



Steam power

Levels 2, 3, 4 & Senior phase Workshop 1.5 hours

In this STEM workshop, pupils will explore how steam engines work and learn about the astounding history of power, energy and the impact of mechanisation on factory production.

Pupils will see our awe-inspiring 1801 Boulton and Watt steam engine in action and be put to the test in an interactive workshop looking at gears, levers and pulleys. Working together, pupils will create their own simple machine, using principles made famous by Scottish engineers James Carmichael and James Watt.

Learning outcomes:

By attending this session, pupils will explore the following:

- The role science played in shaping industrial advances
- How water can power a steam engine, and in turn generate energy to power factories
- How linear motion can be turned into rotary motion
- How the scientific theory of centrifugal force was used to improve steam engines
- The role of Verdant Works, and the mills of Dundee in the Industrial Revolution

Technological developments in society:

TCH 1-01a, TCH 4-01a

TCH 1-01b, TCH 2-01a, TCH 3-01a, TCH 4-01b

Craft, design, engineering and graphics contexts for developing technological skills and knowledge:

TCH 0-12a, TCH 1-12a, TCH 2-12a, TCH 3-12a, TCH 4-12 a, TCH 4-12b

TCH 1-13a, TCH 2-13a, TCH 3-13a, TCH 0-14a, TCH 4-14A, TCH 4-14b

People, past events and society:

SOC 1-06a, SOC 2-06a, SOC 3-06a, SOC 4-06a

SOC 3-05a, SOC 4-05a