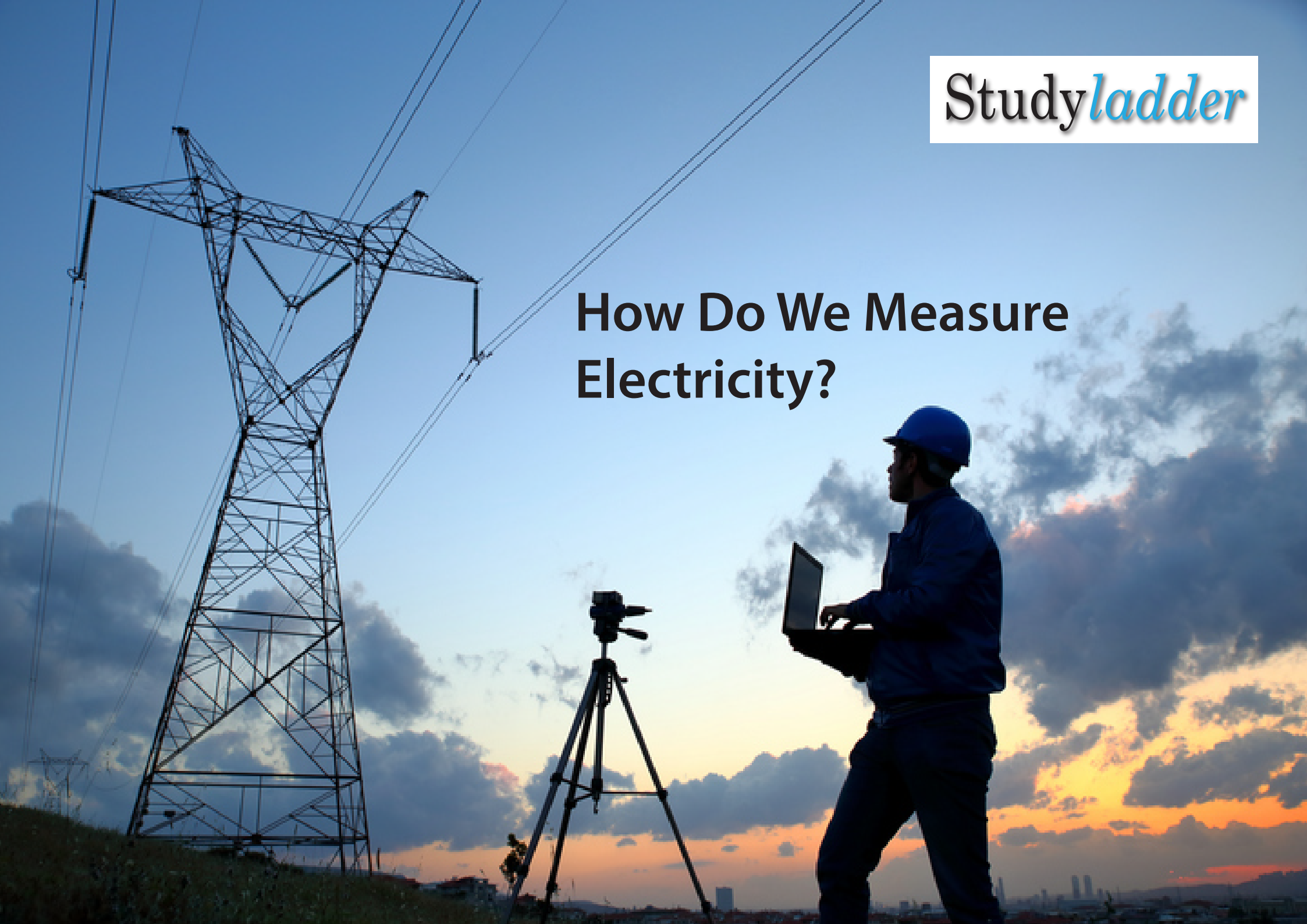
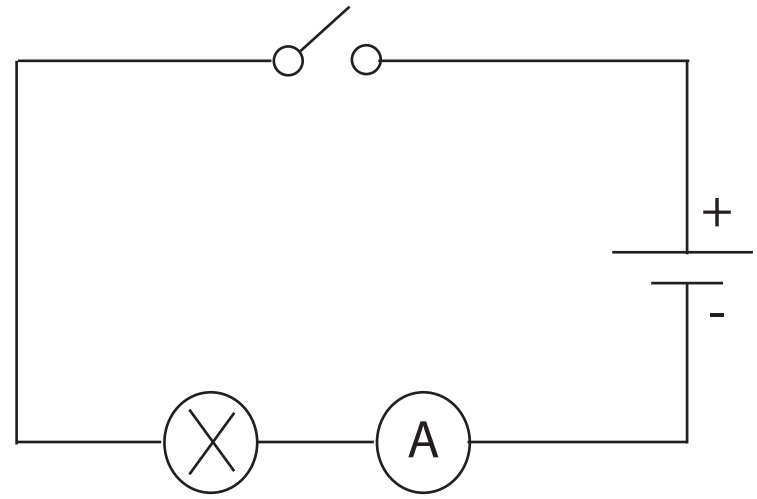

Studyladder
How Do We Measure Electricity?

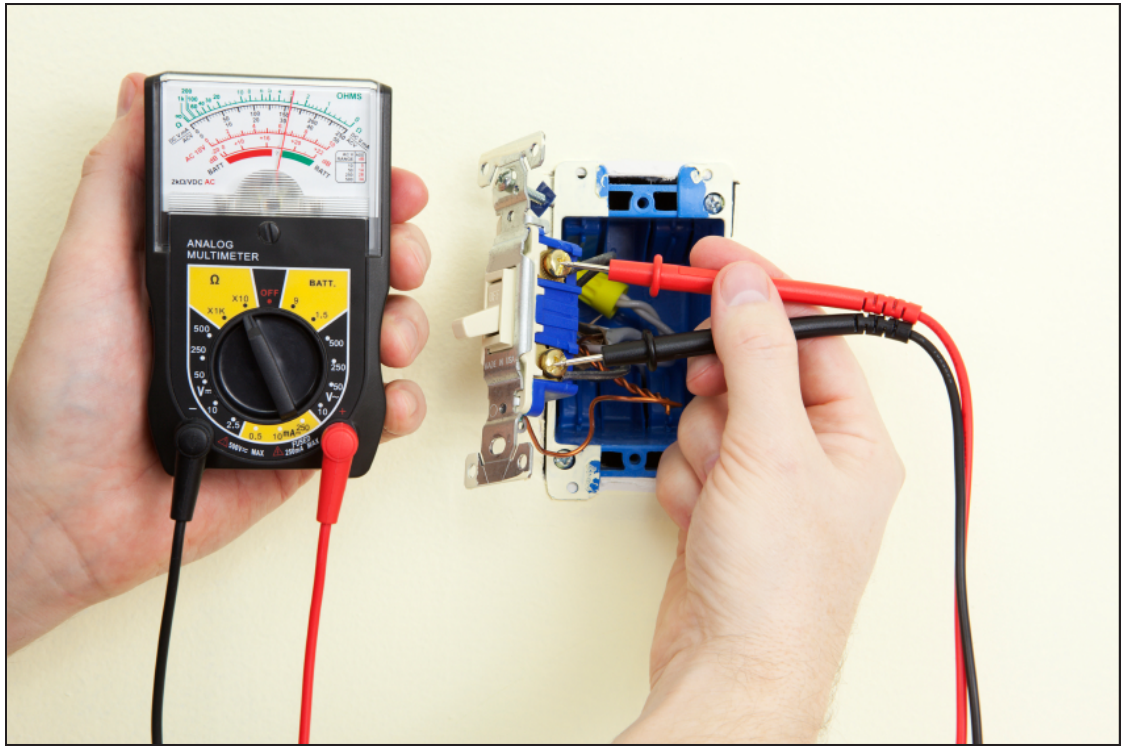
Measuring Current

Current is measured in amperes. We often abbreviate this to ***amps*** or ***A***. The amount of current flowing through a circuit is measured by an ammeter.

An ammeter is connected in series in a circuit to test the amount of current flowing through it.

A circuit with an ammeter connected.





The ampere is named after the French mathematician and physicist André-Marie Ampère who lived from 1775 to 1836.
He explored the relationship between electricity and magnetism.

Voltage

Voltage is measured by a voltmeter and expressed as volts which is abbreviated as V.

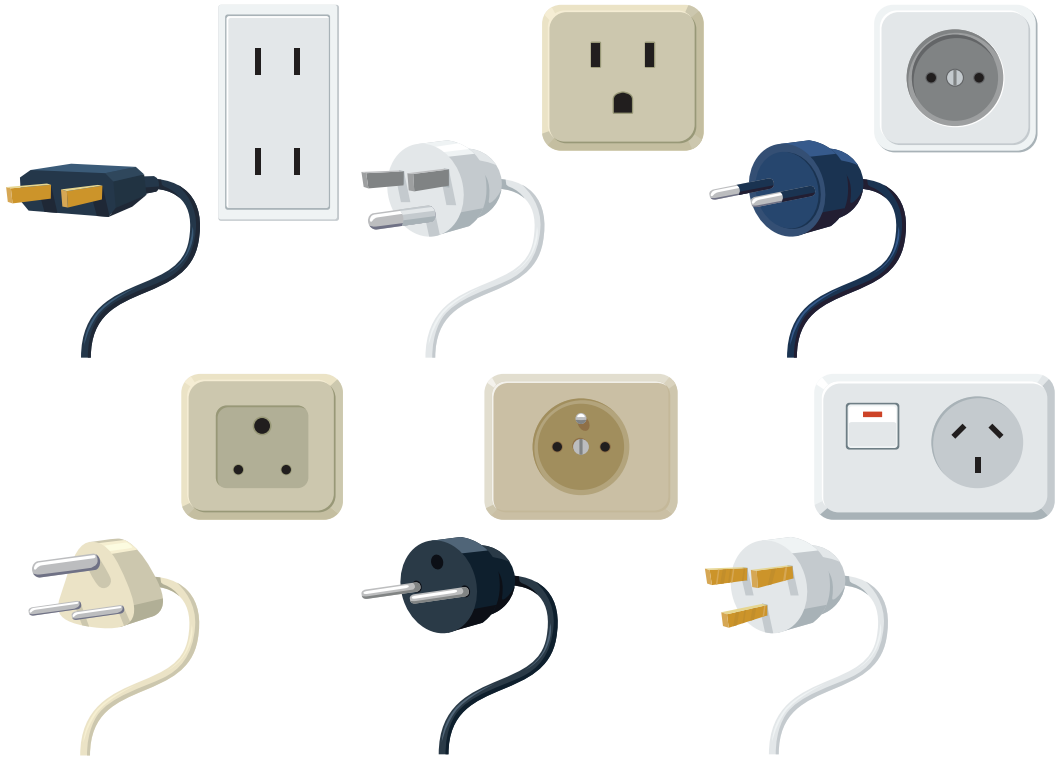
Voltage is a measurement of the force that is needed to move current through the wires. It is the electromagnetic force that pushes the electrons around the circuit.

A battery for example may have a potential energy of 1.5 volts. This would be sufficient to use in a small appliance such as a torch.

A common voltage for a car battery is 12 volts. A higher potential energy is needed to work the electrical system in a car.

The power outlets in your house provide a much higher voltage to work lights, heating and machinery such as refrigerators, kitchen appliances and computers. This energy is potentially fatal to humans. People should be very careful using power outlets.

Power outlets and cords look different in different parts of the world.



Investigate:

What is the standard voltage for power supply to houses in your country?