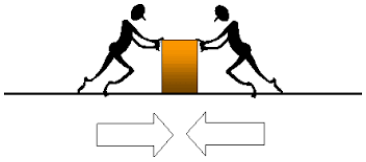
Unit Overview – P5 Forces



You will learn about:

- To calculate forces on, and the energy transfers between, objects and their surroundings.
- How and why things move and be able to predict movement in a system.

You will be able to:

- Describe acceleration and the conditions for it to occur.
- Use Hooke's law to understand the properties of springs.

Key learning points	
Resultant forces	
Gravity	
Hooke's Law and elasticity	
Speed and velocity	
Acceleration equations and their uses	
V-T, D-T graphs	
Falling and Newton's Laws	
Stopping distances	
Momentum	

Links to other subjects:

SMSC

- Explain every day and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.
- Appreciate the power and limitations of science and consider any ethical issues which may arise.

Numeracy

- Algebra skill, substitution, rearranging and solving.
- Make estimates and explain why they may be important.
- Convert numbers from decimal to standard form, and vice versa.

Literacy

- Use scientific vocabulary, terminology and definitions.
- Make and record observations.
- Present reasoned explanations including relating data to hypotheses.

Key Words

Force, Vector, Scalar, Newton, Gravity, Weight, Gravitational field, resultant, equilibrium, falling, component, magnitude, direction, work done, Joule, Energy, transfer, friction, potential, change, stretch, deform, elastic, shape, extension, proportionality, constant, acting, stored, raise, limit, turning, moment, define, clockwise, perpendicular, parallel, pivot, lever, gear, rotation, pressure, fluid, surface, area, depth, Pascal's, liquid, buoyancy, up thrust, volume, density, atmosphere, collision, speed, velocity, braking, stopping, thinking, distance, acceleration, motion, uniform, load, reaction, momentum, inertia, mass, conservation, safety