Definitions and Concepts for CAIE Physics A-level

Topic 5: Work, Energy and Power

Conservation of Energy: In a closed system with no external forces the energy of the system before an event is equal to the energy of the system after the event. The energy does not need to be in the same form after the event as it was before the event.

Efficiency: The ratio of useful energy output to total energy input for a given system.

Gravitational Potential Energy: The energy gained by an object when it is raised by a height in a gravitational field.

Kinetic Energy: A form of energy that all moving objects possess. It is directly proportional to the mass of the object, and to the square of its velocity.

Power: The rate of transfer of energy.

Work Done: The energy transferred by a force moving over a distance. It is equal to the product of the magnitudes of the force and distance.