

# Energy Conversion Notes

**SPI 0607.10.3** Recognize that energy can be transformed from one type to another.

A change from one form of energy into another is called an energy conversion.

What type of energy do you have when you are jumping on a trampoline? (Discuss with your neighbor.)

List the different types and forms of energy involved in jumping on a trampoline:

Jump - Kinetic, chemical, sound, thermal, electrical

In the air - Kinetic, potential, thermal

Trampoline stretching - Kinetic, potential, thermal, electrical, sound

Roller Coasters...

At what point does a roller coaster have the greatest potential energy? Top of the first hill





At what point does a roller coaster have the greatest kinetic energy? Bottom of the first hill

Energy Conversions: Chemical Energy

Chemical energy of food is converted into kinetic energy when you are active and thermal energy to maintain body temperature.

With photosynthesis, light energy (from the sun) is converted into chemical energy (sugars inside the plant).

# Energy Conversions: Electrical Energy

Alarm Clock 	Electrical Energy →	Light Energy, Sound Energy, Kinetic Energy
Battery 	Chemical Energy →	Electrical Energy and Thermal Energy
Lightbulb 	Electrical Energy →	Light Energy and Thermal Energy
Blender 	Electrical Energy →	Kinetic Energy and Sound Energy

# Energy & Machines

Give an example of a machine that converts energy: Bicycle.

1. Chemical energy in your body is converted into kinetic energy when your muscles contract and relax.
2. Your legs transfer this kinetic energy to the pedals, pushing them around in a circle.
3. The pedals transfer kinetic energy to the gear wheel, which transfers kinetic energy to the chain.
4. The chain moves and transfers energy to the back wheel, which gets you moving!

# Other Machines that Convert Energy...Examples

Electric motor	Windmill	Doorbell
Gas heater	Telephone	Microphone
Toaster	Dishwasher	Clock
Lawn mower		

