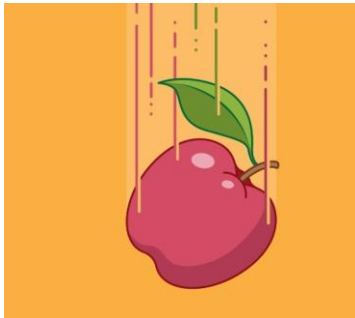




“Whatever you do, work at it with all your heart”

Colossians 3:23

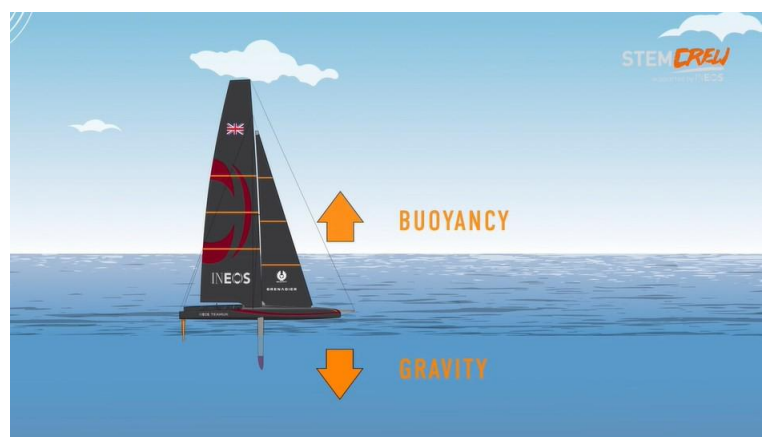


## Forces

Year 5  
Summer Term 1

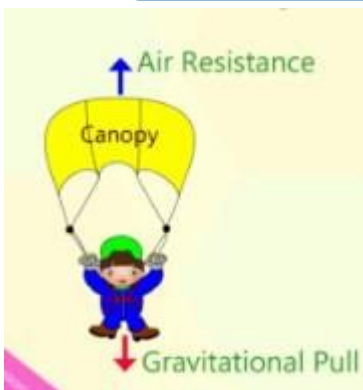
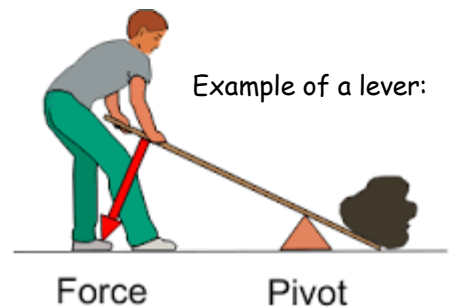
Know that:

- **Objects fall towards the Earth because of the force of gravity**
- **Air resistance, water resistance and friction are forces that can affect a moving object**
- Air resistance is when air pushes against the direction of the main driving force.
- Water resistance is when water pushes against the direction of the main driving force.
- Friction is the resistance that one surface encounters when moving over another—ie. rubbing.
- **Forces can be transferred through mechanical devices (gears, pulleys, levers) allowing a small force to have a greater effect.**
- The mass of an object is a measurement of how much matter is in it. It is measured in kilograms (Kg).
- The weight of an object is the force acting on an object due to gravity. It is measured in newtons (N).



Key Vocabulary:

- Gravity—the force which holds objects to Earth.
- Friction—a force between two surfaces sliding across each other
- Air resistance— a force that is caused by air. The force acts in the opposite direction to an object moving through the air.
- Water resistance— a type of force that uses friction to slow things down that are moving through water. It is often called drag.
- Buoyancy—the ability or tendency of something to float in water or other fluid
- Mass—a measurement of how much matter is in an object. It is measured in kilograms (Kg).
- Weight—the force acting on an object due to gravity. It is measured in newtons (N).
- Mechanism—any tool used to convert or control motion or transmit control or power
- Machine— a device that makes it easier to do work by increasing the force you can apply
- Lever—a simple machine which helps us to lift an object
- Pulley—a simple machine that makes it easier to lift or move a heavy object. It includes at least one wheel and a length of rope
- Gear -a rotating part in a machine that has teeth cut around its circumference.
- Fair test — a scientific test where one factor is changed and everything else stays the same
- Independent variable— something that might be changed in an experiment
- Newton – a unit of measurement for a force like a push or pull, names after Sir Isaac Newton
- Upthrust – any force causing something to be pushed upwards



Example of a pulley:



Gears:

