

Year 5: Forces: How big is physics in your life?

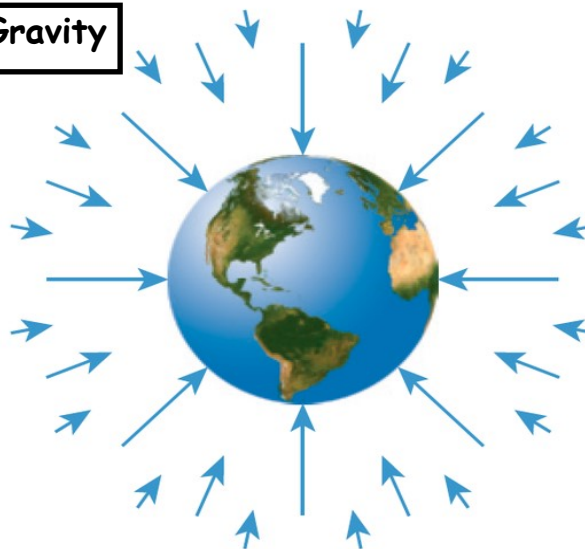
Examples of **forces** in action:



- **Water resistance** and **air resistance** are forms of friction.
- Friction is sometimes helpful and sometimes unhelpful.

For example, air resistance is helpful as it stops the skydiver hitting the ground at high speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

Gravity



Did you know?

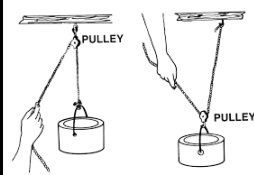
The gravitational force field surrounding the Earth attracts all other objects that are placed within that field.

The Earth's gravitational pull grows weaker the further an object moves away from the Earth.

Vocabulary

air resistance	A type of friction between air and another material.
force	A push or a pull in a particular direction.
friction	The force between two surfaces sliding (or trying to slide) against each other.
gears	Gears are wheels (cogs) with teeth that slot together.
gravity	The force that pulls things towards the centre of the Earth (and other planets).
lever	A strong rod or arm that is fixed to a turning point.
mechanisms	A device that changes an input force or motion, into a different output force or motion.
pulley	When a rope is looped around a wheel.

Pulleys



Pulleys can be used to make a small force lift a heavier load.

The more wheels in a pulley, the less force is needed to lift a weight.

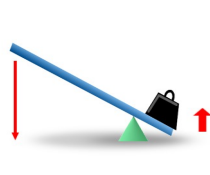
Gears



Gears can be used to change the speed, force or direction of a motion.

When 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 heavier load. A lever always rests on a pivot.

CRC Article 17: All children have the right to find out information providing it is safe.

