**Vocabulary:** **Energy of a Pendulum**



**Vocabulary**

* Conservation of energy – the principle that the total energy in a closed system remains constant.
* 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.*



**Pendulum**

* Kinetic energy – energy of motion.
	+ Kinetic energy is represented by the symbol *KE* or simply *K*.
	+ The formula for kinetic energy is *KE* = *mv*2 ÷ 2.
* Pendulum – a weight that can swing freely.
* 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*.
* Velocity – the speed and direction of a moving object.
	+ The velocity of an object can be described by a vector.