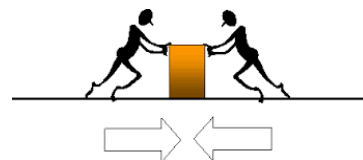


Unit Overview – Forces

Target grade for tests:



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		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
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		
<ul style="list-style-type: none"> • 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		
<ul style="list-style-type: none"> • 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		
<ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. • Make and record observations • Present reasoned explanations including relating data to hypotheses. 		