

Our Lady's Catholic Primary School – Knowledge Organiser



Autumn Term 2

DT: Moving monster

Year Group 3

Sticky knowledge:

- Investigate a variety of familiar objects that use air to make them work.
- Investigate techniques for making simple pneumatic systems.
- Gather ideas for creating moving monsters.
- Follow a design to make a moving monster using pneumatic system.
- Successfully assemble a pneumatic system.
- Design and make a model monster with at least one moving part controlled by a pneumatic system.
- Evaluate a finished product.

Key/Interesting facts:

- The word Pneumatics comes from the Greek word Pneumatikos which means wind or breath.
- Pneumatics have been used for thousands of years but really took off in the late 18th century because of the invention of steam trains which used pneumatic systems.
- Pneumatics systems use air pressure to create mechanical motion (make machines move)
- Air pressure in a pneumatic system acts like a spring, storing energy until it's realised
- Pneumatic systems are more powerful than mechanical motors with the same weight

Key Vocabulary:

• Mechanical:	• operated by a machine or machinery
• Mechanism:	• a system of parts working together in a machine
• System:	• a set of things working together
• A pneumatic system:	• a system that uses compressed air to do work
• Compressed	• flattened by pressure; squeezed or pressed together
• Valve:	• device for controlling the flow of fluid or air through a passage such as a pipe or duct

What do I already know:

- I can combine and join materials to make a lever mechanism.
- I can design and make a moving object.
- I can select a range of tools and equipment to cut, shape and join some materials.

Assessment Question:

How does a pneumatic system make something move?

Examples of pneumatics:



Examples:

