The battery is connected and there is no current

Does a battery need a closed circuit?
You need a closed circuit for a current to flow. Current can only flow from the battery's +terminal if the current can somehow get to the - side. The battery is not connected at the - side,so there is no way for any current to complete the circuit from +to -. There would be a current if there were some connection between a and b.

Can a current flow in a battery?
Maybe something like "Current flow in batteries?" Actually a current will flowif you connect a conductor to any voltage,through simple electrostatics.

Is a battery connected to anything?
A battery is not connected to anything. Is there a voltage between its plus and minus poles? The electro-chemical reactions inside the battery happen only when there's a closed circuit.

Why do batteries need to be connected in a circuit?
With this analogy, it is plainly obvious why both the positive and negative ends of a battery must be connected in a circuit. If, say, you connect only the negative electrode to ground, there is no current because there is no electricity coming in on the positive electrode that can be pumped out.

Why does no current flow in a battery?
In your battery example,there is no return current pathso no current will flow. There is obviously a more deep physics reason for why this works but as the question asked for a simple answer I'll skip the math,google Maxwell's Equations and how they are used in the derivation of Kirchhoff's voltage law.

What happens if a battery carries a current?
When a battery or power supply sets up a difference in potential between two parts of a wire,an electric field is created and the electrons respond to that field. In a current-carrying conductor,however,the electrons do not all flow in the same direction.

No, voltage is not potential energy. The trouble is with that "unit charge" bit at the end. Voltage can exist without any "unit charge" being present, and without any P.E. being ...

The electrical driving force across the terminals of a cell is known as the terminal voltage (difference) and is measured in volts. When a battery is connected to a circuit, the electrons from the anode travel through the circuit toward the ...

Sometimes one pol of a batterie is called 0, and ground is also 0. but the zero at the batterie is not the zero of

ground. The voltage of a batterie of say 3V just says one pol is ...

The terminal voltage (V_{terminal}) of a battery is voltage measured across the terminals of the battery when there is no load connected to the terminal. An ideal battery is an emf source that ...

The components are connected end-to-end with the last wire completing the circuit to form the single loop, meaning there is only one path for the current close current (I) Current is a flow of ...

There is no current flowing from its positive to its negative end because both the air and the internal insulation of the battery are preventing current flow. Back to your example. ...

The circuit is not completed and no current will flow. However, if you connect the positive terminal to the positive terminal of another battery, or to an electrical outlet, a large ...

Therefore, a 12-volt battery typically has six cells connected in series. EMF of Battery. The electric potential difference measured between a battery"s terminals when no load ...

Current can only flow from the battery"s + terminal if the current can somehow get to the - side. The battery is not connected at the - side, so there is no way for any current ...

$begingroup$ When there is an earth fault, the electrons move through the earth fault, through an earth connection, back to the source. If there was no earth connection, ...

An electric current can flow in the wire from one end of the battery to the other, but nothing useful happens. The wire just gets very hot and the battery loses stored internal energy - it ...

Because without free electrons going back into cathode of the battery, no more chemical reaction can happen to keep up the current. ...

Resistance is the size of the pipe. If pressure exists between the input and output of the source, water will flow, so you"ll measure a current as long as the connection exists. To ...

Because without free electrons going back into cathode of the battery, no more chemical reaction can happen to keep up the current. Therefore, once one end of a battery ...

If the battery is not connected to anything, the voltage between its poles exactly matches the electro-chemical potential of the reaction. The placement of the voltmeter ...

If the negative terminal of the battery is not connected to anything, then no current can flow through the battery. Current can only flow around a complete circuit (i.e., it ...

The battery is connected and there is no current

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