Year 3

DT

Mechanical Systems: Levers and Linkages

Knowledge Organiser

Examples of levers and linkages	Types of movement
Fixed pivot O Loose pivot	Lever and linkage mechanisms usually produce oscillating or reciprocating movement: Linear - in a straight line Reciprocating - backwards and forwards in a straight line e.g. a slider Rotary - round and round e.g. a wheel, cam, pulley, gear wheel
When you push the card strip (input movement), the two levers move (output movement).	Oscillating - backwards and forwards in an arc e.g. a lever

Health	and	Safety

Pay close attention when using sharp tools

Stop what you're doing as soon as the teacher or your partner says "stop".

Vocabulary		
Mechanism	a device used to create movement in a product	
Lever	a rigid bar which moves around a pivot	
Linkage	the card strips joining one or more levers to produce the type of movement required	
Fixed Pivot	a paper fastener that joins card strips to the backing card	
Loose Pivot	a paper fastener that joins card strips together	
Slot	the hole through which a lever is placed to enable part of a picture to move.	
Guide or Bridge	a short card strip used to keep lever and linkage mechanisms in place and control movement	
System	a set of related parts or components used to create an outcome	
Input	pushing or pulling the lever	
Process	what happens to the linkage when the lever is moved	
Output	the end result of the linkage. The part that moves	
Linear	moving in a line	
Rotary	turning around on an axis	
Oscillating	swinging back and forth	
Reciprocating	moving forward and back in turn	
User	the person in mind when designing a product	
Purpose	the reason for making a product	
Function	what a product does	
Prototype	an original model on which later stages or forms are based or developed	
Design Criteria	the precise goals that a project must achieve in order to be successful	
Innovative	produced through or resulting in innovation; new and inventive	
Appealing	attractive or pleasant to look at	
Design Brief	the statement a client gives to a designer outlining what they want their product to be like	