

Pre-AP Biology Notes: Light Energy & Photosynthesis

I. Energy for life processes

a. Definition: The ability to cause matter to move or to change, ability to do work

Examples:

b. Types of energy

i. Potential:

1. _____ energy

2. example: _____

ii. Kinetic (mechanical)

1. energy of _____

2. examples:

iii. examples of energy

1. atomic, wind, solar, heat, chemical, electrical, mechanical (motion)

c. Biochemical pathways

i. Series of reactions in which the _____ of one reaction is the _____ of the next.

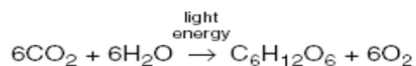
ii. Examples: Photosynthesis & cellular respiration

1. only _____ are capable of photosynthesis

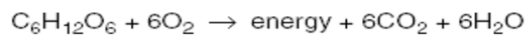
2. both _____ & _____

perform cellular respiration to release energy to do cellular work.

Photosynthesis



Respiration



d. Thermodynamics

i. Definition: the study of energy _____

ii. 1st law of thermodynamics (law of conservation of energy): energy cannot be _____ or _____,

only converted from one form to another

1. example: stored chemical energy in _____ →

stored chemical energy in _____ → mechanical energy to

_____ → heat energy to maintain your

body _____