

THEORY

The theory of the experiment is based on the principle of conservation of energy. In a closed system, the total energy remains constant. The energy is converted from one form to another, but the total amount of energy remains the same. In this experiment, the energy is converted from potential energy to kinetic energy. The potential energy is stored in the spring, and the kinetic energy is the energy of motion. The energy is conserved throughout the experiment.

Parameter	Value	Unit
Mass of the spring	0.10	kg
Mass of the weight	0.20	kg
Initial displacement	0.05	m
Final displacement	0.10	m
Time taken for oscillation	1.57	s
Frequency of oscillation	1.0	Hz

Conclusion: The experiment demonstrates the conservation of energy in a closed system. The energy is converted from potential energy to kinetic energy, and the total energy remains constant.

EXPERIMENT

