

Student Essay on A Biography of George Cayley

A Biography of George Cayley

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Essay

Sir George Cayley was born in Scarborough, England on December 27, 1773. Cayley was a relatively well to do commoner who lived on an estate in England. He was an educated man, and spent his life working on engineering, social, and political problems in England. Free from any concern about money, he launched himself into a bewildering variety of projects, mostly aimed at improving the world through science and technology. Cayley keenly observed and chronicled the natural world throughout his life. He was a Member of Parliament. He was a founding member of the Polytechnic Institution (a national organisation set up in 1838 to educate the public on artistic and scientific matters), and for many years he served as its chairman.

Cayley was considered by many the father of aerial navigation and a founder in the science of aerodynamics. He created and proved the scientific principles for flight. In addition, George Cayley was the first to identify the four forces of flight, thrust, lift, drag, and weight. He then discovered and explained the relationship each had with the other. Most importantly, he designed the first actual model of an airplane and diagrammed the elements of vertical flight. Furthermore, he was able to explain the theoretical problems of flight. For instance, he discovered that cambered airfoils (curved surfaces) provided greater lift than flat surfaces. Cayley created the first full-size model in 1849, which was large enough to support the weight of a boy. Then, in 1853, a larger model carried Cayley's coachman as a passenger.

Sir George Cayley's work influenced many other aspiring inventors, such as William Samuel Henson, who designed the Aerial Steam Carriage, which, as a matter of fact, was based on Cayley's theories.