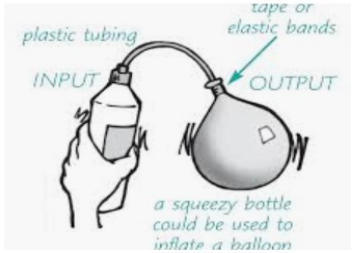
Great Meols Primary School - Design and Technology

Pneumatics	Year 3	Moving Toys

Real life examples

Mechanisms are the parts that make something work. Most objects in our lives are make up of different mechanisms. Pneumatic mechanisms use a gas such as air to make something move. They form a pneumatic systems which have an input, process and an output. Some examples are:

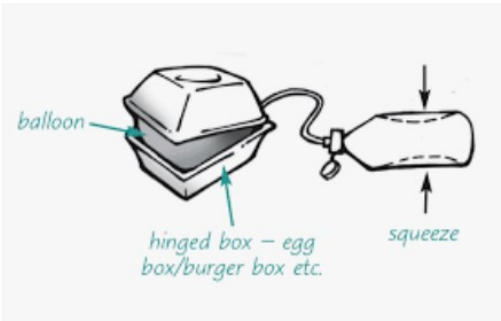


In this example the **input** is when one syringe is pushed in. They are connected by a tube which the air travels through this is the **process.** The **output** is the other syringe being moved out.

In this example the air from the pump is the **input.** As the balloon rises this causes the monsters mouth to open . The monsters mouth opening is the **output**.

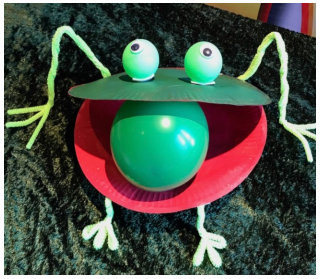
Steps to Success

Designing:
- What sort of moving toy will you make? Who will it be for?
- What pneumatic mechanism will you use? How will it move?
- What materials and tools do you need?
- What order will you work in?



Making:
- How will you join the pneumatic mechanism to the structure?
- Is the pneumatic system functional?
- How will you finish it to make it look attractive?

Evaluating:
- Does it meet the needs of the user?
- How well does your product function?
- What could you change to make it better?



Vocabulary:

compressed	something that is squashed, such as air in a tube
deflate	to remove the pressurised air to allow an object like a balloon to shrink.
inflate	to fill something with air or a gas to make it swell up.
hinge	a part or join that allows something to open and close or to move
input	what goes into a system
join	something that joins two pieces together
mechanism	a device used to create movement in a product.
output	what comes out of a system.
pneumatic	a system that works using gases (air).
product	something made by means of either human work or that of a machine
syringe	a tube with a nozzle and plunger for sucking and blowing air or liquids.

Golden Threads	
User	who the product is for
Purpose	the job your product is supposed to do
Design Decisions	making choices about your design
Functionality	to do the job (purpose) it is meant to do