

# Potential and Kinetic Energy

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# How is all energy divided ....., % Š μ ζ ?

**All Energy**

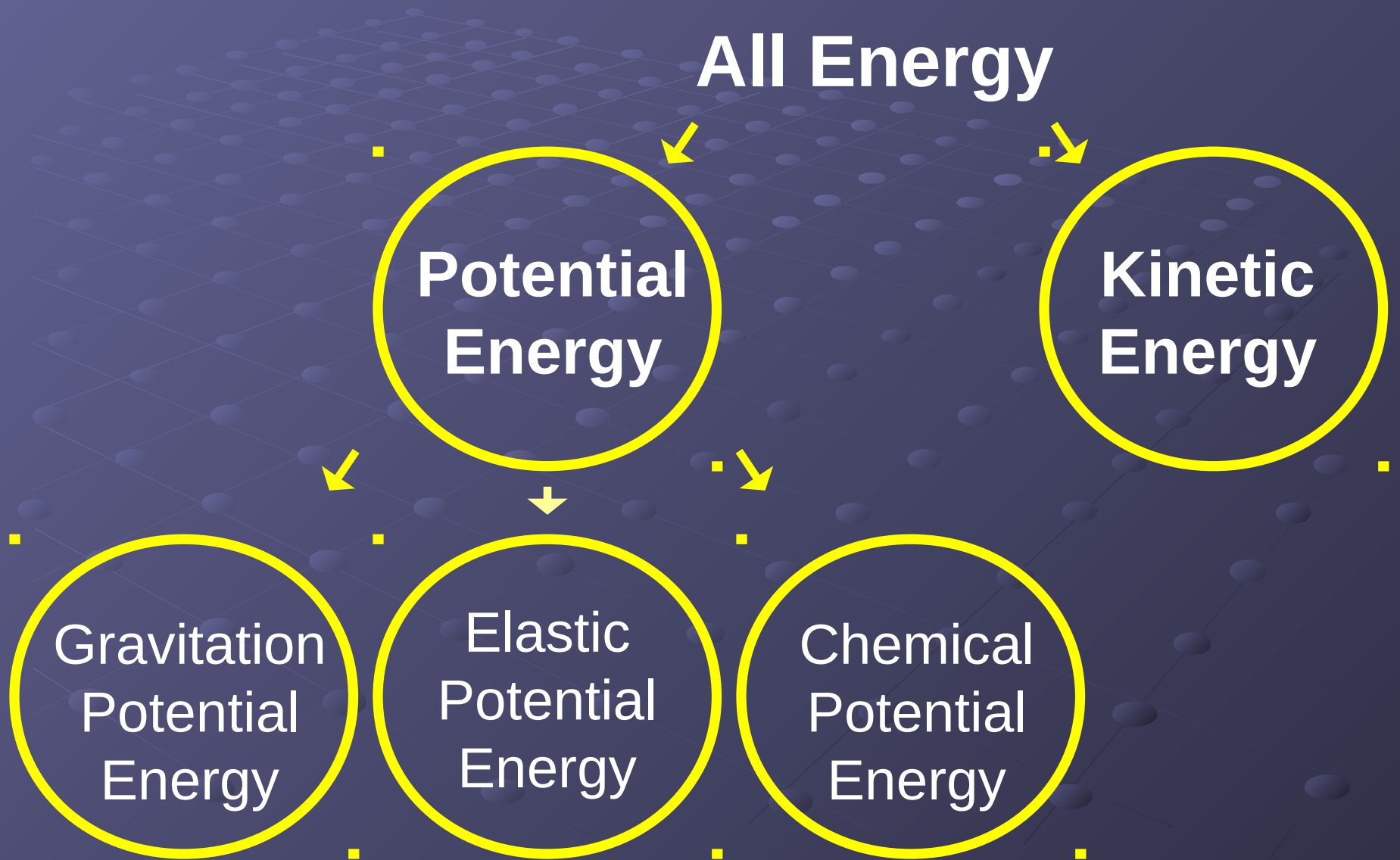
**Potential  
Energy**

**Kinetic  
Energy**

**Gravitation  
Potential  
Energy**

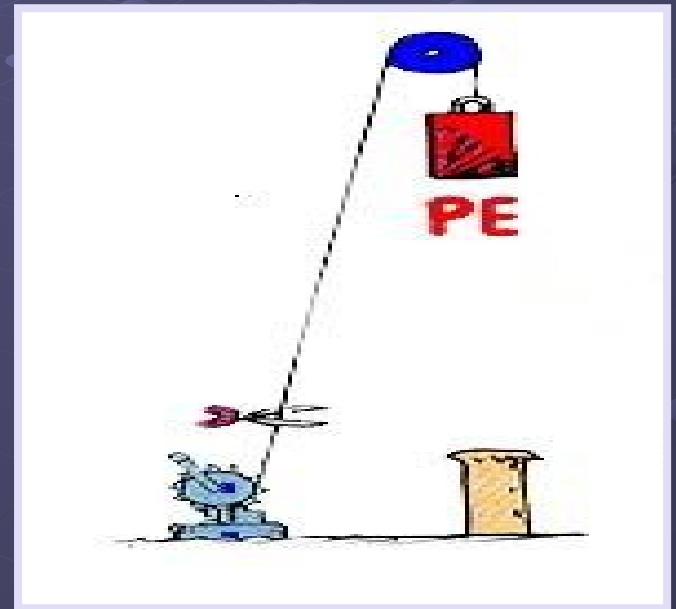
**Elastic  
Potential  
Energy**

**Chemical  
Potential  
Energy**



# What is Potential Energy?

- o Energy that is stored and waiting to be used later





# What is Gravitational Potential Energy?

- Potential energy due to an object's position
- $P.E. = \text{mass} \times \text{height} \times \text{gravity}$

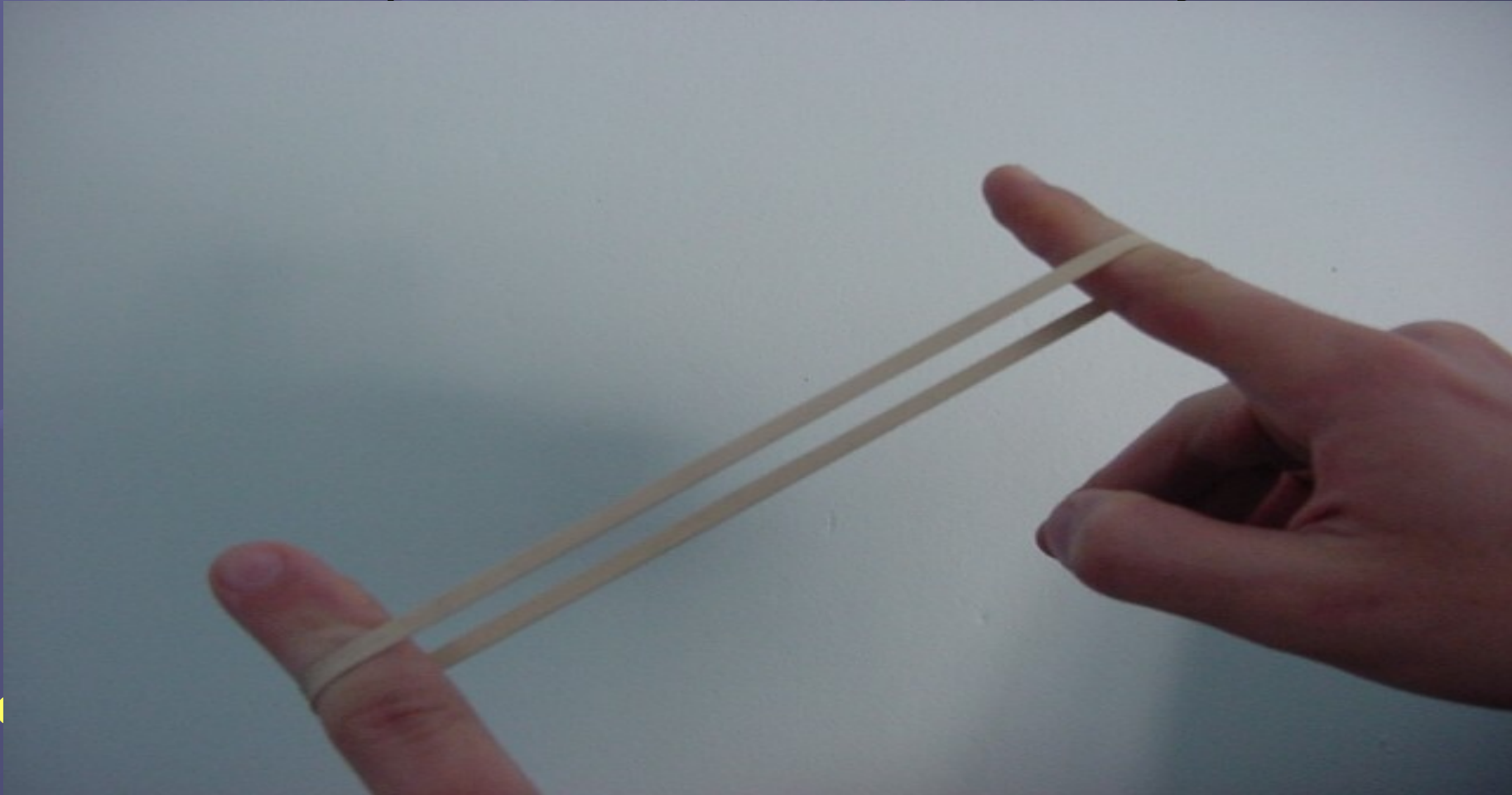


Don't look down,  
Rover!  
Good boy!



# What is Elastic Potential Energy?

- Potential energy due compression or expansion of an elastic object.



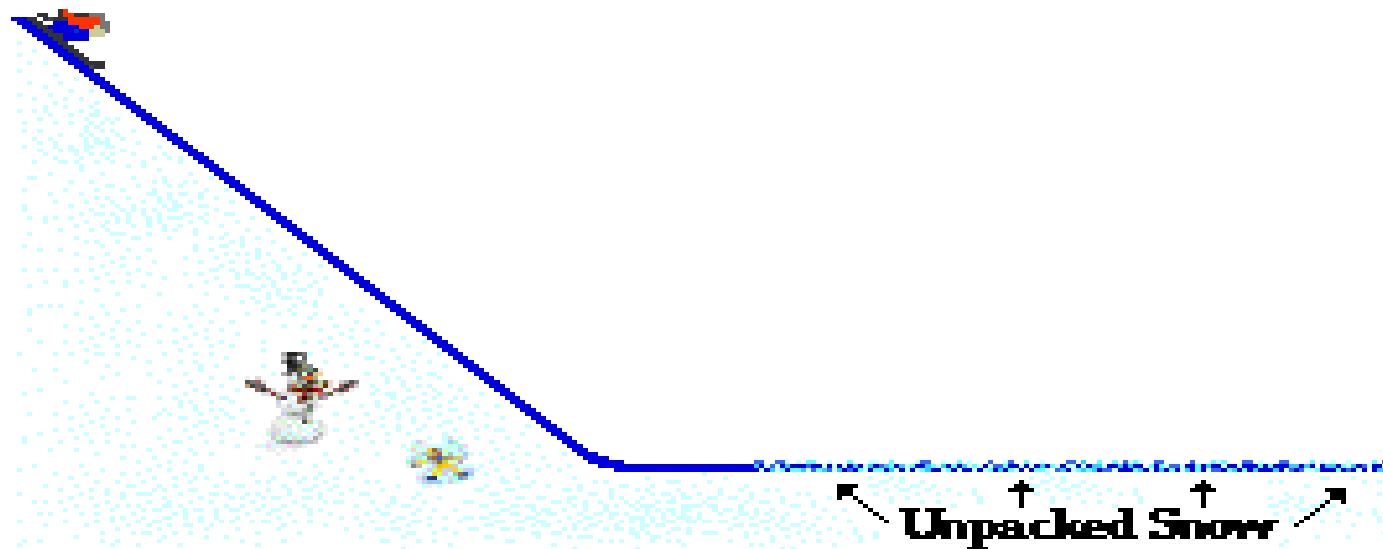
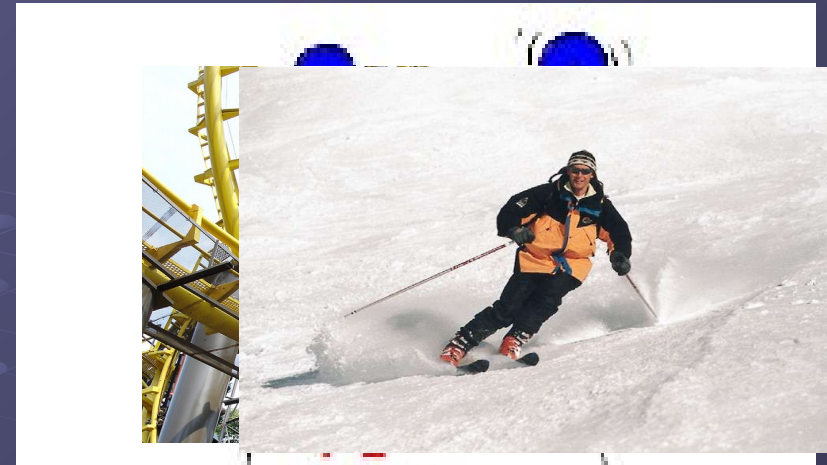
# What is Chemical Potential Energy?

- Potential energy stored within the chemical bonds of an object



# What is Kinetic Energy?

- Energy an object has due to its motion
- $K.E. = .5(\text{mass} \times \text{speed}^2)$



Height = 52.0 m

Speed = 0.0 m/s

