



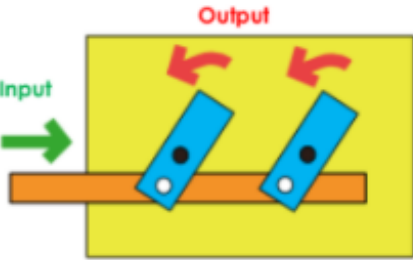
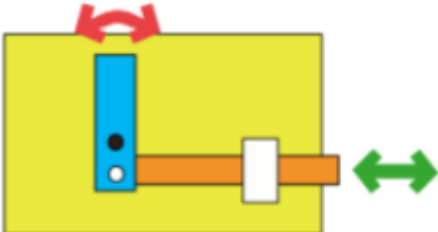


Year 4: Levers and Linkages Knowledge Mat

Subject Specific Vocabulary		Mechanisms	Important knowledge about shell structures
design criteria	The goals that a project must achieve to be successful.	<p>Lever and linkage mechanisms usually produce oscillating or reciprocating movement:</p>  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  Oscillating – backwards and forwards in an arc e.g. a lever	<input type="checkbox"/> I know how levers and linkages are used in the real world. <input type="checkbox"/> I know the purpose of the pivot, slot, guide/bridge, lever, linkage on a lever and linkage mechanism.
prototype	An original model on which later models are based or developed (improvements).		
unique	Being the only one of its type. There is nothing else quite like it.		
modify	To make changes to a product by making alterations.		<input type="checkbox"/> I know that levers and linkages can move in a linear, reciprocating, rotary or oscillating motion.
loose/fixed pivot	A paper fastener that joins card strips together which is either loose (can move) or fixed (can't move).		<input type="checkbox"/> I know that levers and linkages have an input movement (pushing) and an output movement (movement of the lever).
analyse	To examine and explain products.	 	<input type="checkbox"/> I can select and use tools with accuracy. <input type="checkbox"/> I can use my knowledge to design a lever and linkage mechanism; I know the finishing techniques I am going to use.
guide/bridge	A short card strip used to keep lever and linkage mechanisms in place and control movement.		
linear	To move in a straight line.		<input type="checkbox"/> I know how well my mechanism meets the design criteria.
oscillating	To move backwards and forwards in an arc e.g. a lever.		<input type="checkbox"/> I know how to refine and adapt my product to improve it.
reciprocating	To move backwards and forwards in a straight line e.g. a slider.		