

Today,  
Go over Energy Project Assignment

MECH ENERGY Done by Feb break?  
Introduction to Mechanical Energy Changes.  
CW/HW: Energy Problems  
Energy Changes

Example of Mechanical Energy Changes:

I take a spring loaded dart gun and fire it into the air. I push on the 0.1 Kg dart with 3 Newtons of force.

What type of energy does it have at each point in its journey?

ENERGY CHANGES ..... IF no friction/heat

$$\begin{array}{ccccccc} & & & \Delta ME & = & \Delta ME & \\ \text{Start} & & & & & & \text{Finish} \\ \text{GPE} & + & \text{KE} & + & \text{EPE} & = & \text{GPE} & + & \text{KE} & + & \text{EPE} \\ \text{mgh} & + & \frac{1}{2}mv^2 & + & \frac{1}{2}kx^2 & = & \text{mgh} & + & \frac{1}{2}mv^2 & + & \frac{1}{2}kx^2 \end{array}$$



During its contact with a golf club, a golf ball is distorted, as is shown in the high-speed photograph. As the ball moves away from the club, the ball recovers its normal spherical shape, and elastic potential energy is transformed into kinetic energy.