

Forces and Magnets Knowledge Organiser

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 object's shape, or make the object change direction.

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 pushes and pulls

pushes	pulls

Examples of magnetic objects:



iron nails



steel spoon



steel paper clip

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.

Key vocabulary

attract - to pull towards

contact - when objects touch

different - not the same

distance - the length between two objects

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

magnet - a piece of iron that attracts and repels

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

magnetic pole - each end of the magnet where the force is the strongest

pull - to move something towards

push - to move something away

repel - to push away

same - identical, not different

