

Year 3 - DT - Design, make and evaluate a water cleaning system.

Hydraulics and pneumatics



SDG LINK



Sticky Knowledge:

- To know what a pivot, pneumatic and hydraulic mechanism is, and how they are used.
- To know what a lever and linkage is.
- To know what a prototype is.
- To know who Boyan Slat is and what did he invent?
- To know the design process.

Glossary:

- inflate - fill a balloon, tyre, or other expandable structure with air or gas so that it becomes larger.
- deflate - let air or gas out of a tyre, balloon, or similar object.
- Compression – the application of balanced force on a material or structure
- Pneumatic - containing or operated by air or gas under pressure.
- Hydraulic - a liquid moving in a confined space under pressure.
- Input – something that is put into a system or process
- Output - the amount of something produced by a person, machine, or industry.
- Prototype - a first version of a device from which others versions are developed
- Mechanism - a device used to create movement in a product.
- Slot - the hole through which a lever is placed to enable part of a picture to move.
- Guide or bridge - a short card strip used to keep lever and linkage mechanisms in place and control movement.
- Fixed pivot - a paper fastener that joins card strips to the backing card.
- System - a set of related parts or components used to create an outcome. Systems have an input, process and an output. In a lever and linkage mechanism, the 'input' is where the user pushes or pulls a card strip. The 'output' is where one or more parts of the picture move.

