Potential Energy - stored energy
An object with potential energy has the potential to do work.

http://www.youtube.com/watch?v=Jnj8mc04r9E&safety_mode=true&persist_safety_mode=1&safe=active

Gravitational Potential Energy: The energy an object has stored because of its height

Gravitational potential energy depends on an object's mass and its height above some reference level.

Mathematically: $\boxed{E_g = mgh}$

Where: E_g = Gravitational Potential Energy (J)
    g = Gravitational field strength (9.80 N/kg)
    h = Height (m)
    m = mass (kg)

Ex1: A 1.0 kg ball is sitting on a shelf which is 1.5 meters above the ground. Beneath the shelf is a table which is 0.6 m tall. Find the gravitational potential energy of the ball relative to:

a) The Ground   b) The table
c) The change in gravitational potential energy of the ball if it rolls off the shelf onto the table.

Ex 2: What is the gravitational potential energy of a 250 g mass at a height of 450 cm relative to the ground?

b) How much work was done to lift the mass to this height?

* 2 methods

c) How much power is generated if you lift the mass to this height in 6.0 s?

An automobile to be transported by ship is raised 7.0 m above the dock. If its gravitational potential energy is 6.6×10^4 J, what is the automobile's mass?

In 1993, Cuban athlete Javier Sotomayor set the world record for the high jump. The gravitational potential energy associated with Sotomayor's jump was 1970 J. Sotomayor's mass was 82.0 kg. How high did Sotomayor jump?

Other kinds of potential energy...?

Flow of Energy

Practice...

Read p. 335 - 338
Do p. 372 #66-70