

Year group 9	Subject: Mechanisms
Prior learning- linked to National curriculum	<p>DT Design S 79.02 identify and solve their own design problems and understand how to reformulate problems given to them</p> <p>DT Tech knowledge 79.02 understand how more advanced mechanical systems used in their products enable changes in movement and force.</p> <p>Building resilience and independence when tinkering to make mechanisms work. Know what advantages mechanisms can give us and how to describe these in terms of movements. Students often think mechanisms are too difficult to understand so they need to be broken down into very simple parts and systems diagrams.</p>
Rationale	<p>Mechanisms can be difficult to understand; by year 9 we have built trust with students that we can break it down for them. It is also a good test of resilience prior to Yr9 Options for some groups as the GCSE NEA requires thinking, tinkering and resilience. We might add a very basic movements lesson into Year 7 as an introduction of the concepts.</p>
Vocabulary:	Keywords - linear, oscillating, rotary, reciprocating, cam, follower, crank, pulley, lever, linkage, bell crank
Cultural Capital:	Understanding how mechanical products enable us to manipulate and control our environment i.e. how the use of levers might enable safer and more ergonomic and inclusive design.
Key assessments- name the assessments	<p>Assessment Grid of tasks to show achievement and progress across the module.</p> <p>This includes an extended writing task which is adaptive to use simpler movement terms and sentence starters for story writing, if required. This task demonstrates understanding.</p>
What do children know/ can do now (EDSM)	Students know force and distance advantages that mechanisms can give them, can build a cam & follower mechanism, are able to adapt and design mechanisms with linkages and levers, and identify a range of different mechanisms.