



**How you can help at home:**

Can you identify any forces at work in your home?  
Talk to your child about what they have learnt at school.  
Follow this link to make a balloon-powered car: <https://www.rigb.org/families/experimental/balloon-car-racers>

**Sticky Knowledge:**

- Explain that unsupported objects fall towards the Earth because of the force of gravity .
- Identify the effects of air resistance, water resistance and friction.
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

**Prior Learning ↔ Future Learning**

Y1—Understand how applying force can alter an object (squashing/ twisting etc)	KS3 – further knowledge on the nature of forces including: balanced, imbalanced, deforming forces and the ability to measure and record forces. All taught as part of the Physics curriculum.
Y3— how do objects move in relation to each other and how many need to be in contact to do so.	

**Key Vocabulary**

Word	Definition
force	physical strength or energy accompanying action or movement
friction	the force which acts to oppose the movement of two touching surfaces over each other
air resistance	friction between air and another material
upthrust	force that pushes things upwards
water resistance	friction that slows things down through water
gravity	force that attracts a body towards the centre of the earth or towards any other physical body
lever	a simple mechanism that uses a bar to pivot around a fixed point called a fulcrum.
fulcrum	the point on which a lever turns or is supported
load	a weight or source of pressure