Name_____ Date_____

Energy in One Form or Another

ENERGY CONVERSION

We have discussed most of the following types of energy:

Type of Energy	Abbreviation
A. Kinetic Energy	KE
B. Gravitational Potential Energy	GPE
C. Chemical Potential Energy	CPE
D. Elastic Potential Energy	ELPE
E. Potential Difference or Voltage	V
F. Magnetic Related Energy	MRE
G. Electromagnetic Radiation (Light)	ER
H. Heat or Thermal Energy	H

There are several energy conversion devices on the demonstration table. Your job is to analyze each, and write down all of the energy conversions involved in the operation of the device. Use the abbreviations from above and follow the example (1) below.

1. Mass oscillating on a spring
   ELPE --> KE --> GPE --> KE --> ELPE --> repeat until all the motion is turned into heat (H) and the oscillation stops.

2. Pendulum

3. Solar Cell

4. Steam Wheel

5. Radiometer

6. Magnet moving through a coil of wire

7. Human Being

8. Rub your hands together about 40 times).

9. Electric Clock

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10. Wind-up toys

11. Rotating Flywheel

12. Incandescent Light Bulb

13. Toy Shuttle

14. Super ball : Throw the ball up and describe the conversions from after the ball is released.

15. Sterling Heat Engine on a coffee cup. (Ice Bucket)

16. Bounce No Bounce balls

HOMEWORK: SOME MORE CHALLENGING ENERGY CONVERTERS:

1. Try to write down the overall energy conversion involved in the operation of the following devices which you come in contact with every day; i.e., what type(s) of energy is put in and what comes out?

ENERGY IN ENERGY OUT

A. Television

B. Toilet

C. Clothes Dryer

D. Jet Taking off

2. List the energy conversions that take place in an automobile engine.

3. What happened to the kinetic energy of a moving automobile that was moving and stopped? What happens to the energy in sound waves from a radio when the sound is turned off? What happened to the kinetic energy of a pendulum bob as it slowed down and came to rest?