

Year 3 Forces and Magnets Knowledge Organiser

A **force** is a **push** or a **pull** on an object.

A **force** can cause something to

Object Speeds Up 

Object Slows Down 

Object Changes Direction 

- speed up
- slow down
- change shape
- change direction

It is **easier** to push or pull something along

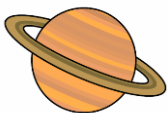
It is **harder** to push or pull something along

- a **smooth** surface
- a **bumpy** or **rough** surface



Friction is

when two surfaces slide together, a force called **friction** makes them stick very slightly together. Smooth surfaces have less friction than bumpy surfaces.



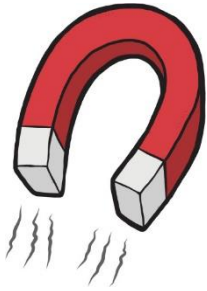
There are two types of natural forces around us-
magnetic forces and **gravity**.



Gravity

makes things fall down towards the centre of the earth. There is gravity everywhere. The gravity from the sun reaches through the solar system and keeps the planets in orbit.

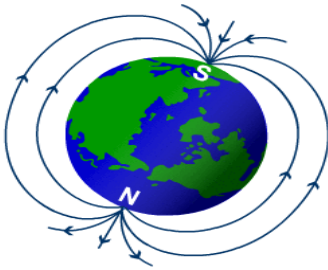
Magnets



are objects that **pull or push** things with an **invisible force** called **magnetism**, which pulls on some **metals** such as iron and nickel.

Magnets cannot pull anything made of wood or plastic, or metals such as copper or gold. Objects that are pulled by magnets are said to be **magnetic**. Objects that are not pulled by magnets are said to be **non-magnetic**.

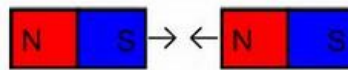
Magnetic poles



The ends of a magnet are called its poles.

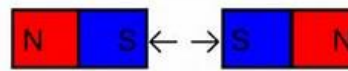
One end is called the **north pole** and the other end is called the **south pole**.

attract



Opposite poles **attract**

repel



Same poles **repel**

Important vocabulary:

force

magnet

magnetic

non-magnetic

speed

direction

friction

movement

surface

gravity

poles

north pole

south pole

attract

repel

magnetism