

Forces

- A force is a push or a pull that can change an object's shape, speed, or direction.
- Forces are measured in newtons (N) using a tool called a newton meter.
- Balanced forces mean the forces acting on an object are equal – the object stays still or moves at a steady speed.
- Unbalanced forces cause a change in motion – the object might speed up, slow down, or change direction.
- Gravity is a force that pulls objects towards the Earth – it gives everything weight.
- Friction is a force that slows things down when two surfaces rub against each other.
- Air resistance is a type of friction caused by air pushing against moving objects.
- Contact forces need to touch something to work (like friction or a push), while non-contact forces (like gravity and magnetism) work at a distance.
- Mass is how much matter something has, while weight is the force of gravity acting on it.
- Force diagrams use arrows to show the size and direction of forces acting on an object.