

What is Energy?

Key Concepts:

- What is energy?
- How do we describe energy?

Energy is the ability to do _____. The word ability means that work _____ not be done right now, but rather there is a condition set up that work _____ get done. In physics, work is defined as a _____ pushing a mass a _____. So energy is to have a condition in which there _____ be a force acting on a mass to cause it to move.

What are some things you would need to get a mass to move?

Energy is _____ something we can _____, touch, taste or feel, rather we observe the _____ it has on mass. Energy is broken down into two categories:

_____ Energy: _____ energy. We see the effects of this energy causing matter to _____

_____ energy: _____ energy. We know there is the _____ to create movement, but the mass is not actually moving.

There are many different _____ of kinetic and potential energies:

Kinetic Energy	Potential Energy
_____, a mass moving	_____, a mass lifted up
_____, Moving particles(heat)	Change of _____, solid to liquid, etc.
	Nuclear energy

Light Energy	
	Chemical Energy

Energy is measured in _____, J. Some common measures of energy:

Falling snowflake	650 nJ
Falling Raindrop	850 uJ
Apple in digestive track	270 kJ
Car driving at highway speed	390 kJ
Television running for 4 hours	1.4 MJ
Nuclear Bomb	63TJ

How can you tell if something you observe is energy?

Since energy is something you cannot see directly, we look for some _____ that there is energy present. For example, if an object is _____, then there is energy involved causing it to move.

For other cases, like a rock perched over a cliff, it is harder to see the effect of energy. In the case of the rock, it is _____ moving, but it still has energy, because it _____ still move. This is easier seen in an example of food. We get energy from _____, and we consider _____ as energy, but it is _____ moving. In both cases of food and the rock, we are looking at _____ energy. It is a _____ energy.