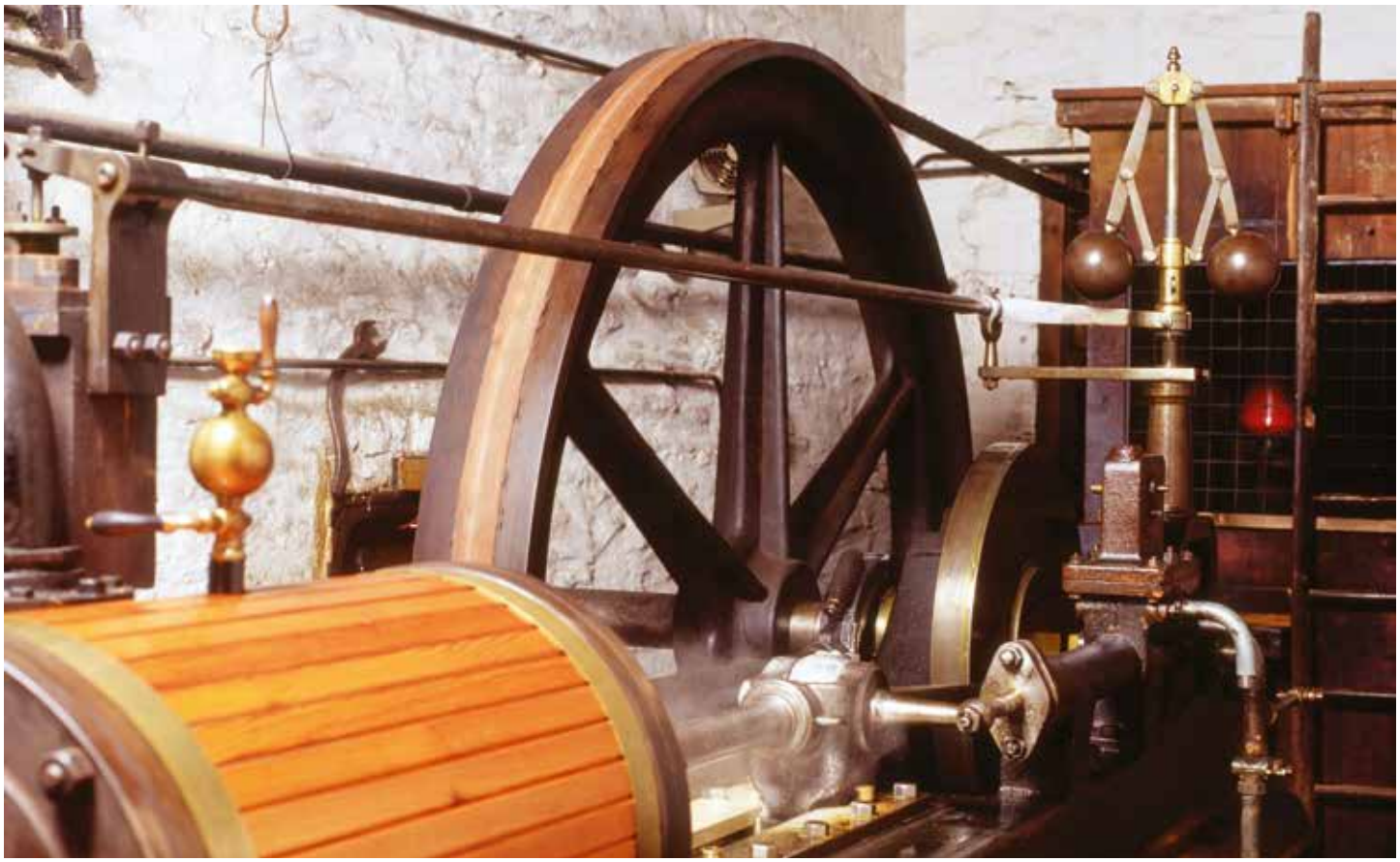
Historic England

Education

Teacher's Kit

Steam Power



Steam engine at Stott Park Bobbin Mill, Cumbria

Eighteenth century

The industrial use of steam power began in 1698 with the development of Thomas Savery's 'Miner's Friend' which pumped water from mines. However, the 'Miner's Friend' was beset with problems and largely unsuccessful. It was not until the development of Thomas Newcomen's atmospheric engine, the first of which was erected in Dudley in 1712, that the use of steam power really gained acceptance.

James Watt greatly increased the very low efficiency of the engine with his separate condenser patented in 1769. This together with improvements in cylinder manufacture made possible the expansive use of steam. Watt also pioneered the development of rotative engines which could drive machinery.

These early engines were not powerful, the largest was only rated at 40hp. However they were independent of streams and rivers, drought and flood. They could be run on any site with some water for the boiler and transport for the coal, day in, day out. Steam power was rapidly adopted by far-sighted entrepreneurs in a wide variety of industries: by 1800 a third of the 496 engines supplied by Watt were being used in the manufacture of textiles.

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Bobbin milling machinery at Stott Park Bobbin Mill, Cumbria
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Milling machinery at Stott Park Bobbin Mill, Cumbria
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Nineteenth century

After 1800 the power of engines steadily increased owing largely to the work of Richard Trevithick in increasing steam pressure. Trevithick also developed the first horizontal engines which took less room and worked faster than beam engines. As such they were better for driving machinery, though for pumping purposes beam engines were being built well into the twentieth century. By the mid-nineteenth century horizontal engines were in widespread use with a very broad range of power outputs, from engines suitable for use in a fairground side-show to those which provided all the power for a seven-storey cotton mill.

Links – Steam power

Visitor information on an English Heritage grant-aided working textile mill:
historicengland.org.uk/services-skills/grants/our-grant-schemes/visit/queen-street-mill-queen-street-bb10-2hx/

This is a resource pack produced by the Ironbridge Gorge Museum Trust Education Department which accompanies the brick-making workshops available at Blists Hill Victorian Town.
ironbridge.org.uk/index.php/learning/schools-and-colleges/ks2/