

Types of Energy, Law of Conservation and Energy Transformations

7. P.2.1 _____ how kinetic and potential energy contribute to the mechanical energy of an object.

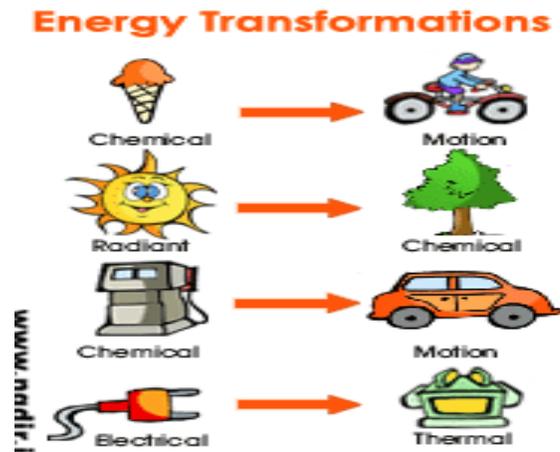
7. P.2.2 _____ how energy can be transformed from one form to another (specifically potential energy and kinetic energy) using a model or a diagram of a moving object.

What is Energy?

_____ is the ability to do _____. Energy is anything that can make matter _____ or _____.

Work is the use of _____ to move an object. The amount of work done depends on the amount of _____ exerted and the _____ the object traveled.

Law of Conservation of Energy



The Law of conservation of _____ states that energy _____ be _____ nor _____. Instead, it must be _____ from one type to another.

Types of energy

_____ Energy = _____ energy

It is the energy that an object has because of its _____ or condition. There are several types of Potential energy

1. Gravitational Potential- Energy due to your height above ground. This Dog has _____ Potential Energy because of his position above ground.

Elastic Potential: _____ energy due _____ or _____ of an _____ object.

_____ Energy: Energy an object has due to its _____.

The amount of kinetic energy an object has is influenced by its _____ and _____.

As long as it's _____ it has Kinetic Energy.

_____ + _____ = Mechanical Energy.

Mechanical Energy due to an object's _____ (kinetic) or _____ (potential). The bowling ball has _____ energy.

When the ball strikes the pins, _____ energy is transferred to the pins and causes them to _____!

Examples of Mechanical Energy: A rocket Launching, a swimmer swimming and A skier skiing.

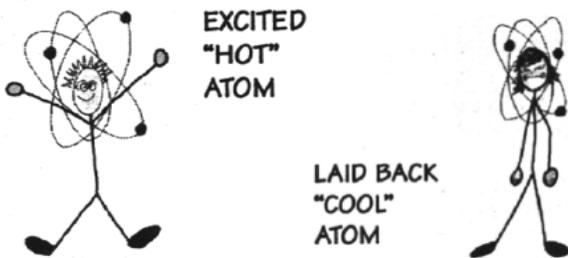
Electromagnetic Energy: _____ energy includes energy from gamma rays, X Rays, _____ rays, _____ light, _____ rays, _____ and _____ bands.

Electrical Energy: Energy caused by the movement of _____. Easily transported through _____ lines and converted into _____ forms of energy.

Chemical Energy: A form of _____ Energy that is available for release from chemical _____. The chemical _____ in a matchstick store energy that is _____ into _____ (Heat) energy when the match is struck.

Examples of Chemical Energy, coal, any form of food, batteries.

Thermal Energy= _____ energy. The heat energy of an object determines how active its atoms are.



A _____ object is one whose atoms and molecules are excited and show rapid _____.

A _____ object's molecules and atoms will show _____ movement.

QUIZ TIME!

What type of energy cooks food in a microwave oven? _____

What type of energy is the spinning plate inside of a microwave oven? _____

Electrical energy is transported to your house through power lines. When you plug an electric fan to a power outlet, electrical energy is transformed into what type of energy?

What energy transformation occurs when an electric lamp is turned on? _____

Energy is converted to _____.

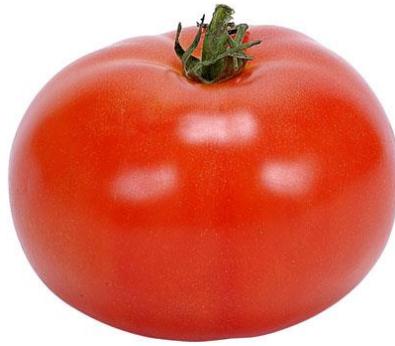
What types of energy are shown below?



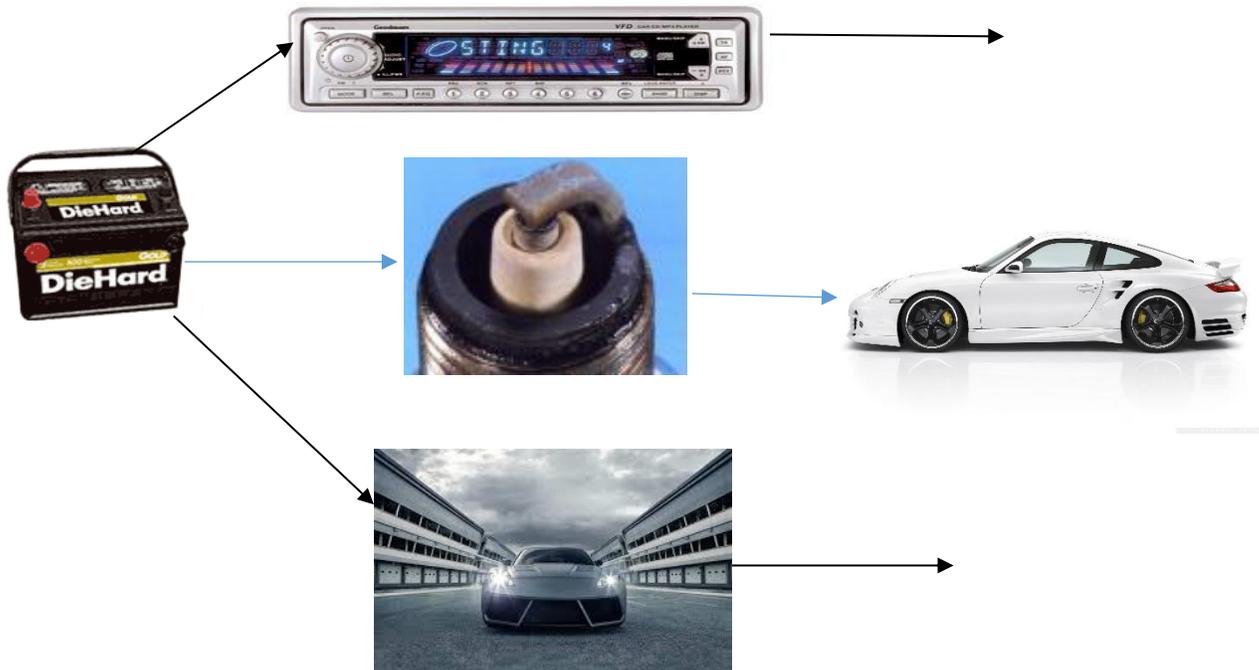
(Don't forget friction)

What type of energy does the tree represent _____.

What types of energy are shown below?



Draw a flow map showing the flow of energy transformations in a car from starting vehicle to driving. You should have 5 different types of energy.



Study Jams- Energy

Watch the video and write down 3 things that it helped you to understand more clearly.
