

Work and Kinetic Energy

Applying a force on an object through a certain displacement increases its **energy**. In this case, we say that **work** was performed on the object.

$$(\text{Work} = \text{Force} \times \text{Displacement})$$

Any moving object has some energy associated with its movement. We call this the **Kinetic Energy**.

“Change in **kinetic energy** is equal to the **mechanical work** done by all forces”

$$\Delta K = W$$

$$K = \frac{m v^2}{2} \quad \text{---> Kinetic Energy}$$

$$W = F \Delta x \quad \text{---> Work}$$