

Work and power

Worksheet 3 Teacher's notes

- 1. What is the formula for work?** - Work in physics is defined as force times displacement.
- 2. When is work done on an object?** - When there is a force and distance hence the formula
 $\text{Work} = \text{Force} \times \text{Distance}$
- 3. What is negative work?** Give an example. negative work means direction of force is opposite to displacement, or working with a work which is opposing the actual work, eg frictional work is negative of actual work
- 4. What is potential energy?** - energy stored in a system of forcefully interacting physical entities.[1]
The SI unit for measuring work and energy is the joule (symbol J).
- 5. What is gravitational PE ?** Gravitational potential energy is energy an object possesses because of its position in a gravitational field.
- 6. What is elastic potential energy?** What is the formula? Elastic potential energy is Potential energy stored as a result of deformation of an elastic object, such as the stretching of a spring.
- 7. What is kinetic energy?** kinetic energy of an object is the energy which it possesses due to its motion.[1] It is defined as the work needed to accelerate a body of a given mass from rest to its stated velocity.
- 8. What is mechanical energy?** mechanical energy is the sum of potential energy and kinetic energy. It is the energy associated with the motion and position of an object.
- 9. What is power?** Give the formula. In physics, power is the rate of doing work. It is equivalent to an amount of energy consumed per unit time.
- 10. What unit is used to measure power?** Joule per second