

SMRP Science Knowledge Organiser for Year 3 FORCES AND MAGNETS

Science Knowledge

Pushes and Pulls

A **force** can be described as being either a **push** or a **pull**. For example, you use a **pull** force on the zip of a coat and you use a **push** force to hit a ball with a tennis racket. These are examples of **contact** forces because one object touches another to make it move.

The Magnetic Rule

Magnets have north poles and south poles. The north and south poles of magnets always **attract** each other. Two north or south poles always **repel**. Magnetic forces work from a distance without the need for contact

Magnet vs Magnetic...what's the difference?

A magnet is an object that produces a magnetic force. Magnets can **attract** or **repel** other magnets. They can also attract **magnetic** objects made from some metals such as iron and steel. Most metals and all other materials are **non-magnetic**. **Magnetic** objects can't attract other magnetic objects because they don't produce a magnetic force!

What are magnets used for?

Magnets can be used to:

- close cupboard doors
- sort magnetic metals from non-magnetic metals in scrap yards
- hold messages to a fridge door
- hold kitchen knives
- lift maglev trains off the ground!
- make loudspeakers work

Do some research...what else can you find that uses magnets?



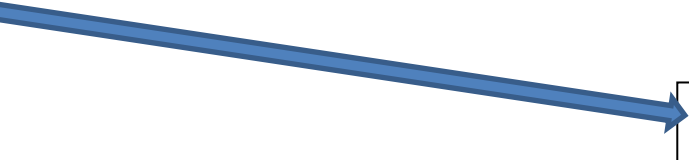
Push or pull?

Can you work out which force is being used in each picture?

The magnetic rule

Like poles repel

Unlike poles attract



Magnets in Action

Science Vocabulary

Word	Definition
Attract	to pull or draw towards
Contact	when two objects touch
Force	a push or pull on an object
Friction	a force that happens when one object rubs against another
Non-magnetic	an object or material that is not attracted to a magnet
Magnet	a material or object that produces a magnetic force known as a magnetic field
Magnetic	an object or material that is attracted to a magnet
Poles	the area at each end of a magnet where the magnetic field is strongest. Magnets have a north pole and a south pole.
Pull	the force of bringing an object closer
Push	the force that moves an object away from something
Repel	to push away

Magnet	Magnetic

