

The Pendulum Demonstration

8-15

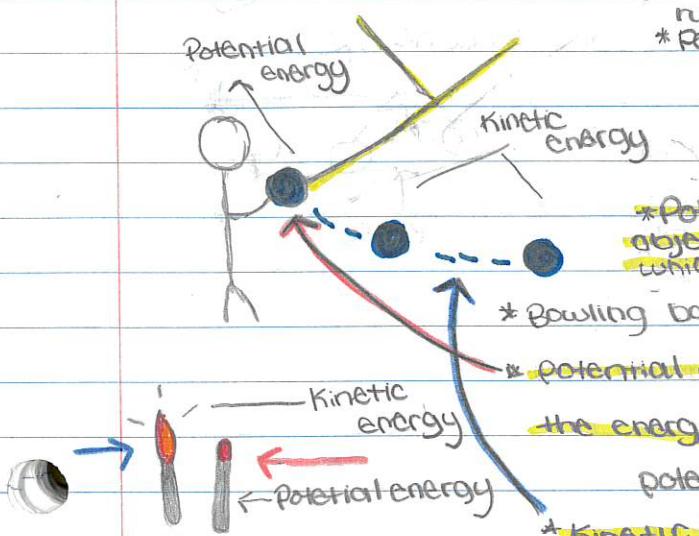
LT: I can identify /describe kinetic and potential energy and the transformation between the two. and that energy is conserved in the transformation.

The amount of GPE is stored in the stretched rubber band

* Pendulum has KE while moving

(GPE) gravitational potential energy

potential energy



* Potential energy is stored energy an object has due to its position or energy which is stored in chemical bonds

* Bowling ball doesn't go up as high as it was

* Potential energy is stored energy

the energy stored to match is chemical potential energy

* Kinetic is the energy a moving object

has because of its motion

* The pendulum has KE while moving

Kinetic energy

GPE is transformed into KE

-F

pendulum has KE while moving

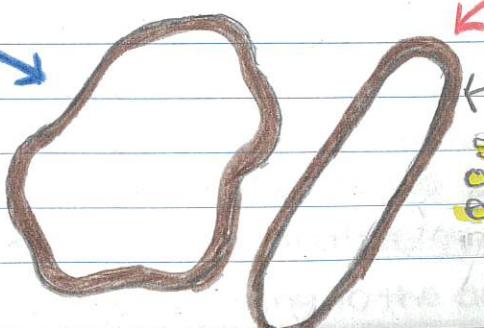
* chemical potential energy (stored in matches)

* elastic potential energy (stored in rubber band)

* energy stored in the pendulum has depends on the amount of GPE exists in the system

* GPE is transformed into KE

* energy stored in the pendulum is GPE



EPE = energy stored in the stretched rubber band or compressed gas in elastic potential energy

Conserved energy:

- * mechanical = potential + kinetic energy
- * friction and air resistance cause some of the mechanical energy to change (transform) into thermal energy (which is also kinetic)

* The bike is creating wind resistance which is creating thermal energy

