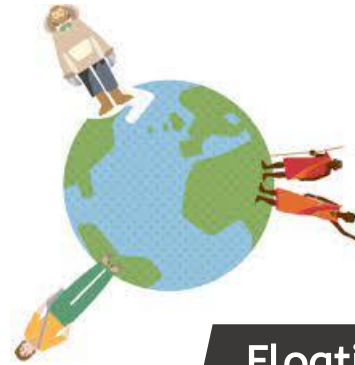


Forces

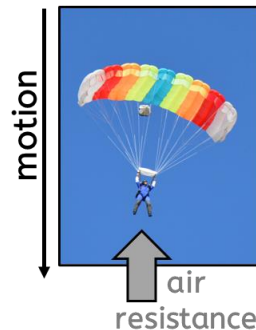
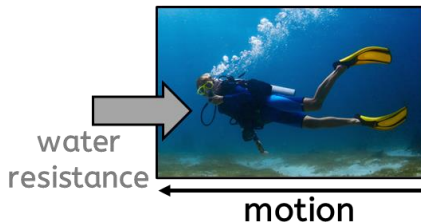
Gravity

- Gravity is a non-contact force that pulls all objects towards each other.
- Objects with a greater mass will have a greater gravitational pull.
- Weight is a force and is measured in newtons (N).
- The weight of the object depends on the gravitational pull. So, objects on the Moon will have a smaller weight than the same object on the Earth.



Frictional forces

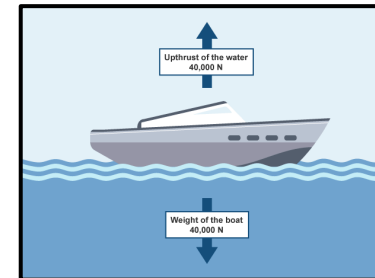
- Air resistance and water resistance are both examples of frictional forces. Both forces act to slow objects down.
- Increasing the surface area of an object will increase the impact of these forces on the object.



Key vocabulary

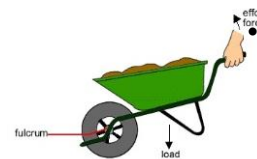
- **friction:** (noun) a force that acts to slow a moving object down, or to prevent an object from moving.
- **mass:** (noun) the amount of matter an object is made from. It is measured in kg.
- **upthrust:** (noun) an upwards force that a liquid (and a gas) exerts on an object floating in it.
- **load:** (noun) the weight (the force) that is being moved.
- **pivot:** (noun) the point at which something turns.

Floating and sinking



When upthrust (an upwards force in a liquid) is equal to the weight of the object in the liquid, the object will float.

Levers, pulleys and gears



Levers, gears and pulleys are simple machines that allow a smaller force to have a greater effect.