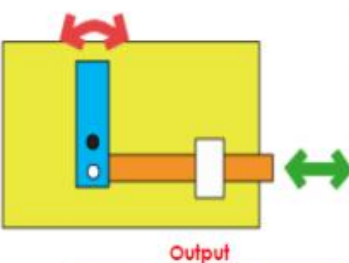








Overview

- Mechanisms are all around us! Most objects that help us in our lives are made up of different mechanisms.
- In a lever and linkage mechanism, the 'input' is where the user pushes or pulls a card strip. The 'output' is where one or more parts of the picture move.
- In a lever and linkage mechanism, the 'input' is where the user pushes or pulls a card strip. The 'output' is where one or more parts of the picture move.





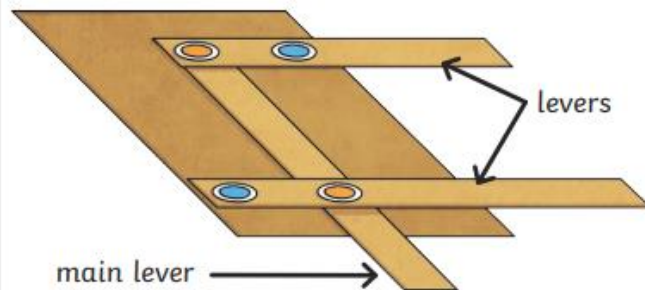
Lever and linkage mechanisms usually produce oscillating or reciprocating movement:

-  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
-  Oscillating – backwards and forwards in an arc e.g. a lever

Levers and Linkages

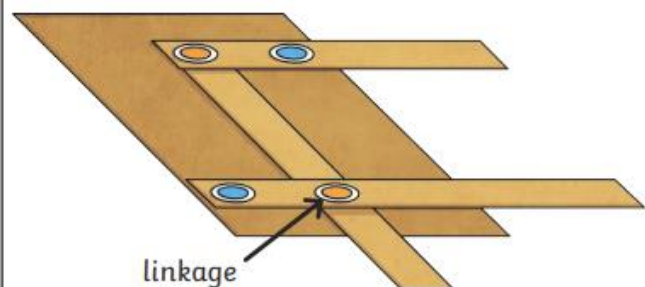
Lever

The simplest type of **mechanism**. A lever is a stiff bar which moves around a **pivot**.



Linkage

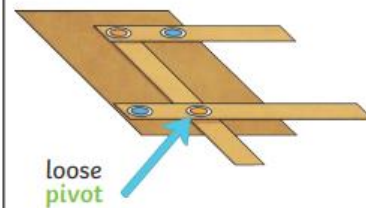
The part of the **mechanism** used to join one or more levers to produce the type of movement required.



Pivots

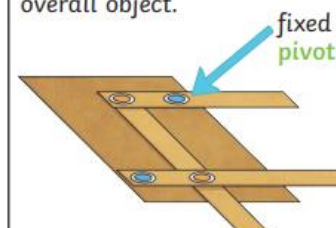
Loose Pivot

Joins the levers together.



Fixed Pivot

Joins the levers to the overall object.



Making

-Levers and linkages can be made using card, cardboard, lollipop sticks, or another thin, firm material of your product.



Evaluating

- How well does your **mechanism work**? Does it **move smoothly**?
- Does it **meet its purpose**?
- Who** would use your mechanism? What would they like about it?
- What else could you do to **improve** your mechanism?

VOCABULARY

| | |
|----------------------|--|
| Loose pivot | A paper fastener that joins two strips of card together. |
| Fixed pivot | A paper fastener that joins system- a set of related parts used to create an outcome. |
| System | A set of things working together as parts of a mechanism or an interconnecting network; a complex whole. |
| Input | The movement of the main lever by the user. |
| Output | The movement that is made by the smaller levers |
| Process | A series of actions or steps taken in order to achieve a particular end. |
| Rotary motion | Turning round in a circle, e.g. a wheel. |
| Linear motion | Moving in a straight line, e.g. paper trimmer |
| Reciprocating motion | Moving forwards and backwards in a straight line, e.g. cutting with a saw. |
| Oscillating motion | Swinging from side to side in an arc, e.g. a pendulum in a clock. |