

DT: Mechanical Systems - Pneumatic Toys



Overview

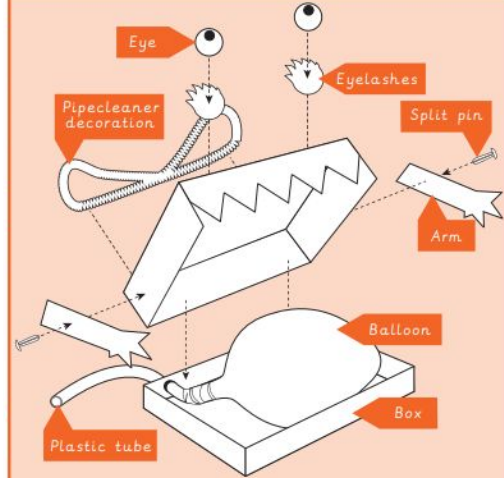
Pupils design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts while also building on their design knowledge. They will then be introduced to thumbnail sketches and exploded diagrams.

Exploded-diagram	A diagram which shows all of the parts of a product, including the internal and external parts.
Function	How something works.
Input	Input is the motion used to start a mechanism.
Linkage	Lengths of material (for example, metal or card) that are joined together by pivots, so that the links can move as part of a mechanism.
Mechanism	The parts of an object that move together as part of a machine.
Motion	The movement an object makes when controlled by an input or output (e.g. left, right, up, down).
Net	A 2D flat shape, that can become a 3D shape once assembled.
Output	Output is the motion that happens as a result of starting the input.
Pivot	The central point, pin, or shaft on which a mechanism turns or swings.
Pneumatic system	A mechanism that runs on air or compressed gas.
Thumbnail sketch	Small drawings to get ideas down on paper quickly.

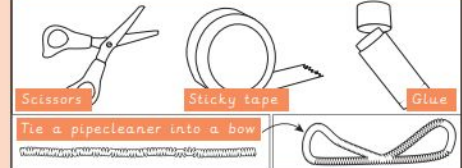
Key Points of Learning (RAG at end of each session)

- Understanding how pneumatic systems work
- Learning that mechanisms are a system of parts that work together to create motion
- Understanding that pneumatic systems can be used as part of a mechanism
- Learning that pneumatic systems force air over a distance to create movement

Exploded-diagrams allow us to see how a product is put together and the different components inside.



You will need:



Useful Websites