A 6 kg rock is thrown with a velocity of 10 m/sec. What is the kinetic energy of the rock?

$E_K = \frac{1}{2} m v^2$

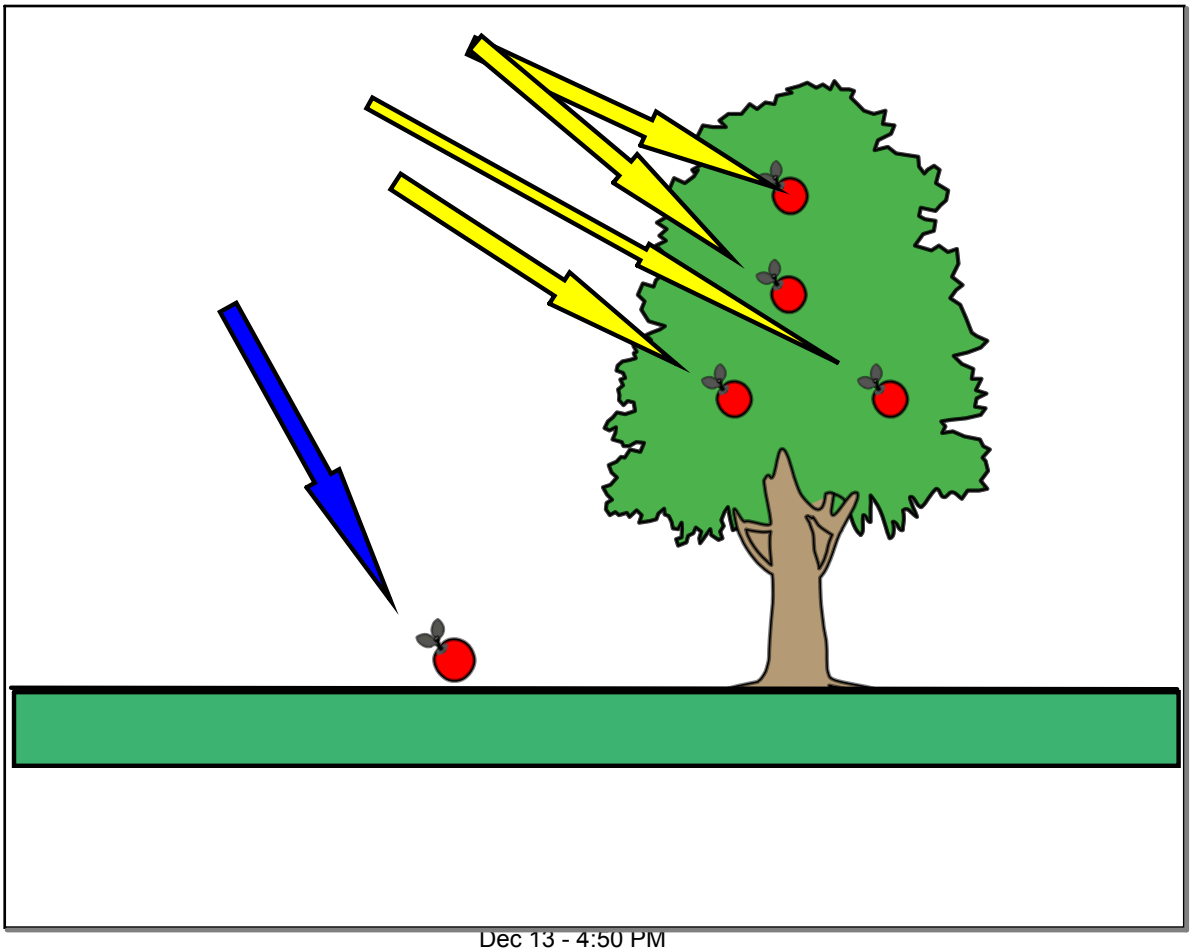
$\frac{1}{2}[6 \cdot (10^2)]$

$\frac{1}{2} 6 \cdot 100$

$\frac{1}{2} 600$

$300 J$

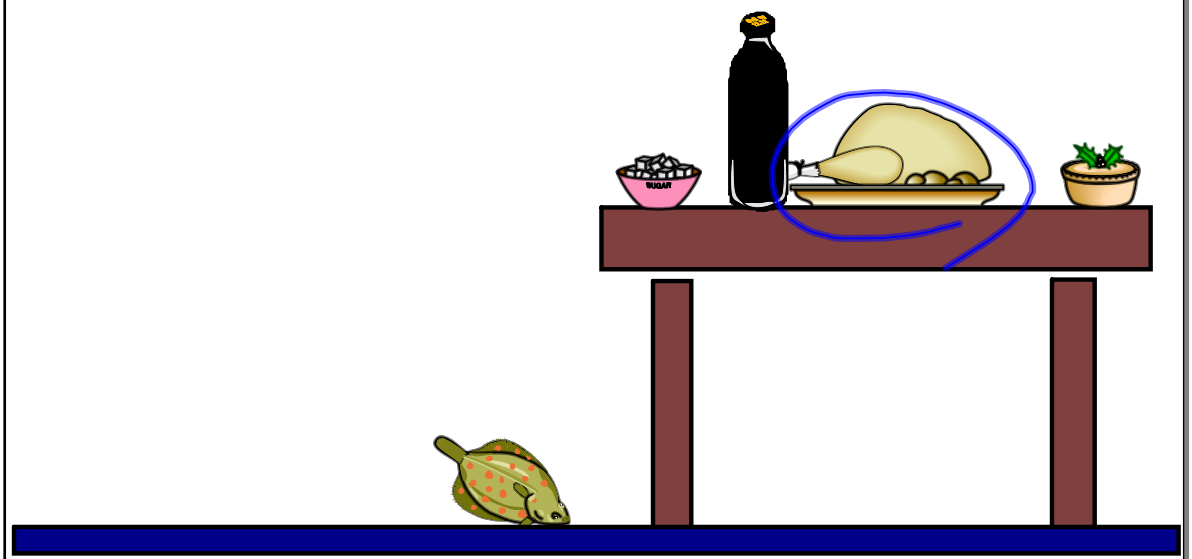
Dec 13 - 4:49 PM



Dec 13 - 4:50 PM

Potential energy- the stored energy of a position

Dec 13 - 4:56 PM

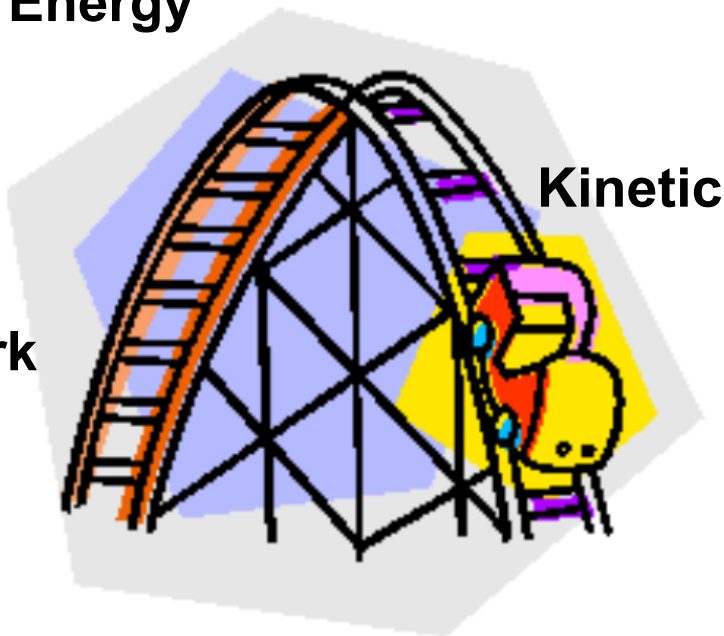


Dec 13 - 4:58 PM

Graviational potential energy is stored when work lifts an object aganist the force of gravity

Dec 13 - 4:57 PM

Potential Energy



Kinetic Energy

Work

Dec 13 - 5:03 PM

Equation for graviational potential energy

$E_p = WH$

weight (N) height (m)

What are the units?

Dec 13 - 5:04 PM

What is the graviational potential energy of an object weighing 6n, lifted 2.5m?

$6 \cdot 2.5$

$15\ J$

Dec 13 - 5:11 PM

A 37 N object is lifted to a height of 3 meters.
What is the potential energy of this object?

$37 \cdot 3$

$111\,J$

Dec 13 - 5:12 PM

A 30 kg child climbs 15 meters up a tree.
When he stops to have a look around,
what is the child's potential energy?

$30 \cdot 9.8$

$294\,N$ $E_p = 294\,N \cdot 15\,m$

$4410\,J$

Dec 13 - 5:15 PM

A 1.8 kg cat climbs upwards 12 meters to sit on the roof of a house. How much potential energy does it possess while it sits enjoying the sunshine?

211.68J

Dec 13 - 5:16 PM

A boulder has 5000 J of potential energy while sitting on top of a cliff. If the cliff is 250 m above the ground, what is the weight of the boulder?

20N

Dec 13 - 5:18 PM