including steel) are the most common magnetic materials, but nickel and cobalt are also magnetic. Some coins are magnetic and some are not.

All magnets have two poles, the north pole and the south pole. These poles are in different places depending on the shape of the magnet. If two like poles are brought near each other they repel. If two unlike poles are brought near each other they attract.



The idea of magnetic field lines and magnetic fields was first examined by Michael Faraday and later by James Clerk Maxwell

Scientists



Michael Faraday (1791-1867)

Links to prior learning and next steps:

Forces and electricity (Y4)

Links to other subjects

Geography: location of north and south poles on a globe