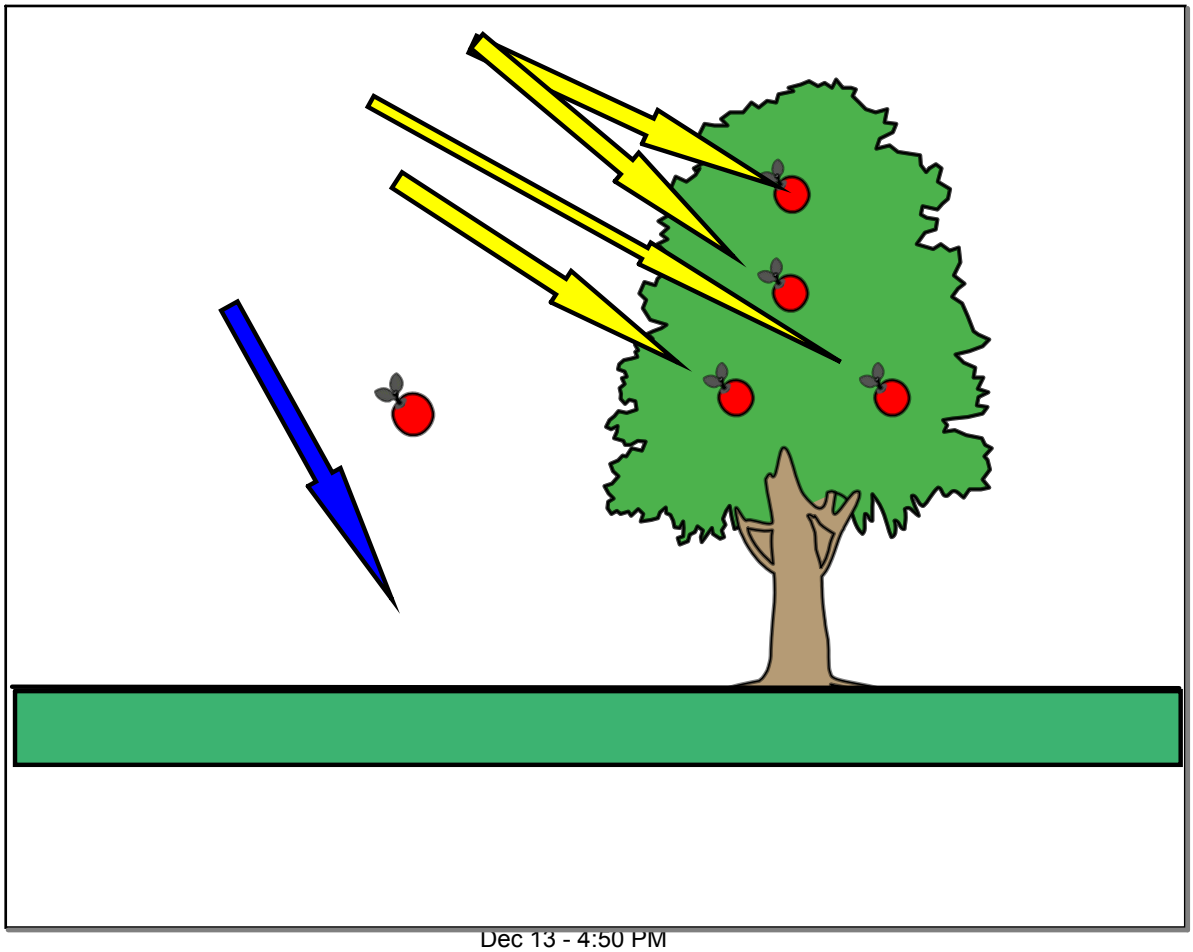

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Potential energy- the stored energy of a position

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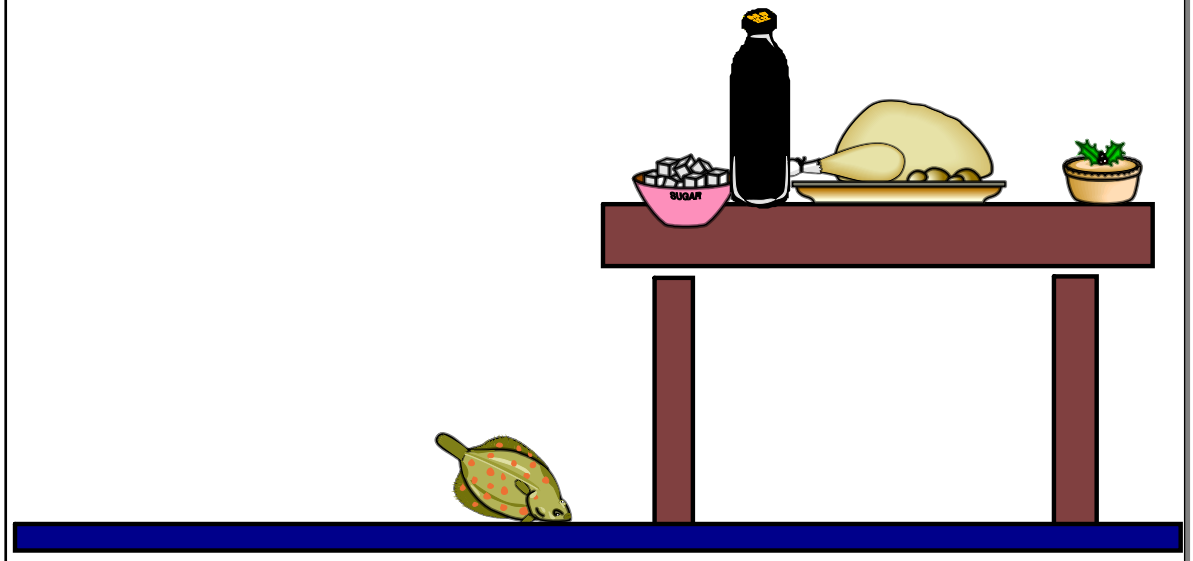

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Graviational potential energy is stored when work lifts an object aganist the force of gravity

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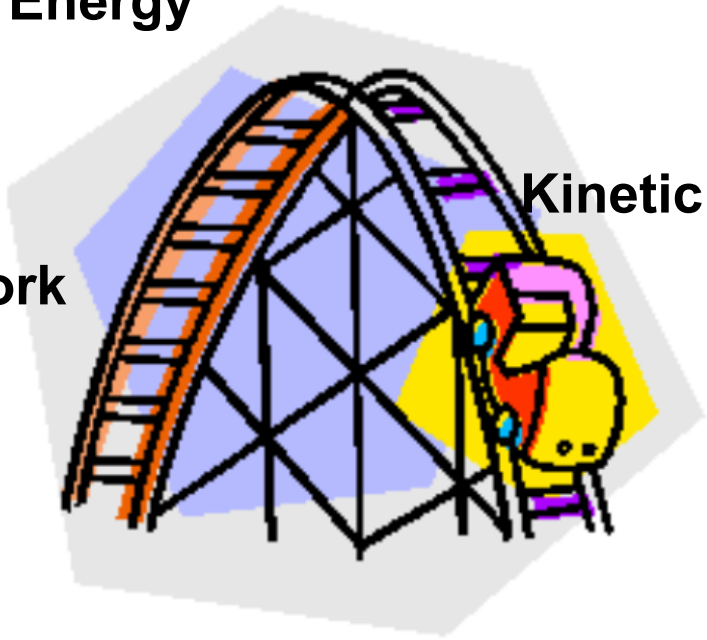
Potential Energy



Kinetic Energy

Work

Dec 13 - 5:03 PM

Equation for graviational potential energy

$E_p = W H$

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?

$E_p = 6 \cdot 2.5$

$E_p = 15\,J$

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

$E_p = 37 \cdot 3$

$E_p = 111\,J$

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?

$30 \cdot 9.8$ $E_p = W \cdot H$

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

$4410\ J$

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?

$1.8 \cdot 9.8$ $E_p = 17.64N(12)$

$17.64N$ $E_p = 211.68\ J$

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?

$$\frac{5000J}{250} = \frac{W\ 250}{250}$$

$$20N$$

Dec 13 - 5:18 PM