



# Riversdale Primary School – Pupil Knowledge Organiser



<b>Year Group</b>	<b>3</b>	<b>Unit of Learning</b>	<b>May the Forces be with You: Part 1</b>	<b>Subject</b>	<b>Design Technology</b>
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## Sequence of Lessons

<b>Learning Objective</b>	What familiar objects use air to work?	How can we make simple pneumatic systems?	How could you use pneumatics to make parts of a toy move?	Can we design a toy with a moving pneumatic system?	Can we follow our design?	How well does our finished product work?
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### Key Vocabulary

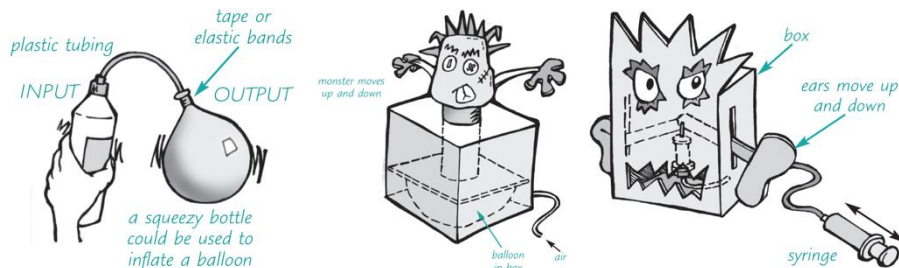
pneumatic  
mechanism  
system  
input  
output  
air pressure  
airtight  
control  
movement  
components  
adjust  
syringe

valves  
tubes  
limbs  
precision  
assembly  
reliable  
safety  
aesthetics  
user experience  
mechanical  
design  
feedback

### Key Knowledge

- Everyday objects that use air include inflatable toys, whistles, foot pumps, and party blowers.
- Air can be controlled to create a push force that makes objects move.
- Pneumatic systems use air pressure to create mechanical movement.
- "Input" is the air pressure, and "output" is the resulting movement or action.
- A pneumatic system includes an airtight container, air flow control, and a mechanism for converting air pressure to motion.
- Air pressure can be adjusted to control the speed and force of movement.
- Pneumatic systems can be used to make various parts of a toy move.
- Pneumatic components must be securely integrated into the toy's structure so that they work reliably and safely.
- Precise assembly is vital for pneumatic systems to ensure that air flows as intended for controlled movements.
- Gathering feedback helps in improving pneumatic toys for the future.

### Key Concepts



### Key Assessment Questions

- Can you name an everyday object that needs air to work?
- How can air be used to move objects?
- How do pneumatic systems create movement?
- What are the input and output in a pneumatic system?
- What are the main parts of a pneumatic system?
- How can you change the speed and strength of movement in a pneumatic system?
- What purpose might a pneumatic system have in a toy?
- Why should pneumatic components be securely integrated?
- Why is it important to assemble pneumatic systems precisely?
- How can we make our pneumatic toys better for the future?