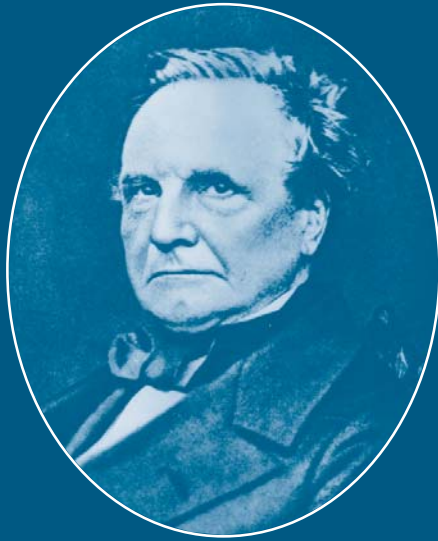


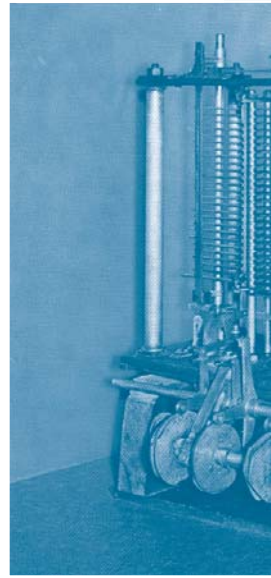
LOCAL STUDIES EDUCATION SERIES

CHARLES BABBAGE



FATHER OF THE COMPUTER
(1791-1871)

Charles Babbage was a Victorian scientist and mathematical genius whose vision paved the way for the modern computer and helped give the world space invader games!



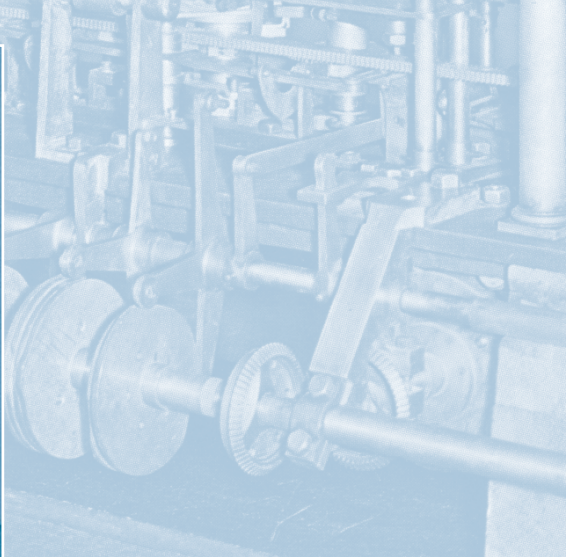
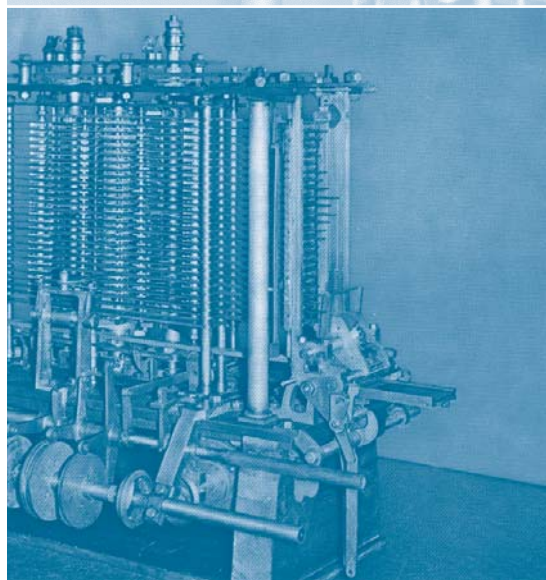
CHARLES

FATHER OF THE COMPUTER (1791-1871)

The son of a wealthy Totnes family, he completed his education at Cambridge University and was reluctantly supported in his scientific pursuits by his father who paid him an allowance. During his career Babbage made many notable inventions. He pioneered stage lighting, lighthouses, speedometers, the ophthalmoscope (used for eye examinations), the heliograph (used to send coded messages with a mirror deflecting the sun's rays) and the 'cowcatcher' (a device first fitted to the front of American trains to clear obstacles from the track).

Less successful was an attempt to develop paddles to enable people to walk on water. Babbage almost drowned when he

tried to cross the River Dart with the contraptions strapped to his feet! His greatest disappointment, however, was his failure to fully develop a calculating engine capable of carrying out complicated tasks. Drawings and descriptions of his mechanical machines show that they were similar in concept to computers which were developed a century later. In 1991, a working model of his Difference Engine was built and displayed at the Science Museum in London to celebrate the 200th anniversary of his birth. By this time the world fully appreciated the contribution of Charles Babbage, who is now universally recognised as 'The Father of the Computer!'



BABBAGE

THE ANALYTICAL ENGINE

Charles Babbage pioneered the computer when he became interested in mathematical tables used in astronomy, navigation, surveying and life insurance. Miscalculation and printing errors could result in serious consequences (many shipwrecks were said to be due to inaccurate navigational tables). Babbage won government support for the development of his Difference Engine, designed to calculate and print accurate mathematical tables. The venture was not completed as funding was withdrawn when Babbage's search for perfection resulted in soaring costs as he constantly changed the specification to improve the machine's performance.

The Analytical Engine was his next project, conceived with the help of his research assistant Lady Lovelace. Her idea was to produce a machine controlled by a system of punched cards to automatically give the machine instructions. This would have made her the world's first computer programmer! A primitive system of punched cards was already in use to control weaving looms which could produce a variety of patterns on textiles, but few people saw the need for developing this technology and without financial backing the Analytical Engine was never built.

DID YOU KNOW?

Charles Babbage's birth sign was Capricorn. He was born in London on Boxing Day 1791. His parents were from Totnes, but had moved to the capital where his father was a banker.

Charles attended a junior school in Alphington and King Edward VI Grammar School, Totnes.

As a boy Charles read tales of witchcraft and once recited the Lord's Prayer backwards in a vain attempt to summon the Devil.

His ambition was to become a vicar. Science and mathematics were considered to be a gentleman's hobby, not a suitable career.

Charles married Georgiana Whitmore at Teignmouth. His wife gave birth to eight children before she died aged 35.

His assistant Lady Ada Lovelace was the daughter of the poet Lord Byron.

Babbage designed his machines before electricity was in use, so they were operated by turning a handle.

The Difference Engine had 12,000 parts which had to be individually manufactured.

In contrast to the modern lightweight computer, Babbage's engines weighed several tons.

The first electronic computer was built in Britain and became operational in December 1943. It was used to crack enemy codes during the Second World War.

FURTHER INFORMATION

Books about the life of Charles Babbage available from Torbay Library Services include:

Passages from the Life of a Philosopher - Edited by Martin Campbell-Kelly (1991)

Irascible Genius - Maboth Moseley (1964)

Charles Babbage the Man and his Machines - Donald H Brown (1992)

For more about the history of Torbay - visit the Local History Collection at Torquay Central Library or view the Torbay Council website (www.torbay.gov.uk) for information on the following subjects:

History of Torbay/Torbay's Heritage/People and Places/Famous People. The site also contains opening times, news of forthcoming events and general information about the following historic buildings and museums which are all well worth a visit:

Torre Abbey Historic House & Gallery,
King's Drive, Torquay. Torquay
Tel: 01803 293593

Torquay Museum, 529 Babbacombe Road,
Torquay. Tel: 01803 293975

Oldway Mansion, Torquay Road, Paignton.
Tel: 01803 201201

Brixham Heritage Museum, Bolton Cross,
Brixham. 01803 856267



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