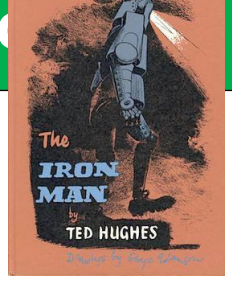
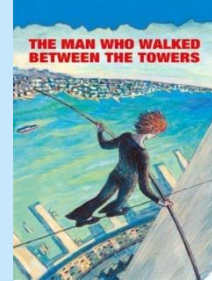


always come down?

LQ1	What are forces?
LQ 2	How do forces act on objects?
LQ 3	How was gravity discovered?
LQ 4	What are the effects of resistance? (Air and water resistance).
LQ 5	What is a pulley?
LQ 6	How can you balance the load? (Using levers)
End Product	Create a simple machine using gears, pulleys and levers.
Links to being previously taught.	Year 3 Forces and Magnets Year 7 Force and its effect on objects
Cross-curricular links	Create a simple machine using gears, pulleys and levers.

Forces and Motion



Sticky Knowledge.
<ul style="list-style-type: none"> Forces can make an object: start to move, stop moving, move faster, move slower, change direction and change shape. Mass is how much matter is inside an object – it is measured in kilograms (kg). Weight is how strongly gravity is pulling an object down – it is measured in Newtons (N). Isaac Newton is famously thought to have developed his theory of gravity when he saw an apple fall to the ground from a tree. Friction, Gravity, Buoyancy, Human Force and Magnetic Force are all types of force. Water resistance, air resistance and surface resistance are forms of friction. Friction is sometimes helpful (rubber soles on shoes) but sometimes unhelpful (trying to run in water) Many vehicles are streamlined to create less water or air resistance and therefore can move through water or air quickly. Pulleys can be used to make a small force lift a heavy load. Gears or cogs 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 can be useful to make a small force lift a lighter load.

Vocabulary
<p>Forces, gravity, Earth's gravitational pull, weight, mass, Isaac Newton, friction, air resistance, water resistance, buoyancy, streamlined, mechanism, gear, lever, pulley, balance, counter-balance, force meter, simple machines, pivot.</p>