

Year 5 - Mechanical Systems - Pop-Up Books - Term 2

Key Vocabulary

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).

Input is the motion used to start a mechanism. Output is the motion that happens as a result of the input.



Think of a see-saw, when you sit on your side of the see-saw (input) your friend goes up on the other side. (output)

Did you know?



Did you know that the first children's pop-up books were invented in the 1700s? That's over 300 years ago! Lothar Meggendorfer was a well-known pop-up author in the 1800s.

To know statements



I know how to produce a suitable plan for each page, naming each type of mechanism, input and output and understanding that structures use the movement of the pages to work and mechanisms control movement

I know how to produce the structure of the book and beginning to draw and assemble the components necessary for the first structures/mechanisms

I know how to assemble the components for all the required structures/mechanisms and hiding the relevant parts of the mechanisms with more layers using spacers where needed

I know how to use a range of mechanisms and structures to illustrate the story and making it interactive, using layers to hide mechanical elements and illustrating the story through the use of appropriate materials and captions

What can you remember from previous units?

How would you ensure a model car is aero-dynamic?
 What is a chassis?
 What is a tab in design and technology?

Anything else you have learnt? What have you enjoyed?