





Key Facts	Artists/sculptures/styles	
<p><u>Mechanisms are all around us.</u> A set of related mechanisms used to create movement is called a <u>mechanical system</u>.</p> <p>-<u>Gears</u> are toothed wheels (cogs) that lock together and turn one another. When one gear is turned the other turns as well.</p> <p>The wheels are usually different sizes, so that one gear speeds up to slow down the next gear. They therefore <u>increase the power of a turning force</u>.</p>  <p>-<u>Pulleys</u> are like gears, but the wheels do not lock together. The wheels are instead joined together by a <u>drive belt</u>. Pulleys can be used to affect the speed, direction or force of a movement.</p>	<p>In order for the vehicle to move, it is essential that the mechanical system is planned effectively, and include an input, a process, and an output.</p> <p><u>Motor spindles</u> can attach the motor to the gears/ pulley system (process)., which in turn propels the axles and/or wheels to move the vehicle forwards/ backwards (output).</p> <p><u>Famous engineers</u> Archimedes Isambard Kingdom Brunel Leonardo Da Vinci George Stephenson</p>	
Key Learning:	Prior Learning:	Books for support/ Enrichment Opportunities:
<p><u>Chassis, Axle, Wheels</u></p> <p>-You will need to draw on your prior knowledge of chassis, axle and wheel systems. The chassis is the frame or base on which the vehicle is built. The chassis should include axle holders. Your axle needs to be strong enough to hold the wheels, and fit freely in the axle holder. Consider the materials of your wheels</p> <p><u>Gears and Pulleys</u></p> <p>-The vehicle can run using either a gear or pulley mechanical system.</p> <p>-In either case, you need to understand the <u>ratio</u> (how often larger wheels turn in relation to smaller pulleys). With gears, this can be done by counting the <u>number of teeth</u></p>	<p>Looking at ready made objects, designing their own using specific features and techniques.</p>	 <p>As a part of the design process, you should be able to sketch and annotate different ideas. You should also be able to plan the main stages of making, using either a checklist, a storyboard, or a flowchart.</p>

Subject Specific Vocabulary

Key word	Definition
Mechanism	The parts that make something work.
Mechanical System	To include an input, a process, and an output.
Gear	Gears are toothed wheels (cogs) that lock together and turn one another
Pulley	Pulleys are like gears, but the wheels do not lock together
Lever	A stiff bar which moves around a pivot.
Cogs	Any teeth on the rim of a gear wheel
Force	A push or a pull, a change in state of motion
Driver	A part that transmits force