

## Key Knowledge

### Force

This is a push or pull and can be a contact force (eg kicking a ball) or a non-contact force (eg a magnetic force)

### Objects moving

When an object moves over a surface the texture of the surface and the object affect how it moves eg the surface might be smooth or not.

### Magnets

These attract magnetic materials such as iron and nickel.

### Magnetic poles

These are the strongest parts of the magnet and are named north pole and south pole.

### Repel attract

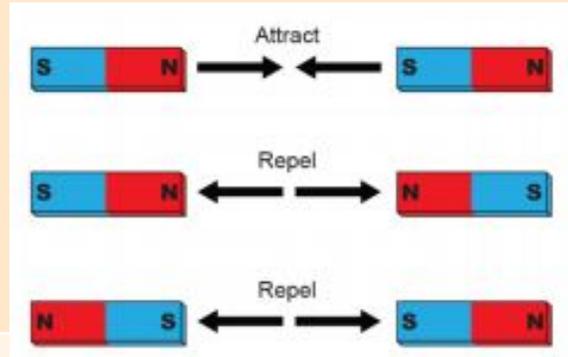
Two identical poles will repel or push each other away. Opposite poles will attract or pull towards each other.

### Types of magnets

There are different magnets named depending on their shape. Examples include bar, button, ring and horseshoe magnets.

## Key Diagrams

Magnetic attraction and repulsion



## Key Vocabulary

|                          |  |
|--------------------------|--|
| <b>Force</b>             | This is a push or pull   |
| <b>Iron</b>              | A magnetic metal   |
| <b>Magnet</b>            | A magnet is usually made from iron and has poles at either end   |
| <b>Magnetic force</b>    | This is a force that explains the attraction of magnets for iron (which is a magnetic metal).                    |
| <b>Magnetic material</b> | These are materials which are attracted to magnets, eg iron and nickel.  |
| <b>Metal</b>             | A material which is usually solid and hard. It will conduct electricity. Some metals are magnetic.               |
| <b>Poles</b>             | These are the two ends of a magnet, one end is called the north pole and the other end is called the south pole. |
| <b>Pull</b>              | This is a force moving something towards you.  |
| <b>Push</b>              | This is a force moving something away from you.  |
| <b>Steel</b>             | This is a magnetic metal that is a mixture of iron and carbon.   |
| <b>Strength</b>          | How much force something can take before it crumples or breaks.  |

## Important Scientists

### Michael Faraday

1791 - 1867

He used magnets to create electricity something that is still done today

### Laura Bassi

1711 - 1778

Laura was the first female physics professor in the world

## Investigate

Explore and investigate how objects move on different surfaces

Classify materials according to whether they are magnetic or not

Explore how magnets behave towards each other

Investigate the strength of different magnets