Energy Vocabulary

Unit 2.1

Advanced Version

You need 11 Index Cards

Chastain 2017

Learning Target

- Students will explain the relationship between potential and kinetic energy.

Introduction to Energy

- https://www.youtube.com/watch?v=CW0_S5YpYVo

Energy

- The ability to do work or cause change. (Work – the movement of an object through a distance).

What is energy really?

- https://www.youtube.com/watch?v=jCrOtF7T4HE

The Law of Conservation of Energy

- In physics, the **law of conservation of energy** states that the energy can not be created or destroyed, only transformed.

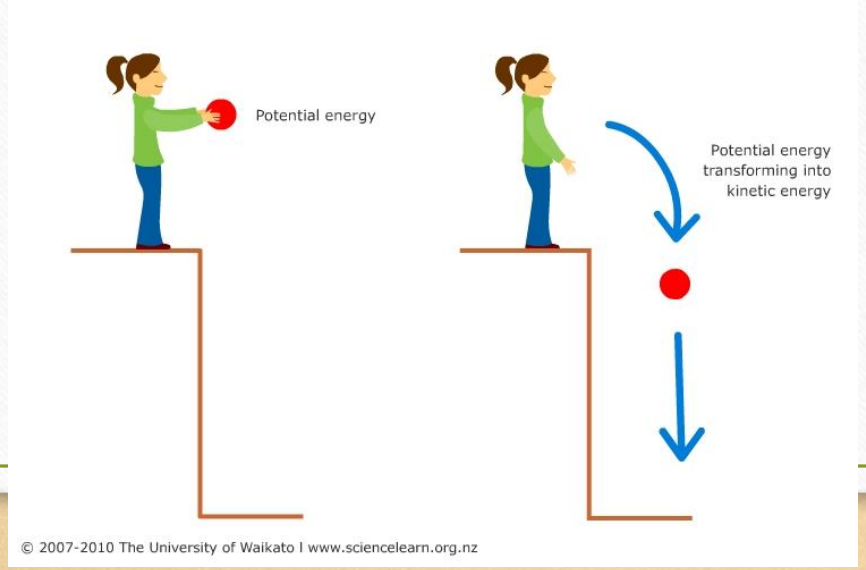
Law of Conservation of Energy (Roller Coaster Demo)

- https://www.youtube.com/watch?v=LrRdKmjhOgw

Kinetic Energy

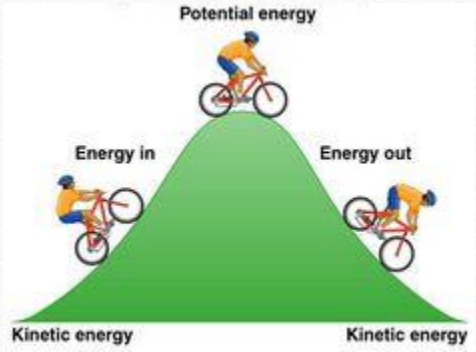
- Energy resulting from the motion of an object.

- The amount of kinetic energy an object has is determined by the mass and speed (velocity) of the object.



Potential Energy

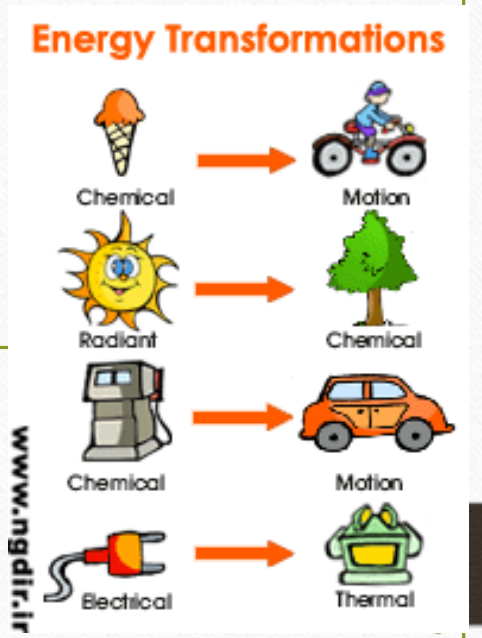
- This is stored energy. An object has potential energy because of its position or composition.
- Ex: A bike on top of a hill.



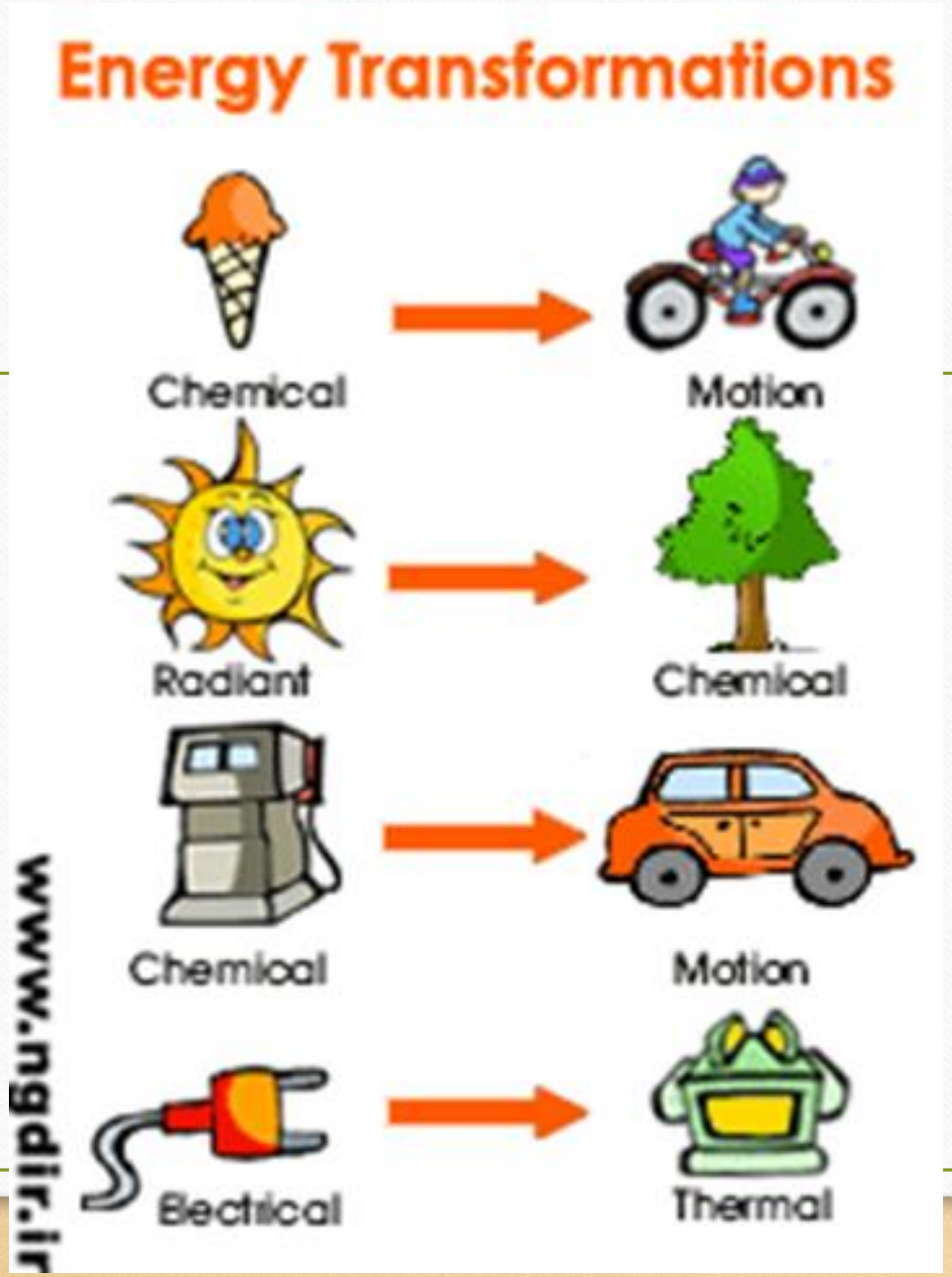
Gravitational Potential Energy

- Energy an object possesses because of its position in a gravitational field.

Energy Transformation



- Energy can be transformed (changed) from one form to another.
- EX: Flipping a switch to turn on a light.


Energy Transformations
Chemical
Motion
Radiant
Chemical
Chemical
Motion
Electrical
Thermal
www.ngdir.ir

How does energy convert?

- https://www.youtube.com/watch?v=ftj23FRS2LI

Speed

- A measurement of how fast an object moves relative to a reference point.
- It does not have a direction.
- Example – The racecar was driving at 160mph around the track.

Velocity

- The speed of an object in a certain direction.
- Example – The car was driving 160 mph northeast around the track.

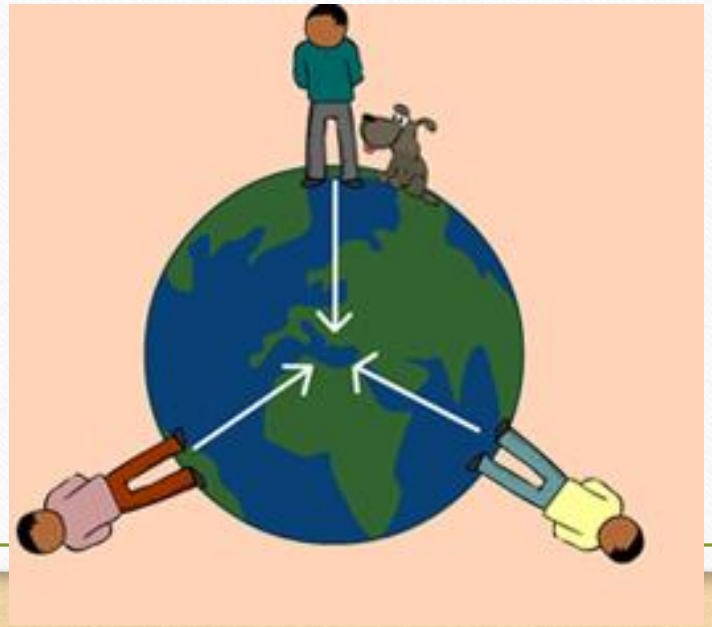
Mass

- A measure of how much matter is in an object.

Gravity

- A force which tries to pull two objects toward each other.

- Anything which has mass also has a gravitational pull. The more massive an object is, the stronger its gravitational pull is.



Joule

- The basic unit of electrical energy, and is equal to the work completed when one ampere of current is passed through a resistance of one ohm for one second.
- An example of **joule** is what a scientist would use to measure energy.

Discovery Of Energy ~ James Prescott Joule & William Thomson

- https://www.youtube.com/watch?v=fYbi26CHvew

Quizlet

https://quizlet.com/_3v5ngn