




# How can forces cause a change in an object's movement?

## Forces Y5

### Key learning

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- Identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect

### Working scientifically concepts

- Making predictions 
- Scientific enquiry 
- Recording data 

### Forces – Our Learning Journey

#### Year 3

- Notice and compare simple forces through friction and magnets

#### Year 5

- Identify and explain unbalanced forces
- Describe the orbits of the Earth and moon

### Key vocabulary



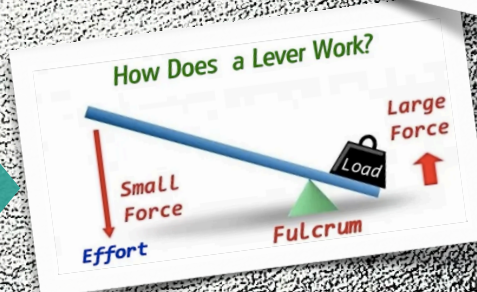
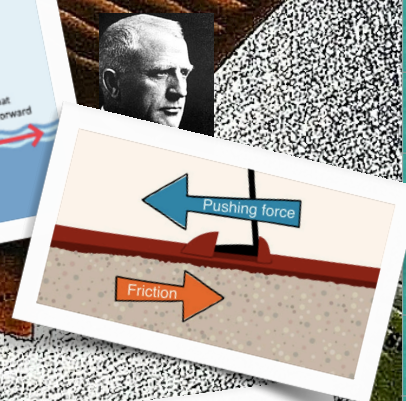
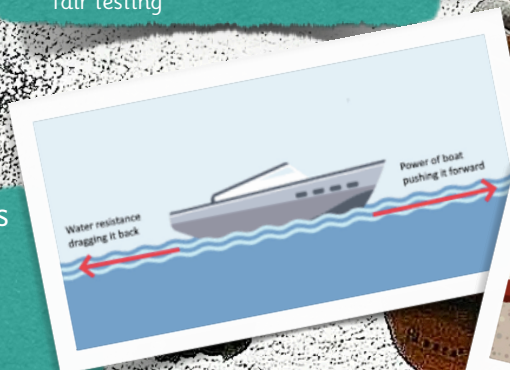
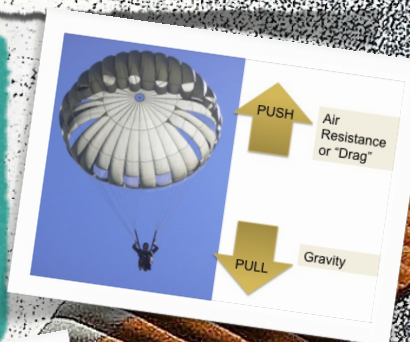
### Scientific enquiry types



Comparative and fair testing



Pattern seeking



### Key vocabulary

balanced forces	Forces that are the same size but acting in opposite directions
buoyant force (water resistance)	A type of force that uses friction to slow things down that are moving through water
drag (air resistance)	A type of friction between air and another material
force	A push or pull that causes things to move, change speed or change their shape
friction	A force which is the resistance of motion when when object rubs against another
fulcrum	The place where a lever pivots
gears	Wheels with teeth that slot together to increase the power of a turning force
gravity	A force that pulls anything with mass towards the centre of the earth or another object
lever	A long sturdy body that rests on a support called a fulcrum in order to lift a load
Newton	The unit of measure used to measure force
normal force	The force that surfaces exert to prevent solid objects from passing through each other
pulley	A machine consisting of a wheel (or multiple wheels) with groves and a cord used to increase the amount of weight that can be lifted
unbalanced forces	Forces that are not the same size acting in opposite directions, causing a change of motion



### Ethics

How can our understanding of forces help us to save energy?