

Unit hub

Mechanical systems: Pneumatic toys :

Intended outcome of the unit

Pupils who are **secure** will be able to:

Draw accurate diagrams with correct labels, arrows and explanations.

Correctly identify definitions for key terms.

Identify five appropriate design criteria.

Communicate two ideas using thumbnail sketches.

Communicate and develop one idea using an exploded diagram.

Select appropriate equipment and materials to build a working pneumatic system.

Assemble their pneumatic system within the housing to create the desired motion.

Create a finished pneumatic toy that fulfills the design brief.

Key Vocab

mechanism
lever

component
thumbnail sketch

| Week 1 | Week 2 | Week 3 | Week 4 |
|--|---|---|--|
| Lesson 1: Exploring pneumatics | Lesson 2: Designing a pneumatic toy | Lesson 3: Making pneumatic toys | Lesson 4: Decorating and assembling my toy |
| To understand how pneumatic systems work. | To design a toy that uses a pneumatic system. | To create a pneumatic system. | To test and finalise ideas against design criteria. |

Suggested Next Steps

[Mechanical systems: Making a slingshot car](#)

pivot
linkage system
pneumatic system
input
output

research
adapt
properties
reinforce
motion

Unit specific links:

[Knowledge organiser: DT - Y3 Pneumatic toys](#)
[Vocabulary display: Pneumatic toys](#)