

Science Subject Knowledge Bank Year 5: Forces

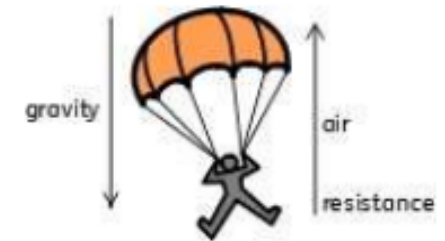
<u>Vocabulary</u>	<u>Definition</u>
Gravity	The force that attracts a body to the centre of Earth.
Air resistance	The force that is acting upon an object that is moving through air moving in the opposite direction.
Water resistance	A type of force that uses friction to slow things down whilst moving through water
Friction	The resistance that one surface or object encounters when moving over another.

What is gravity?

- Gravity is the force that pulls objects to the centre of the Earth.

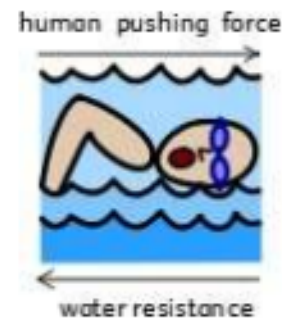
What is air resistance?

- Air resistance pushes up on the parachute, opposing the force of gravity.
- This makes the parachute land more slowly.



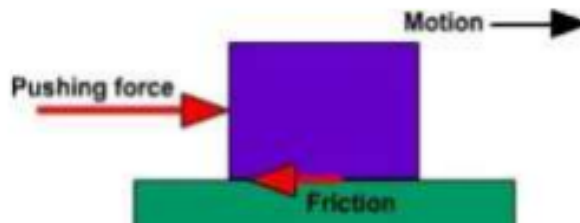
What is water resistance?

- Water resistance is the friction that is created between water and an object that is moving through it.
- Some objects can move through water with less resistance if they are streamlined.



What is friction?

- Friction is a force - it is the resistance of motion when one object rubs against another.



How do mechanisms use forces to help them do work for less effort?

- Levers allow us to do heavy work with less effort. For example, trying to pick up a large heavy box is difficult, however if a lever is used it becomes much easier to move it.
- Pulleys also allow us to do heavy work - objects are attached to ropes and pulley wheels, and so instead of lifting heavy object upwards, we can pull on the pulley rope downwards.
- Gears are toothed wheels. Their 'teeth' can fit into each other so that when the first wheel turns, so does the next one. This allows forces to move across a surface.
- Springs can be stretched by pulling them or squashed by pushing them. The greater the force pulling or pushing the spring, the greater the force the spring uses to move back to its normal shape