

LEMON-FLAVOURED BATTERIES

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Intro

Batteries are based on chemical reactions. To be efficient, they tend to use materials like lithium, lead or cadmium. But we can also get clean and sustainable energy using everyday materials and fruit.

Objectives

- Prepare batteries with everyday materials that are capable of generating enough energy to turn on small electronic devices.

Materials

- Lemons
- Potatoes, apples, oranges (optional)
- Copper coins (5, 2 or 1 euro cents, or pennies, for example)
- Galvanised keys (zinc coated)
- Voltmeter, cables and crocodile clips
- LED diodes in different colours
- Calculators, watches (optional)

Steps to follow

- POKE a coin and a key into the lemon.
- ATTACH one of the crocodile clips to the coin and another to the key and connect them to the voltmeter or to the LEDs.
- INCREASE the voltage by attaching multiple lemons.
- EXPERIMENT to see whether other fruits and vegetables can provide different voltages, and turn on lights or other, more powerful, devices.
- OBSERVE which fruit provides the highest voltage and how different fruits can be connected together to multiply this.

Form

Geolocation / DD/MM/YYYY / fruit / voltage