

POTENTIAL AND KINETIC ENERGY



High Dive!

Imagine climbing the ladder of a high dive.

When you get to the platform, you walk to the far edge and pause.

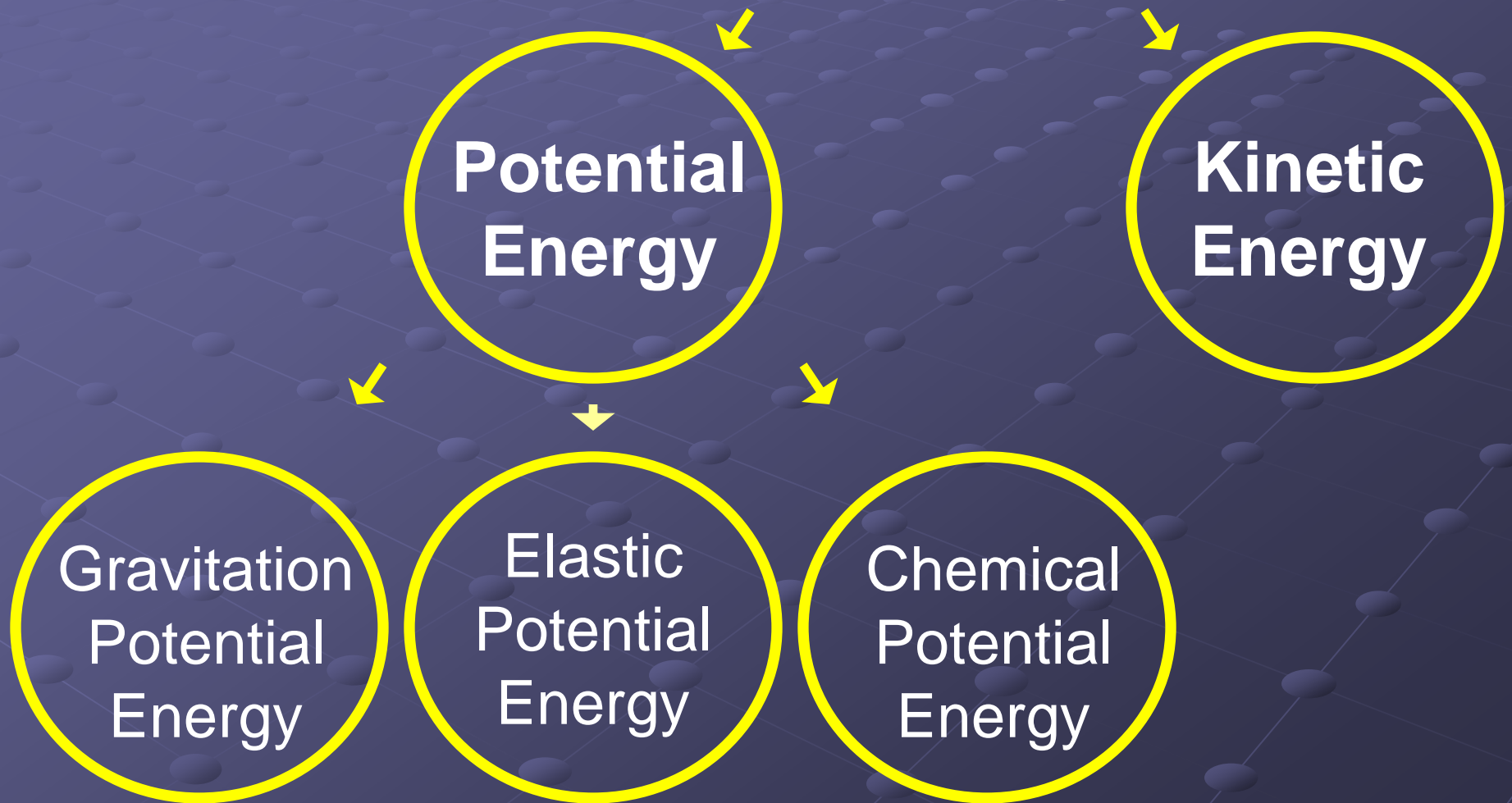
At that moment, standing high above the water, you have potential energy.

Now imagine diving off the platform. As you dive, your potential energy is converted to kinetic energy – the energy of motion.



How is all energy divided?

All Types
of Energy



What is Potential Energy?

- Energy that is stored and waiting to be used later



What is Gravitational Potential Energy?

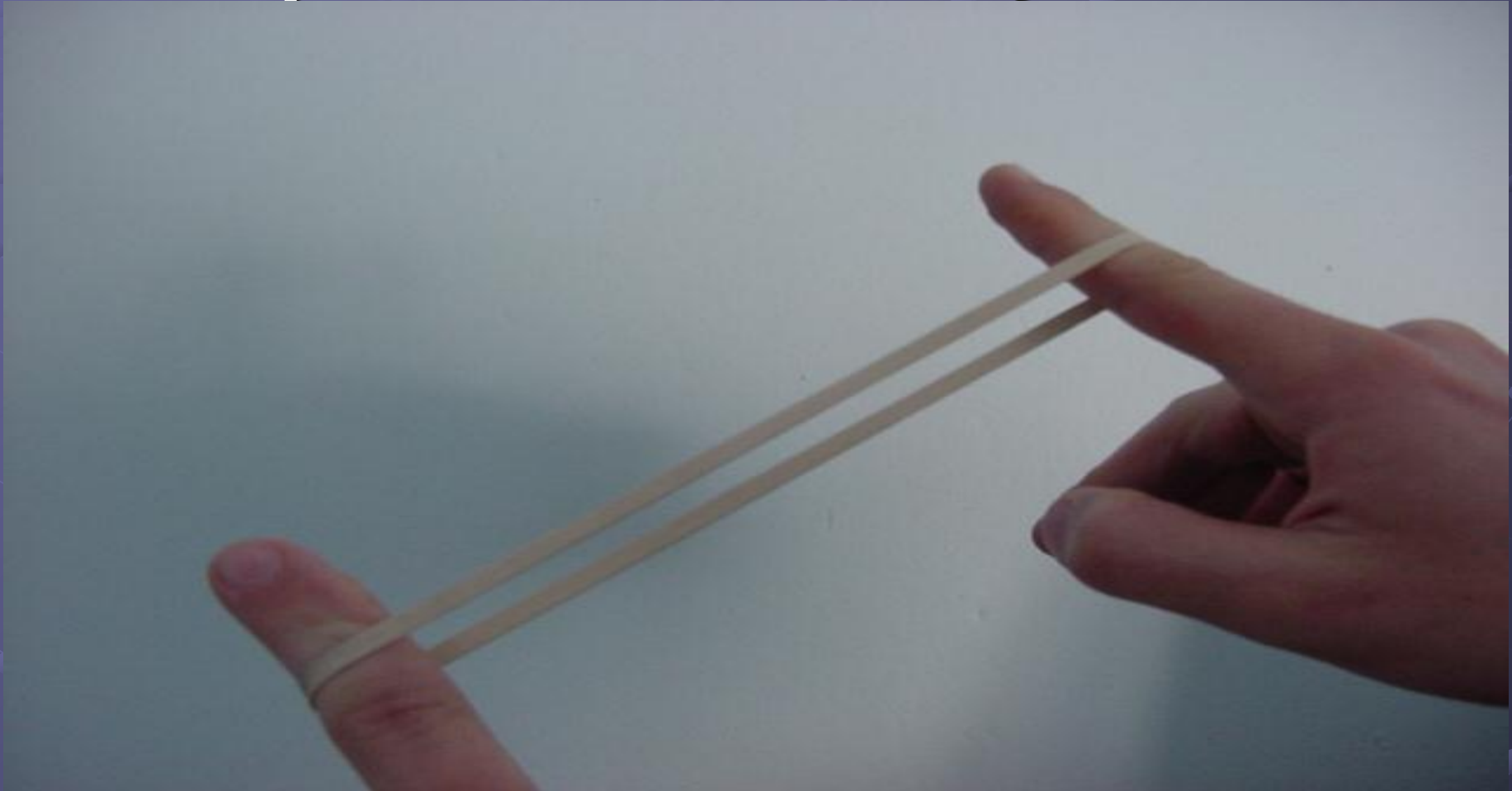


- Potential energy due to an object's position
- $P.E. = \text{mass} \times \text{height} \times \text{gravity}$



What is Elastic Potential Energy?

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



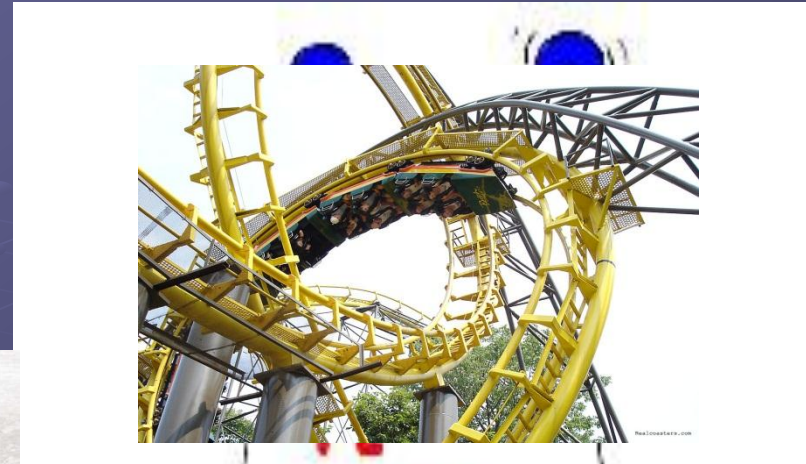
What is Chemical Potential Energy?

- Potential energy stored within the chemical bonds of an object

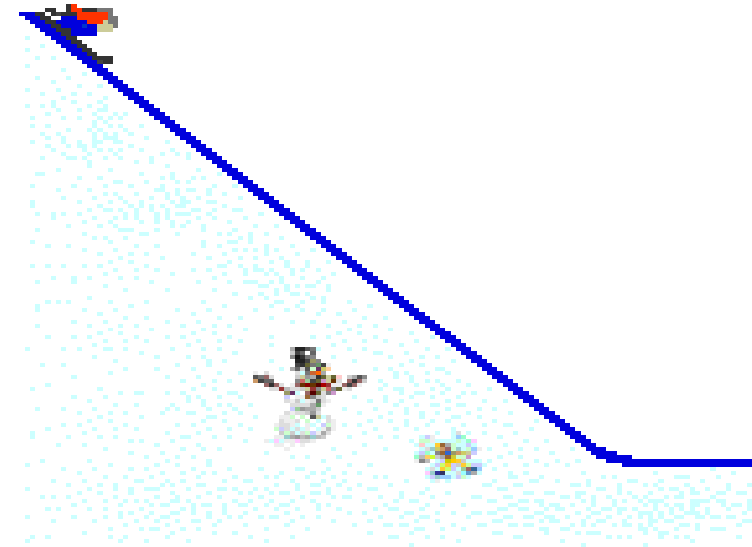


What is Kinetic Energy?

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



Height = 72.0 m



Height = 52.0 m