



## ACROSS

- 1 Energy caused by the movement of light waves.
- 3 Stages a product goes through from concept and use to eventual withdrawal from the market place.
- 6 The law that heat is a form of energy, and the total amount of energy of all kinds in an isolated system is constant; it is an application of the principle of conservation of energy. Also known as conservation of energy.
- 7 A resource that can be replaced when needed.
- 12 Refers to the property of a thermodynamic system in which all parts of the system have attained a uniform temperature which is the same as that of the system's surroundings.
- 15 A part of the physical world as described by its thermodynamic properties such as temperature, volume, pressure, concentration, surface tension, and viscosity.
- 18 The flow of electrical power or charge.
- 22 The function of the state of a thermodynamic system whose change in any differential reversible process is equal to the heat absorbed by the system from its surroundings divided by the absolute temperature of the system.
- 24 Process by which, in a fluid being heated, the warmer part of the mass will rise and the cooler portions will sink.
- 25 The ability to do work.
- 26 The unit of electric current in the meter-kilogram-second system of units. Referred to as amp and symbolized as A.
- 28 States that the direct current flowing in an electric circuit is directly proportional to the voltage applied to the circuit.
- 29 A type of system that uses circulating pumps and fans to collect and distribute heat.
- 30 Energy in transit due to a temperature difference between the source from which the energy is coming and a sink toward which the energy is going.
- 31 The net transfer of electric charge (electron movement along a path) per unit of time.
- 32 The unit of potential difference symbolized as V.
- 34 A law that if two systems are separately found to be in thermal equilibrium with a third system,

the first two systems are in thermal equilibrium with each other; that is, all three systems are at the same temperature. Also known as thermodynamic equilibrium.

## DOWN

- 2 The study of the effects of work, heat, and energy on a system.
- 4 The opposition that a device or material offers to the flow of direct current.
- 5 Systems that do not make use of any externally powered, moving parts, such as circulation pumps, to move heated water or air.
- 8 Any source of energy other than fossil fuels that is used for constructive purposes.
- 9 The process separating the hydrogen-oxygen bond in water using an electrical current.
- 10 Energy caused by the movement of atoms.
- 11 A general statement of the idea that there is a preferred direction for any process.
- 13 A unit of absolute temperature and symbolized as K. Formerly known as degree Kelvin.
- 14 The transfer of heat within an object or between objects by molecular activity, without any net external motion.
- 16 The measure of resistance to heat flow.
- 17 A measure of thermal transmittance through a material.
- 19 Individual fuel cells that are combined in series.
- 20 A straight line that best represents all data points of a scatter plot. This line may pass through some, all, or none of the points displayed by the scatter plot. Also referred to as a Trend Line or Regression Line.
- 21 The process by which energy is transmitted through a medium, including empty space, as electromagnetic waves. This energy travels at the speed of light. This is also referred to as electromagnetic radiation.
- 23 A property of an object which determines the direction of heat flow when the object is placed in thermal contact with another object.
- 27 The potential difference measured in volts. The amount of work to be done to move a charge from one point to another along an electric circuit.
- 33 The unit of electric current in the meter-kilogram-second system of units. Symbolized as ?.