



Mechanisms

Levers and Linkages

Y4

In this unit, we will design, make and evaluate a greetings card with moving parts for family or friends.

Knowing More Remembering More:

Remembering previous learning

What is a mechanism? Mechanisms are the parts that make an object work

What is a slider? A slider is something that can move from side to side or up and down

What is a lever? A lever is a bar that moves around a pivot

What is a pivot? A pivot is the central point on which a mechanism turns or moves.

Skills

I will be able to:

Design:

4.1 Record ideas by drawing using annotated sketches.

4.3 Use prototypes to develop and share ideas.

4.5 Order the main stages of making

Make:

4.7 Explain my choice of materials according to functional properties and aesthetic qualities.

4.8 Select and use appropriate tools to measure, mark, cut and assemble with some accuracy.

4.9 Use a range of finishing techniques with some accuracy.

Evaluate:

4.11 Draw/sketch existing products to help analyse and understand how products are made

4.12 Research key individuals in D&T

4.15 Identify the strengths and areas for development in my work

Vocabulary

Technical vocabulary

mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating

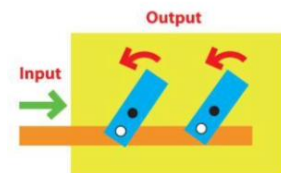
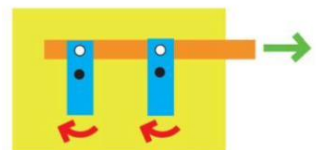
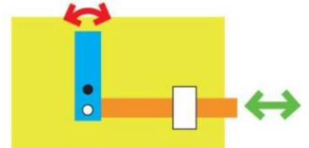
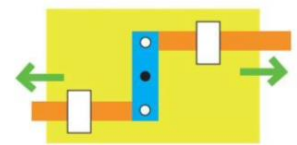
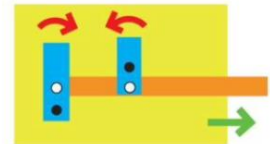
Process vocabulary

User, purpose, function, prototype, design criteria, innovative, appealing, design brief, Names of tools, equipment and materials used

Techniques:

Teaching aids to demonstrate levers and linkages

- Fixed pivot
- Loose pivot



When you push the card strip (input movement), the two levers move (output movement).

Inspiring Individuals



Leonardo Da Vinci



Richard Trevethick



Edward Bouchet

Knowing More Remembering More:

Knowing more in Y4

What is a fixed pivot? A fixed pivot fixes the lever to the material and the main object

What is a loose pivot? A loose pivot joins the lever to another lever so they both move at the same time.

What is a linkage? A linkage is a mechanism which is made by connecting levers together through joints known as pivot points. The levers in the linkage work together.

How can a lever make things move? Levers can make things move in a linear, reciprocating or oscillating movement.