



Aesthetic	How an object or product looks.
CAD	Computer-aided-design. To use the computer to design a product, diagram or drawing.
Caption	A short piece of writing under a picture that describes or explains the picture.
Design	To make, draw or write plans for something.
Design brief	A description of what you are going to design and make and how it will work.
Design criteria	To help designers focus their ideas and test the success of them.
Exploded-diagram	A diagram which shows all of the parts of a product, including the internal and external parts.
Function	How an object or product operates or works.
Input	Input is the motion used to start a mechanism.
Linkage	A set of bars linked together to form a mechanism.
Mechanism	A system of parts working together.
Motion	The movement an object makes when controlled by an input or output (e.g. left, right, up, down).
Output	Output is the motion that happens as a result of starting the input.
Pivots	A shaft or pin on which something turns.
Prototype	A simple model that lets you test out your idea, showing how it will look and work.
Sliders	A part of a mechanism which allows an object to move from side-to-side (e.g. left-to-right).
Structure	Something which stands, usually on its own.
Template	A stencil made of metal, plastic, or paper, used for making many copies of a shape or to help cut material accurately (e.g. biscuit cutter).



Fasten the lever



Design → Make → Evaluate

Knowledge and skills covered in this topic

- ❑ Children will know that an input is the motion used to start a mechanism.
- ❑ Children will know how to describe an output.
- ❑ Children will know that mechanisms control movement.
- ❑ Children will know how to make their own mechanisms based on their design.
- ❑ Children will know how to make their product aesthetically pleasing using layering and spacing techniques.
- ❑ Children will know that they should consider the preferences and needs of the user.
- ❑ Children will evaluate their work effectively and make small changes to ensure that their book is neat and securely assembled.

Prior knowledge

- Year 1:** Understanding how to use sliders and mechanisms, knowing how to create sliders for a story book.
- Year 2:** Understanding the use of levers and pivots for movement. Identifying the role of inputs and outputs in a mechanism.
- Year 3:** Understanding how pneumatic systems work and that they can be part of a mechanical system. Knowing that air creates movement in a pneumatic system.
- Year 4:** Understanding that objects have kinetic energy when they move. Understanding air resistance and choosing designs that increase or decrease speed.