

kilowatt-hour

the energy used by a  
1 kilowatt appliance  
operating for 1 hour

Kirchoff's first  
(current) law

the sum of the currents into  
any point in a circuit is  
equal to the sum of the  
currents out of that point

Kirchoff's second  
(voltage) law

the sum of the potential  
drops around a circuit is  
equal to the sum of the  
emfs

line of force

a line drawn tangential to  
the direction of the force on  
a charge (or mass or  
magnet) at each point

magnetic field

a region around a  
magnet where a  
magnetic force would be  
felt

magnetic poles

where the magnetism is concentrated in a magnet; always come in pairs

magnetism

the property of certain materials that allows them to attract iron objects

motor

a device that changes electrical energy into mechanical (kinetic) energy

negative charge

charge that will repel an electron

neutral

the state of no overall electric charge

Oersted's experiment

an experiment that showed that a current carrying conductor produces a magnetic field around it

Ohm

the SI unit of electrical resistance; equal to that resistance which will allow a current of one ampere to flow when there is a potential difference of one volt

Ohm's law

the ratio of the applied voltage across a conductor to the current through it is a constant;  $R=V/I$

parallel circuit

a circuit containing more than one pathway for the current

positive charge

charge that will attract a negative charge; the type of charge found on protons

potential difference (V)	a measure of the work done per unit charge as a charge is moved between two points in an electric field
potential energy	energy due to position or configuration; stored energy
power (P)	the time ratio of doing work; $P=VI$
resistance	the property of a material that makes it difficult for electric charge to flow; $R=V/I$
right-hand grip rule	when the thumb of the right hand points in the direction of conventional current, the fingers curl in the direction of the magnetic field

safety devices

fuses, circuit breakers, earth-leakage devices that protect users from electrocution

series circuit

an electric circuit which has only one pathway

solenoid

a coil of wire that acts like a bar magnet when current flows through it

static electricity

electric charges at rest

voltage (V)

another name for potential difference

voltmeter

a meter used to measure the potential difference between two points

volt (V)

the SI unit of potential difference; the potential difference between two points is one volt if one joule of work is done to move one coulomb of charge between the two points

watt (W)

one watt is the power developed when 1 joule of energy is transformed in 1 second