

Electricity in the making - literacy task

Galvani and Volta

Alessandro Volta (1745–1827) was a professor of physics at the University of Pavia, in Italy. Volta heard about Galvani's experiments with frog's legs, but he did not believe that the frog's leg had produced the electricity. He thought that the two metals, copper and iron, had made the electricity when they touched. The electricity made by the metals had made the leg twitch.

In 1794, Volta started experimenting to test his theory by trying to make electricity without any animal tissue. Eventually, Volta made a cell from a pile of pieces of zinc and copper, with each pair of metals separated by paper soaked in salt solution. He demonstrated his cell in 1800, and in 1801 he went to Paris to show it to Emperor Napoleon. Volta's work was so important that his name was used as the unit for measuring the energy carried by electricity, the volt.

Volta and Galvani were both partly right and partly wrong. Galvani was correct, because we now know that nerves do conduct electricity, but it is not a different kind of electricity. Volta was also correct – the electricity that made the frog's leg twitch was caused by the two different metals, but this is not the only way that electricity occurs in bodies.

Questions

- ① The work outlined above led Volta to invent the first battery. What is a battery?
- ② Both Galvani and Volta had mistakes in their conclusion. Explain how electricity can be generated using any method you have learnt.
- ③ Complete some research to create a fact file on the scientists that contributed to our understanding of electricity. Include Eddison, Franklin and Tesla.