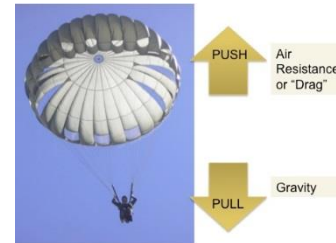


Year 5 Forces

Key Vocabulary	
Forces	Pushes or pulls
Gravity	A pulling force exerted by the Earth (or anything else which has mass).
Earth's Gravitational Pull	The pull that Earth exerts on an object, pulling it towards Earth's centre. It's the Earth's gravitational pull that keeps us on the ground.
Weight	The measure of the force of gravity on an object. Measured in Newtons (N).
Mass	A measure of how much matter (or 'stuff') is inside an object. Measured in Kg.
Friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
Air resistance	A type of friction caused by air pushing against any moving object.
Water resistance	A type of friction caused by water pushing against any moving object.
Streamlined	When an object is shaped to minimise the effects of air and water resistance.
Mechanism	Parts which work together in a machine. Examples of mechanisms are pulleys, gears and levers.

Examples of forces in action:

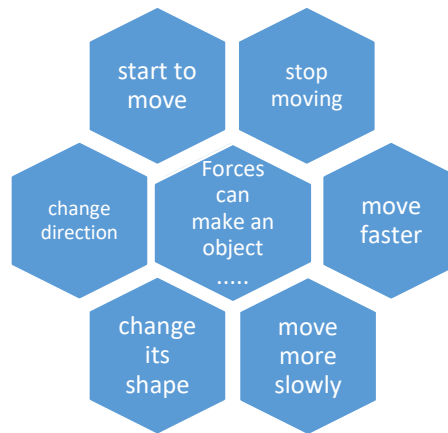
Water resistance Swimmer's force



cyclists driving force friction



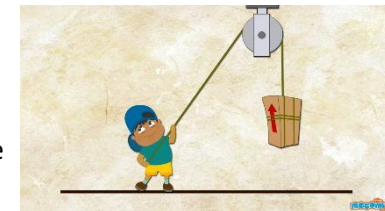
Water resistance and air resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful it slows down a skydiver with a parachute open when they fall to ground. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.



The Moon has a smaller mass than Earth so the gravitational pull on the Moon is smaller than on Earth.

Pulleys

Pulleys can be used to make a small force lift a load. The more wheels in a pulley, the less force is needed to lift the load (object).



Gears

Gears or cogs can be used to change the speed, force or direction of a motion. When the two gears are connected, they always turn in the opposite direction to each other.



Levers

Levers can be used to make a small force lift a load. A lever always rests on a pivot.

