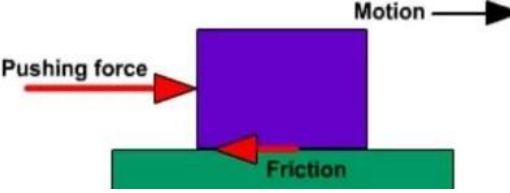
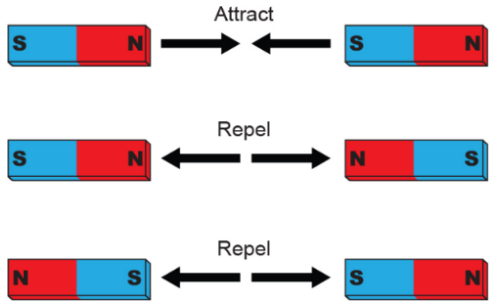
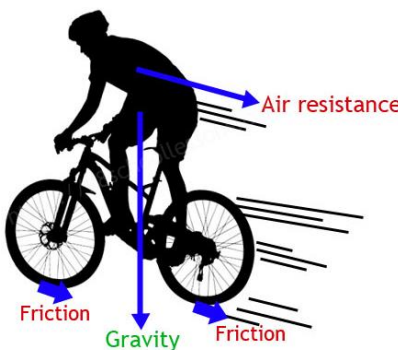
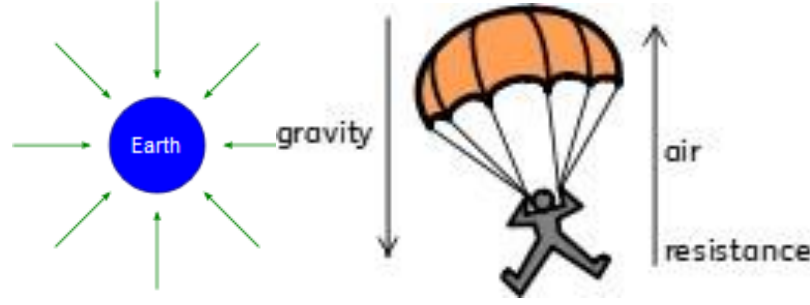
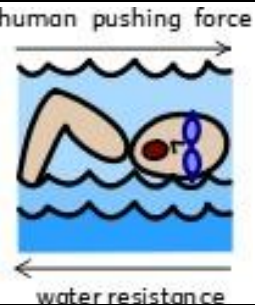


Linked scientists

Isaac Newton – Mathematician and physicist who developed theories about gravity

Archimedes – Mathematician who developed theories about how levers and pulleys can lift and move heavy objects

Key Vocabulary	
air resistance	Force that causes an object to slow down when it is moving through the air
attract	When an object, usually a metal object made of iron, is pulled towards a magnet . Opposite poles of a magnet attract each other
buoyancy	The ability of objects to float in water or air
exert	When something is moved via a force
force	A force is a push or pull . To make an object move, a force must be applied to it
friction	Force between two surfaces that rub together. It slows down moving objects
gears	They are wheels with teeth that slot together, which causes one part to move the other
gravity	Force that pulls objects towards Earth . On a rollercoaster, pulls the carriage faster on the downhill slopes and slows it down on the uphill parts of the ride
lever	A basic tool used to lift or pry things open
mechanisms	Part of a machine or a number of parts that work together to create movement
pulley	A mechanism used to make lifting a load easier. Usually a rope looped around one or more wheels
streamlined	A streamlined vehicle, animal or object has a shape that allows it to move more efficiently through air or water
surface	The flat top or outside of an object
water resistance	Force that slows things down when they're moving through water

What I will know by the end of the unit	
What are forces?	   <p>Forces are pushes and pulls. Forces act in opposite directions to each other. They cause objects to move, stop, speed up, slow down or change direction.</p> <p>Magnets can attract or repel each other, or other materials.</p> <p>When an object moves across a surface, friction acts as an opposite force. Friction is a force that holds back the motion of an object— it is the resistance of motion when one objects moves against another. Some surfaces create more friction than others which means that objects move slower across them.</p>
What is gravity and air resistance?	<p>Gravity is the force that pulls everything towards the Earth and acts at distance. Isaac Newton demonstrated that gravity causes objects to fall to Earth. Larger objects have greater gravitational force. Air resistance pushes up on the parachute, opposing the force of gravity. The greater the surface area of the parachute, the slower the object will fall.</p> 
What is water resistance?	<p>Water resistance is the friction that is created between water and an object that is moving through it – it slows the object down.</p> <p>Some objects can move through water with less resistance if they are streamlined.</p> 
Show that some mechanisms help smaller forces have a greater effect	<p>Simple machines work by turning small forces into larger ones.</p> <p>Gears, levers, cams and pulleys can be used to help do this.</p> 