POTATO BATTERY

Explore the fascinating world of chemistry and electricity by creating a simple potato battery that can power a small LED light!

SUPPLIES

2 Potatoes
2 Galvanized nails or screws
2 Pennies
3 Alligator clips
1 Led light
Knife

INSTRUCTIONS:

STEP 1: Insert one nail into each potato. This will act as the anode (negative electrode).

STEP 2: Insert one copper wire or penny into each potato, at least an inch away from the nail. This will act as the cathode (positive electrode).

STEP 3: Use one alligator clip to connect the nail in the first potato to the copper wire/penny in the second potato. This creates a series circuit.

STEP 4: Attach the second alligator clip to the remaining nail in the second potato. Connect the other end of this clip to the shorter leg of the LED (the cathode, which is the negative side).

STEP 5: Attach the third alligator clip to the remaining copper wire/penny in the first potato. Connect the other end of this clip to the longer leg of the LED (the anode, which is the positive side).

STEP 6: Test the Circuit: Once all connections are made, the LED should light up if everything is connected correctly.

THE SCIENCE

The potatoes act as an electrolyte, allowing ions to move between the zinc (galvanized nails) and copper, creating a small electrical current. By connecting two potatoes in series, you increase the voltage available to power the LED. The LED lights up when the circuit is complete, demonstrating the flow of electricity.