



# Mechanisms

## Levers and Linkages

In this unit, we will design, make and evaluate a greetings card with moving parts for family or friends. We will investigate and evaluate a range of Cards, books and other products with lever and linkage mechanisms, engage in focused practical tasks which will inform our designing and making. We will test and evaluate our cards, identifying strengths and areas for improvement. We will also research inspiring individuals in this field.

### Mechanisms Knowledge:

#### I will:

- Understand and use lever and linkage mechanisms.
- Distinguish between fixed and loose pivots.
- Know and use technical vocabulary relevant to the project

### 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

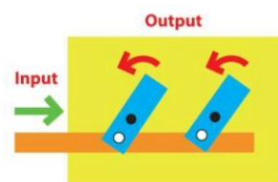
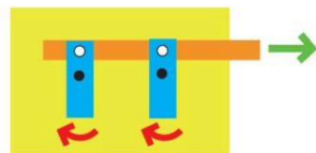
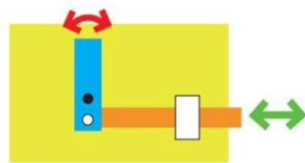
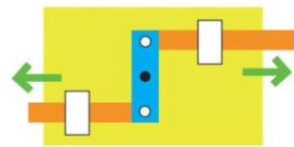
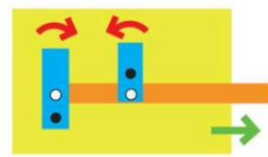
#### Process vocabulary

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