

Chemical sources of electrical power



ZŠ Hlavná 5,
Družstevná pri Hornáde



Chemical sources of power voltage



Luigi Galvani
(1737-1798)

- They are the source of DC voltage to obtain electricity (voltage) of the chemical energy stored in the materials from which they are made.
- These resources consist of electrodes and the electrolyte.

Distribution of chemical sources of electrical power

- Depending on the size of voltage:
 - Batteries - electric voltage from 1.2 V - 2 V
 - Batteries - some monocells connected in series, a voltage of 3 V - 24 V
- According to charging strategies:
 - Unrechargeable
 - Rechargeable – batteries (in cars, mobile phones, cameras, laptops)

Battery

- It is the most widely used primary cell voltage of 1.5V



- *Its disadvantage is that it may leak and damage the appliance.*
- *Enhanced version of the alkaline primary cell, is used in more demanding appliances, more lasts, has a longer shelf life.*

Battery

- It is a few monocells connected in series (the electric voltage is added):



9V



4,5V



12V



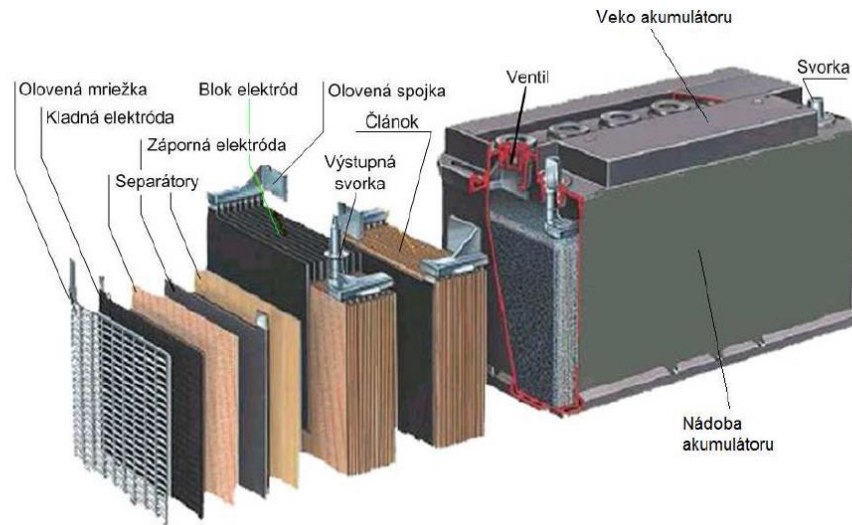
3,6V



3V

The accumulator

- It is used in cars, one cell has a voltage 2V, 12V battery is the most common.
- The chemical reactions that take place in it are reversible, the battery can be recharged by passing direct electrical current. This happens especially when driving a car.



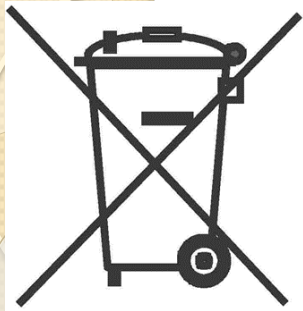
Rechargeable sources in the home

- Types of rechargeable sources



- Chargers:





Disposal of chemical sources of electrical power

- All of the above sources contain harmful substances, heavy metals, which can not be disposed of with household waste.
- All used batteries must be collected in special containers (even in our school), and then disposed of safely and professionally.





THANKS FOR PAYING ATTENTION !

Image Source: Internet.