

## Weight / Gravity / Energy / Work

Weight and Gravity The weight of an object is the force of gravity acting on it. It is calculated using the following formula:  $\text{Weight (N)} = \text{Mass (kg)} \times \text{g (N/kg or m/s}^2)$  This force of gravity is explained by considering the earth to be surrounded by a gravitational field. The strength of this field is the force acting upon a mass of 1kg and this is 9.8 N/kg near the surface. Energy and Work Energy exists in many different forms and can be changed from one form into another. There are 2 main types of energy: Potential Energy (PE) - some examples are:

- Gravitational PE (GPE) - energy stored due to position (e.g. being high up)
- Elastic PE - energy stored in a stretched spring
- Chemical PE - energy stored in a fuel
- Magnetic PE - energy stored in a magnetic field

Kinetic Energy (KE) Kinetic Energy is motion / movement energy. Other forms of energy are heat, light, sound, electrical, and nuclear. Work is done when energy is changed (transferred) from one form into another. (e.g. in lifting a weight up, energy is transferred from chemical energy (in the person's muscles) to GPE)

## About the Author

Source: <http://crampuppy.com>