

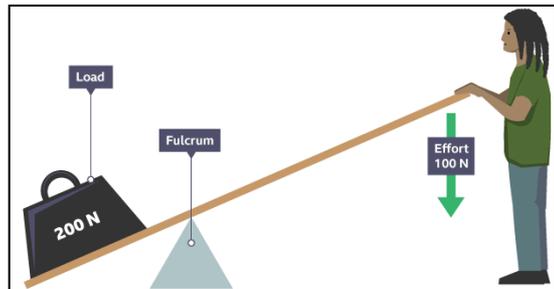
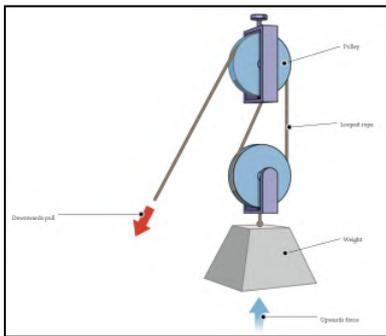


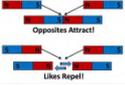
Science Focus: Forces	Year 5	Autumn Term
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Key Vocabulary	
Spelling	Definition
effort	The force applied to make the object move.
force	A force is a push or a pull on an object.
forcemeter	A way of measuring some kinds of force by using a spring in a tube.
fulcrum	The point at which a lever pivots.
gravity	The force that attracts a body towards the centre of the earth.
lever	A long rigid body with a fulcrum along its length.
load	The object that you are lifting.
Newton	A unit used to measure force.
pulley	A wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weights.
resistance	An opposing force.
streamlined	A shape presenting the least resistance to air or water.

Key Knowledge			
What is a force?	A force is either a push or a pull. A force happens when two objects interact—that is, when one object does something to the other object. When the interaction stops, the force stops, too.		
What effects can forces have?			
Forces can make objects:			
Speed up	Slow down	Change shape	Change direction
			

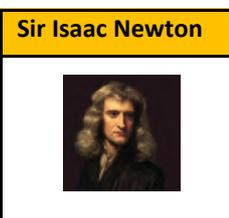
Levers and pulleys reduce the force required to move objects.



Types of Force:	
Magnetism	Magnets attract or repel each other, or other objects. <div style="text-align: center;">  <p>Opposites Attract!</p> <p>Likes Repell!</p> </div>
Friction	<ul style="list-style-type: none"> Friction happens when two surfaces touch each other Friction gives us grip Friction produces heat Rougher surfaces slow things down a lot Smoother surfaces don't slow things down as much
Air Resistance	Air resistance or drag, acts against gravity on falling objects. It is a type of friction between air and another material. For example, when an aeroplane flies through the air, air particles hit the aeroplane making it more difficult for it to move through the air. <div style="text-align: center;">  </div>
Water Resistance	Water resistance is a type of friction between water and another material. If you go swimming, there is friction between your skin and the water particles. <div style="text-align: center;">  </div>

Streamlining	
How can we reduce air and water resistance?	Some shapes, known as streamlined shapes, cause less resistance than others. Aeroplanes and cars are streamlined, so that they move through the air as easily as possible.

Famous Scientist
Sir Isaac Newton (1642-1726) was an English physicist and mathematician. He is most famous for his work on the laws of motion, optics, gravity and calculus. Newton understood that gravity makes things fall to the Earth. He invented the law of gravitation.



Gravity
Gravity is the forces that pulls objects down towards the centre of the Earth. Gravity stops things from floating away into space. When things go into the air (like a football) gravity pulls them back down.