



## Alessandro Volta

In 1800, the Italian scientist Alessandro Volta built the voltaic pile and discovered the first practical method of generating electricity. Count Volta also made discoveries in electrostatics, meteorology and pneumatics. His most famous invention, however, is the first battery.

Alessandro Volta was born in Como, Italy in 1745. In 1774, he was appointed professor of physics at the Royal School in Como. While at the Royal School, Alessandro Volta designed his first invention, the electrophorus, in 1774: a device that produced static electricity. For years at Como, he studied and experimented with atmospheric electricity by igniting static sparks. In 1779, Alessandro Volta was appointed professor of physics at the University of Pavia and it was while there that he invented his most famous invention, the voltaic pile.

Constructed of alternating discs of zinc and copper, with pieces of cardboard soaked in brine between the metals, the voltaic pile produced electrical current. The metallic conducting arc was used to carry the electricity over a greater distance. Alessandro

Volta's voltaic pile was the first battery that produced a reliable, steady current of electricity.

One contemporary of Alessandro Volta was Luigi Galvani, in fact, it was Volta's disagreement with Galvani's theory of galvanic responses (animal tissue contained a form of electricity) that led Volta to build the voltaic pile to prove that electricity did not come from the animal tissue but was generated by the contact of different metals, brass and iron, in a moist environment. Ironically, both scientists were right.

**Volt** - The unit of electromotive force, or difference of potential, which will cause a current of one ampere to flow through a resistance of one ohm. Named after Italian physicist Alessandro Volta, a pioneer in the study of electricity.

**Photovoltaic** - Photovoltaic are systems that convert light energy into electricity. The term "photo" is a stem from the Greek "phos" meaning "light" and "volt" comes from Volta.

(Taken from [http://inventors.about.com/od/utstartinventors/a/Alessandro\\_Volta.html](http://inventors.about.com/od/utstartinventors/a/Alessandro_Volta.html))

## EXERCISES

### 1 True or false?

- a. The electrophorus was Volta's first invention.  T  F
- b. Volta was a professor in Pavia in 1774.  T  F
- c. According to Galvani's theory, electricity is not intrinsic to animal tissue.  T  F
- d. Photovoltaics are systems that convert light energy into electricity.  T  F

### 2 Complete.

- a. Volta ..... the famous pile while he was ..... in Pavia.
- b. Volta built his pile alternating ..... of zinc and ....., with pieces of cardboard soaked in .....
- c. To conduct ..... out of the pile and over great ..... he used a metallic conducting .....
- d. Photovoltaic are ..... named after Alessandro Volta, they ..... light energy into .....
- e. The term "photo" comes from the ..... "phos" meaning ".....". And the ..... "volt" comes ..... Alessandro Volta.

*invented • electricity • term • copper • Greek • brine • discs • convert • electricity • devices • Professor • distances • light • arc • from*

### 3 Match questions and answers.

QUESTIONS		ANSWERS	
<b>A</b>	How did Volta build his pile?	<b>1</b>	That electricity is intrinsic to animal tissue.
<b>B</b>	With which point of Galvani's theory did Volta disagree?	<b>2</b>	He alternated discs of zinc and copper, putting between them pieces of cardboard soaked in brine.
<b>C</b>	What is a volt?	<b>3</b>	It is the unit for electric potential, electric potential difference, and electromotive force. This unit is named after Alessandro Volta.

A .....	B .....	C .....
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