

# Intro to Energy

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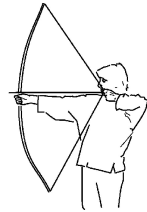
## Types of Energy

- ▶ **Mechanical Energy**
  - **Kinetic Energy**
    - Thermal (or heat) energy (KE)
    - Electrical Energy (KE)
    - Electromagnetic Energy (light) (KE)
    - Sound Energy (KE)
  - **Potential Energy**
    - Chemical Energy (PE)
  - **Both KE & PE**
    - Electrochemical Energy (battery) (KE/PE)
    - Nuclear Energy (PE/KE)

## Energy

- ▶ **Energy** is the property of an object or system that enables it to do work.
  - Energy measured in Joules (J) → (just like work...)
- ▶ Mechanical Energy is...
  - The ability to do work.
  - Evident when one form of energy changes to another form.
  - The energy due to the position *and/or* the movement of something.
  - The sum of the potential and kinetic energy.

## Mechanical Energy



In each of these examples, energy was given by someone/something to be stored and later used.

## Total Mechanical Energy (TME)

- ▶ The Total Mechanical Energy can result in
  - Work being done.
  - Motion.
  - Energy stored due to position.