

# Design Technology Subject Knowledge Bank

## Year 6: Pneumatics

Vocabulary	<u>Definition</u>
<b>Pneumatic</b>	The use of air to make things move.
<b>Pressure</b>	A steady force upon a surface.
<b>Input</b>	What is put in, taken in, or operated on by any process or system
<b>Output</b>	The amount of something produced by a person, machine, or industry
<b>Piston</b>	A disc or short cylinder fitting closely within a tube in which it moves up and down against a liquid or gas, to derive motion, or in a pump to impart motion.
<b>Syringe</b>	A tube with a nozzle and piston or bulb for sucking in and ejecting

Examples of Pneumatics

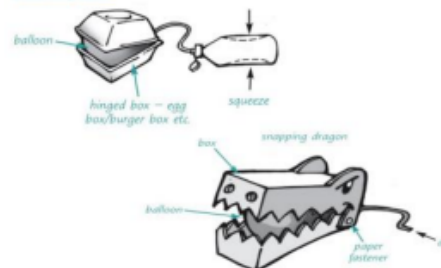


**Pneumatics - The use of pressurised air to make things move.**

Some real-life examples include:

- tyres.
- pneumatic drills used in construction;
- door openings on buses and trains;
- floors that raise and lower on buses and trains, which help people get on and off;
- air brakes;
- bicycle pump

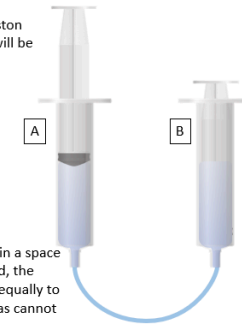
Examples



### Pneumatics

A pneumatic system is one that uses the pressure of a gas to perform mechanical work.

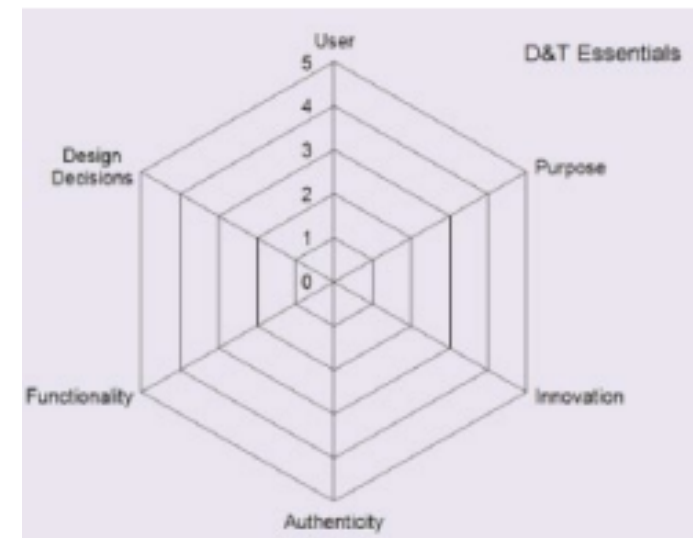
If pressure is put on piston **A**, the same pressure will be transmitted to piston **B**



You will see the gas will move from **A** to **B**, making piston **B** rise.

When a gas is enclosed in a space and a pressure is applied, the pressure is transmitted equally to all parts of the gas, as gas cannot be compressed.

In this case the gas used is **air**.



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