

Forces

Key Vocabulary:

Acceleration: The rate at which an object's velocity changes

Air resistance: The force of air acting on a moving object

Balanced forces: Two forces of equal size acting in opposite directions

Contact force: A force that must touch an object to affect it

Friction: The force caused by one surface touching another surface

Gravity: A force that attracts an object towards the centre of another object

Magnetism: The force between two magnets or between a magnet and a magnetic material

Motion: Movement

Newton: The unit for force

Non-contact force: A force that can affect an object without touching it

Tension: The force acting on an object that has been stretched

Thrust: A 'pushing' force

Up-thrust: The force that acts upwards on an object, often from air-resistance or water

Velocity: The scientific word for 'speed'

Weight: The force that results from an object's mass and the effect of gravity

Energy Stores

Kinetic energy – All moving things have this. The amount depends on the mass of the object and its speed.

Internal energy – All objects have this. If it is caused by the movement of the particles in the object, it is **THERMAL ENERGY**. If it is due to how the particles are bonded together, it is **CHEMICAL ENERGY**.

Elastic potential energy – This is energy stored in stretched or squashed materials.

Gravitational potential energy – This is the energy an object has due to where it is positioned. It depends on the mass of the object, the height the object moves and the strength of gravity (the Gravitational field strength)

Electrical energy – Some objects carry electrical charges (called electrons). They can exert forces on each other.

Magnetic energy – Some objects can be magnetised and create magnetic fields. They can exert forces on other magnetised objects.

Energy transfers

