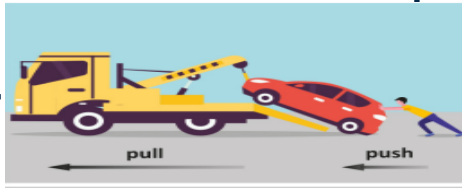


Mighty Metals

Forces

A force is a push or pull. Forces cannot be seen, but it is possible to see what forces do. When a force is applied to an object, it can change the object's speed, direction of movement or shape. Some forces are contact forces. This is where objects must be touching each other to apply a force. Non-contact forces, such as gravity and magnetism, act between two objects that are not touching each other. Some forces are measured in Newtons (N) using a force meter.



Gravity

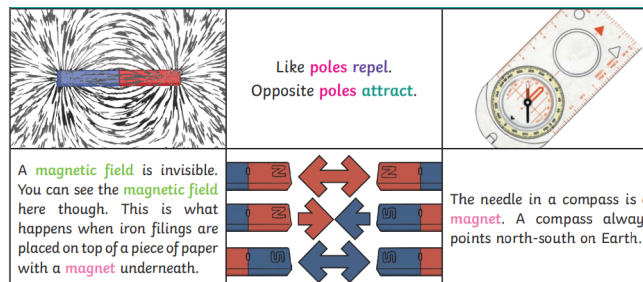
Gravity is a non-contact force. It pulls objects towards each other. Anything with a mass can pull on another object. The bigger the object's mass, the bigger the gravitational pull. On Earth, gravity pulls everything downwards towards its centre because the Earth has such a large mass. This is why objects on Earth fall to the ground when dropped.

Friction

Friction is the force between two surfaces moving across each other. It acts in the opposite direction to movement. And always slows down a moving object. Friction is in all places where two surfaces meet, but its force depends on their materials. Normally, smooth surfaces have less friction than rough surfaces. Friction can be a useful force. It keeps our shoes from slipping and stops car tyres from skidding.

Magnetism

A magnet is a material or object that produces an invisible magnetic field. A magnetic field causes the force of magnetism that pulls on magnetic materials and attracts or repels magnets. The two ends of the magnet are where the force is strongest. These are called the north and south poles. Two poles of the same type push each other away, which is called magnetic repulsion. Two opposite poles pull towards one another, which is called magnetic attraction.



Glossary

Attract - A force which pulls objects together.

Forces - pushes or pulls

Friction - A force that is created when two surfaces rub against each other. It makes things slow down.

Gravity - A force that pulls everything down to the ground on Earth.

Magnet - An object which produces a magnetic force that pulls certain objects towards it.

Magnetic - objects which are attracted to magnets, iron, nickel and cobalt are magnetic.

Repel - A force which pushes objects away.