

# Alessandro Volta

Alessandro Volta was born in Como, Lombardy, Italy, on February 18, 1745 and died in 1827. He was known for his most famous invention the battery. He was a physicist, chemist and a pioneer of electrical science.

He came from a noble family. Until the age of four, Alessandro showed no signs of talking, and his family feared he was not very intelligent. Fortunately, they were wrong as he grew to be very intelligent.



Although as a child he was slow to start speaking, he left school being fluent in Latin, French, English, and German. His language talents helped him in later life when he travelled and discussed science with others around the world.

In 1775 he devised the electrophorus - a device that produced a static electric charge. He studied gas chemistry and discovered methane. He created experiments such as the ignition of gases by an electric spark.

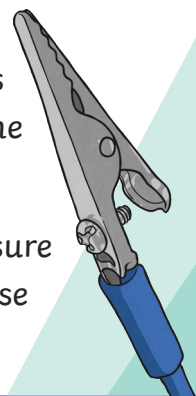


In 1800 he developed the voltaic pile, which was the forerunner of the electric battery which produced a steady electric current.

He didn't intend to invent the battery, but to instead perform science experiments to prove another Italian scientist, Luigi Galvani, was incorrect in his scientific ideas. Alessandro set out to prove Galvani's idea that animal electricity was the same as static electricity was an incorrect theory.

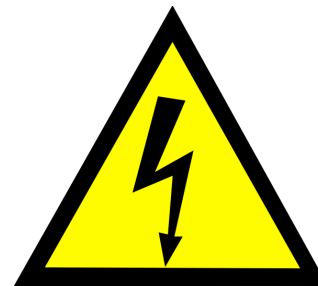
In 1792 Volta performed experiments on dead and disembodied frogs legs. He found out that the key to getting them to move is by contacting two different types of metals; if you use the same type of metal the electricity did not pass through the frog.

In 1794 Volta carried out extensive experiments to measure electrical effects of different pairs of metals. Volta named these metals in the order of their conductivity 'electromotive force'.



# Allesandro Volta Comprehension

1. What was Volta's 'most famous' invention? (1 mark)
2. Why is some of the text separated into boxes? (1 mark)
3. Which of the following would be be the most appropriate **overall summary** for the text? (1 mark)



Statement	
<b>A.</b> The text explains where the term 'Volts' comes from.	
<b>B.</b> The text describes the achievements of the scientist Volta.	
<b>C.</b> The text explains how Volta was slow to start speaking.	

4. **Find** and **copy** another word that means the same as someone who is *the first to do something* or who *leads the way*. (1 mark)
5. Why might some have been surprised at Volta's achievements. (2 marks)
6. **Find** and **copy** a phrase/sentence which tells you that Volta created the battery by accident. (1 mark)
7. What does 'conductivity' mean? You can use a dictionary to help you. (1 mark)
8. What was the electrophorus? (1 mark)
9. Can you come up with an alternative title to the text? (1 mark)
10. How can you tell that this is a non-fiction text? Please use examples and evidence. (2 marks)

## **Growth Mindset Challenge**

Do you agree or disagree that Volta was an influential and important figure? Why? Use at least two quotes/pieces of evidence from the text to support your answer. (3 marks)

**Remember to answer in full sentences when required. Not 'because...'**

## **Answers - Total of 15**

1. The battery/can refer to language of 'volts'.
2. To highlight key/important information. To separate the text/to make it easier to understand and more visually appealing.
3. B
4. Pioneer
5. Some might have been surprised as he couldn't talk in his early childhood and this led his parents to think he wasn't intelligent. 1 mark for only the point without an explanation.
6. 'He **didn't intend** to invent the battery'.
7. Ability of something to conduct electricity/allows electricity to pass through it.
8. The electrophorus was a device that produced a static electric charge.
9. Any that link to **the entire text** and are appropriate. 'Electricity' for example is too general and 'Volts' only links to one aspect.
10. Any of the following/that are appropriate:
  - a. Clear title and introduction
  - b. Images and diagrams
  - c. Separated into boxes/paragraphs
  - d. Formal language
  - e. Facts and key information
  - f. Past tense

## **Challenge**

Yes - Three separate explanations/reasons or two that are well explained and justified. 2 marks only for 2 reasons or one well justified and so on.

Possible to also give reasons as to 'no' when linked to other scientists or reasons that in context show that he was not as influential as others **but a full no would not link to the evidence from the text.**