

## Key Vocabulary

**Attract** - to pull towards

**Bar magnet** - a rectangular shaped magnet

**Contact** - when objects touch

**Force** - a push or pull that acts upon an object that can cause it to move, change shape or change direction

**Friction** - the force that acts upon one surface when it moves against another

**Horseshoe magnet** – a magnet shaped like a horseshoe

**Magnet** - a piece of iron that attracts and repels

**Magnetic force** - when a magnet pulls objects towards it or pushes objects away

**Magnetic metal** – a metal that contains iron, nickel or cobalt

**Magnetic pole** - each end of the magnet where the force is the strongest

**Non-magnetic metal** – a metal that does not contain iron, nickel or cobalt

**Pull** - to move something towards

**Push** - to move something away

**Repel** - to push away

## Forces

A force is a push or pull that acts upon an object. We can't see forces, but they are an important part of our everyday lives. We push and pull objects to do many different things. When we push or pull objects we can move the object, change the shape of the object, or make the object change direction.

### Examples of pushes and pulls



## Magnets

South magnetic pole.



North magnetic pole.

Magnets are usually made from iron. They can attract and repel other objects with their magnetic forces. Magnetic forces act at a distance meaning that a magnet does not need to be in contact with another object for the magnetic forces to act. Magnets can be lots of different shapes, sizes and colours, but they will always have a north and south magnetic pole.

### Examples of magnetic objects



## Magnets and their poles



### Same poles repel

If you try to put two magnets together with the same poles pointing towards one another, the magnets will push away from each other. We say they repel each other.

### Different poles attract

If you put two magnets together with different poles pointing towards one another, the magnets will pull towards each other. We say they attract each other.

### Fantastic Force Facts!

- All forces are really just a push or a pull.
- Magnetism is a type of force. A magnet might pull an object towards it or push it away.
- Not all metals are magnetic!
- Sir Isaac Newton was one of the first scientists to study forces.

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