



André Marie Ampère

1775 - 1836

Many people use the word 'ampere' for the unit of electrical current knowing nothing about the great genius French scientist, André Marie Ampère, after whom it is named.

Ampère's life was rather restless and unhappy, despite being born into a wealthy silk trader's family. Before being able to read, the young Ampère's greatest pleasure was to listen to passages from Buffon's Natural History. Soon, the reading of history books in his father's library attracted him but mostly he was interested in the Encyclopedia. His mathematical ability became evident at an early age. The little boy tried to solve problems with the help of stones and even using biscuits.

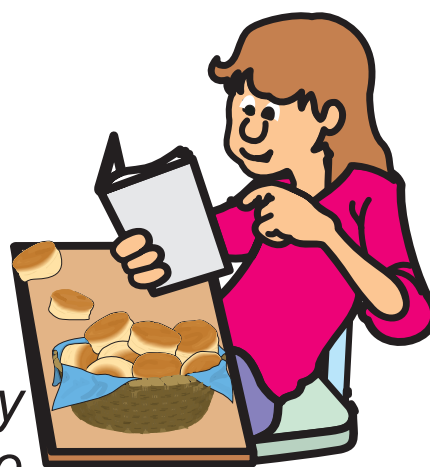
At the age of 13 he taught himself Latin in order to read the mathematical work of Euler. Apart from mathematics, young Ampère was fond of botany and poetry and wrote verses by himself. **He studied Greek so that he could read classical poetry.**

Ampère's childhood ended in 1789 with the outbreak of the French Revolution. His father was appointed to the post of judge, became involved in political intrigue and finally was tried and guillotined. The news of the death of his father deeply affected the young man. Ampère became deeply depressed and for a year he retreated within himself, not speaking to anyone. **Only an interest in botany and a volume of Roman poetry seemed to save him.**

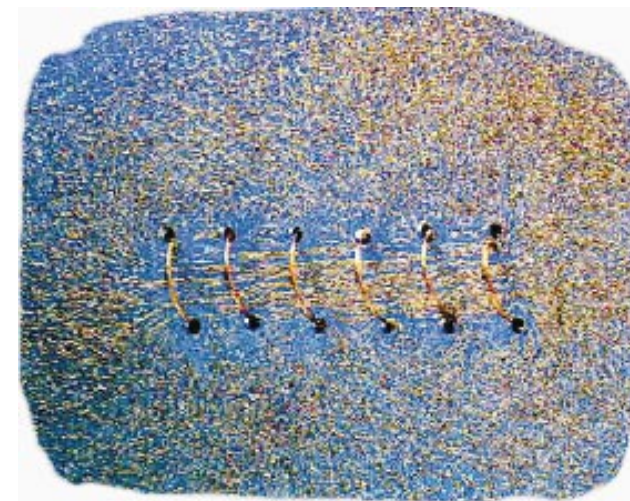
He was 21 when he met Julie, a young gold-haired lady. **The romantic young man fell in love with her.** They married three years later when André Marie was able to earn a living as a mathematics teacher in Lyon. The next four years were the happiest of Ampère's life. A son was born to them in 1800.



*His father
went
to the
guillotine....*



*The little boy
tried to solve
problems with the
help of biscuits*



*A coil
carrying
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behaves
like a bar
magnet*

In 1802 André Marie obtained the post of Professor of Physics and Chemistry at the central school in Bourg-en-Bresse. At the same time he began to work on an original paper on probability theory. Then tragedy struck again. His young wife died of tuberculosis. Ampère was desperate and wanted to commit suicide. The family convinced him to take a poorly paid position as a tutor at the École Polytechnique in Paris.

A second marriage in 1806 was a catastrophe from the very beginning. After the birth of a daughter, his life was so unbearable that Ampère decided to divorce. (His mother and aunt took care of both his children). An appointment to the post of Inspector General of the University of Paris improved his finances. Being a brilliant mathematician he was interested in dozens of questions at once: in atomic theory, in the structure of crystals, in chemistry, and in philosophy.

In 1820 Ampère learned about the result of the Danish physicist, Ørsted, that a magnetic needle is deflected by a conductor through which a current is sent. Soon, Ampère reported to the French Academy of Sciences: **'two parallel electric currents attract one another when the currents move in the same direction; they repel if they move in opposite directions'**. He demonstrated that a coil through which currents flowed had the properties of a bar magnet and therefore proved that electricity in motion and magnetism were linked.

Ampère was known as a kind, sensitive, poetic man, with a streak of absent-mindedness. It is a legend that once at his lecture before the Academy Ampère failed to recognize the presence of Napoleon I, who was sitting right in front of him. The Emperor was not insulted and invited the great scientist for lunch on the next day. However, Ampère was so preoccupied with his work that he forgot the appointment!

S.E.