Vocabulary: Potential Energy on Shelves

Vocabulary

- Gravitational potential energy – *potential energy* that depends on an object's position within a gravitational field such as that exerted by Earth.
  - Gravitational potential energy is represented by several symbols: *GPE*, *PE*, or *U*.
  - On Earth, an object's gravitational potential energy depends on the object's *weight* and height above Earth's surface.
  - The formula for gravitational potential energy is $GPE = wh$ or $GPE = mgh$.
- Kinetic energy – the energy of motion.
  - Kinetic energy is represented by the symbol *KE* or simply *K*.
  - The formula for kinetic energy is $KE = mv^2 \div 2$.
- Potential energy – the energy an object has because of its position or shape.
  - Potential energy that is dependent on an object's position above earth is known as gravitational potential energy.
  - Potential energy that is dependent on an object's shape (such as a stretched rubber band) is known as *elastic potential energy*.
- Weight – a measure of the gravitational force exerted on a mass.
  - Weight is represented by the symbol *w*.
  - The formula for weight is $w = mg$.
- Work – the product of a force being applied on an object over a distance.
  - The formula for work is $W = Fd$.