

What type of energy and matter is being exchanged?

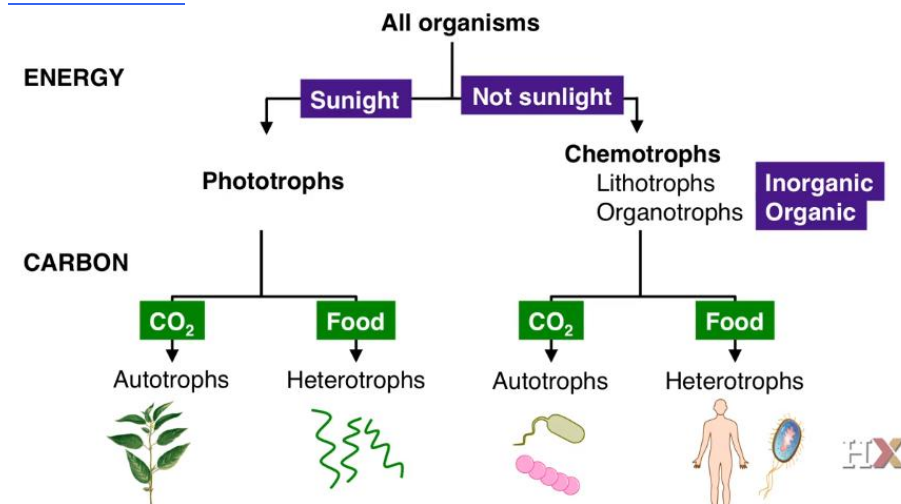
Matter: O₂, Minerals, Organics, CO₂

Energy: { Sunlight, extracted from Complex molecules (food) } : **Potential energy** = Can not be used directly = Must be converted (Break down of complex mol: Catabolism)

*** This energy is used to do work (Movement...) or to build up other molecules (Anabolism)

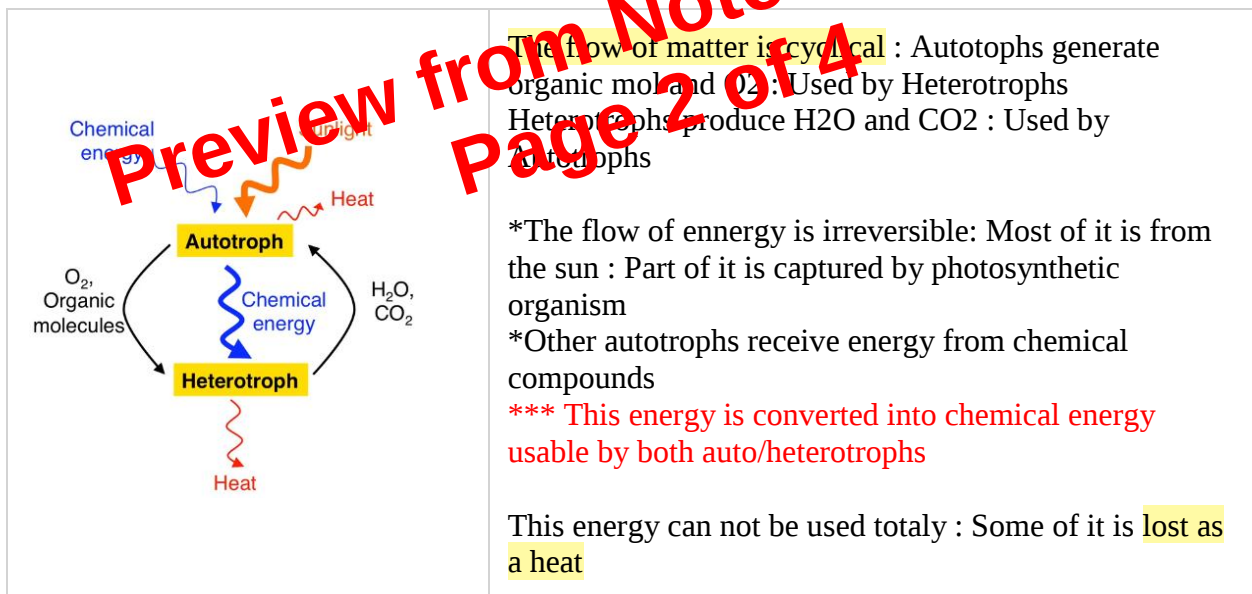
Metabolism = Anabolism + Catabolism

Classification



Energy : Source of energy

Carbon: Source of carbon atoms to build complex mol



What is Energy

Energy : The capacity to do Work

Living organism = Obey the laws of **thermodynamics**

#1st law: The universe contain a constant amount of energy : Energy is not created nor destroyed but it can change form

#2nd law: Energy is transferred the way increases the randomness (**Entropy**) of the univers

Entropy change = Change of various forms of energy into thermal energy