SNS COLLEGE OF TECHNOLOGY

Vazhiamyampalayam,Coimbatore-35

(An Autonomous institution)

Accredited by **NBA-AICTE** and Re-Accredited by **NAAC-UGC with A+ Grade**

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DEPARTMENT OFPHYSICS

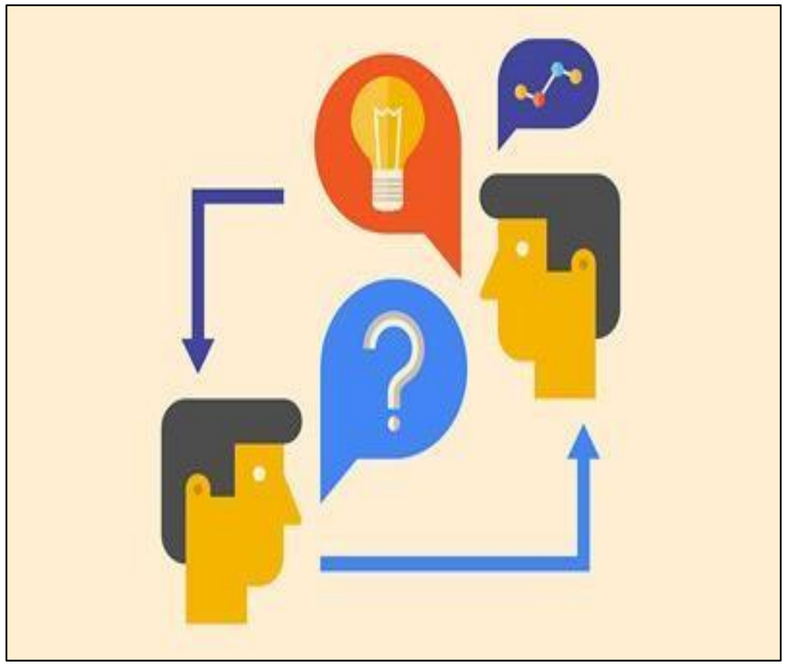
COURSE NAME : 19HST102- ENVIRONMENTAL SCIENCE

I YEAR / II SEMESTER

UNIT : 1. ECO SYSTEM

TOPIC : 2. STRUCTURE & FUNCTION OF AN ECO SYSTEM

BRAINSTORMING WITH RECAP



STRUCTURE /COMPONENTS

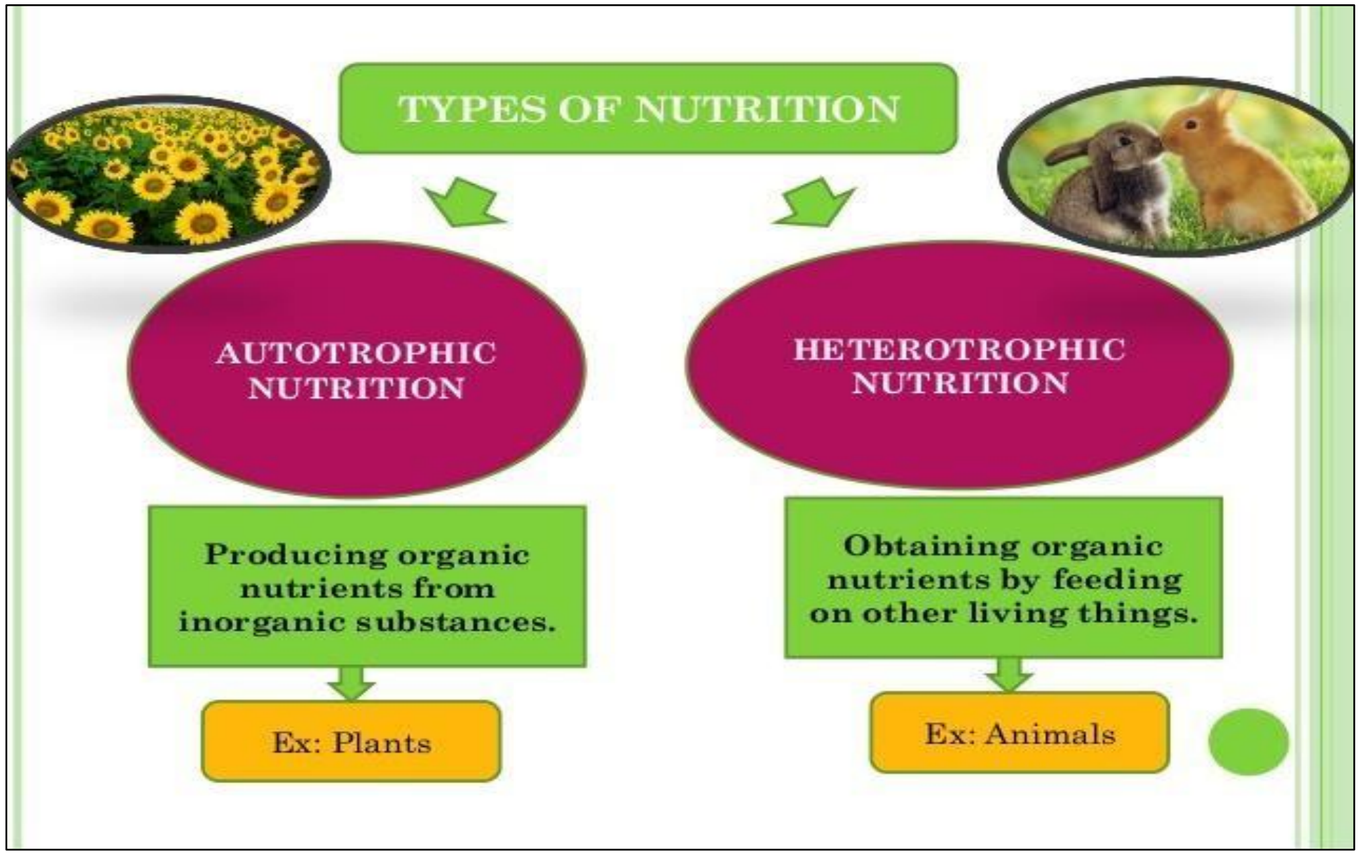
Chemical components

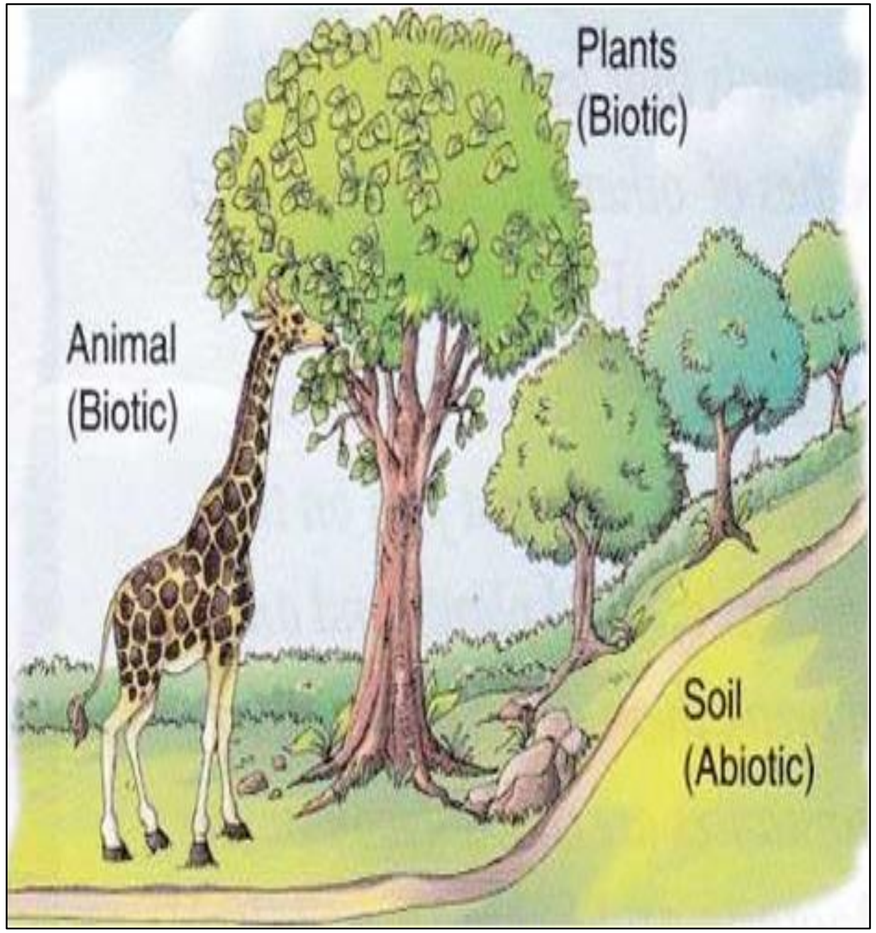
Physical components

1.ABIOTIC/ NON-LIVING COMPONENTS

STRUCTURE /COMPONENTS

BIOTIC/LIVING COMPONENTS





BIOTIC/LIVING COMPONENTS

AUTOTROPHIC COMPONENTS: Producers

HETEROTROPHIC COMPONENTS: Consumers and decomposers

Producers or Autotrophs: The organisms which can prepare their own food

Consumers or Heterotrophs: The organisms which derive their food from other organisms.

i. **Primary consumer or Herbivores: D**epends on plants for their food.

Ex: Deer, Elephant, Cow, etc..

BIOTIC/LIVING COMPONENTS

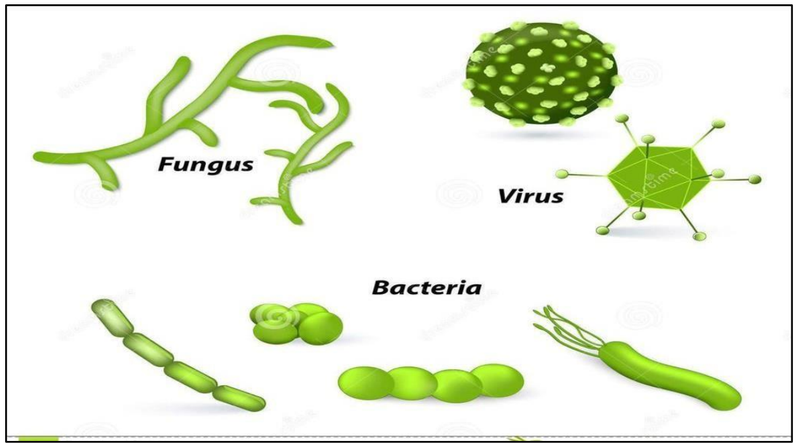
2.Secondary consumers or Carnivores: depends on herbivores for their food.

Ex: Fox, birds, etc..

3.Tertiary consumers or Omnivores: depends on both herbivores and carnivores for their food. Ex: Man, Bear, pig, squirrels, etc..

Decomposers: derive its energy from the dead bodies of other organisms

Ex: Bacteria and fungi



Activity

- What has teeth but cannot bite?

- Ans : Comb

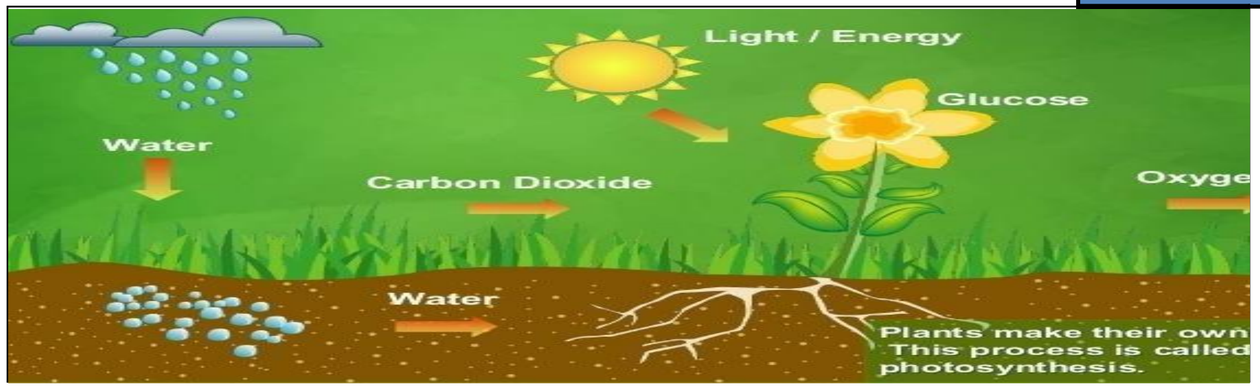
- What Can You Catch but Not Throw?

Ans : Cold!

FUNCTIONS

Transferring energy and nutrients from one organisms to another.

- Primary function (Production of starch)
- Secondary function (distribution of energy as in the form of food)
- Tertiary function (Decomposition of dead matters)



ENERGY FLOW

1. I law:

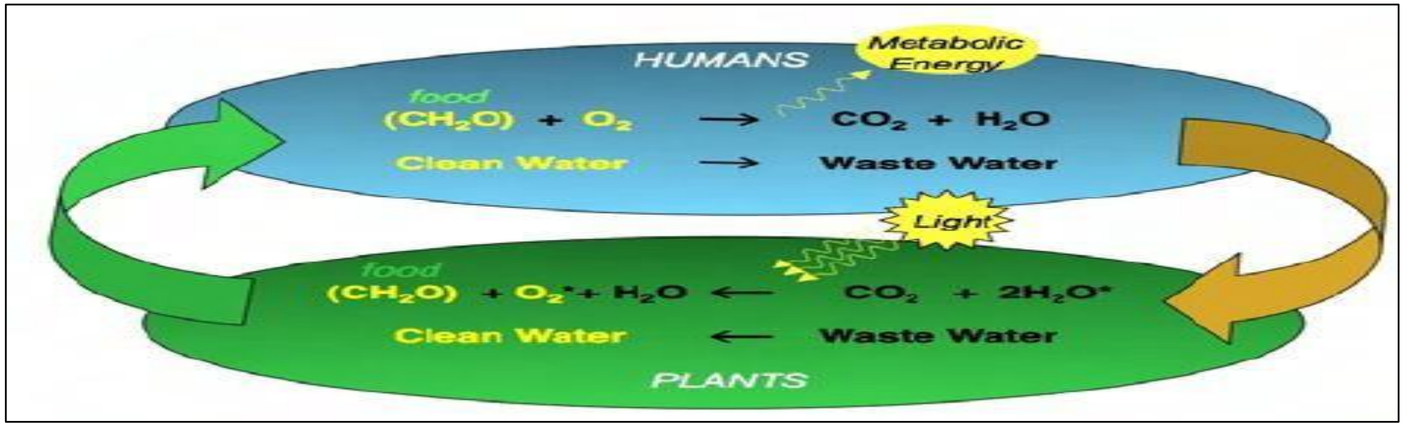
Energy neither be created nor be destroyed but can be converted into one form to another

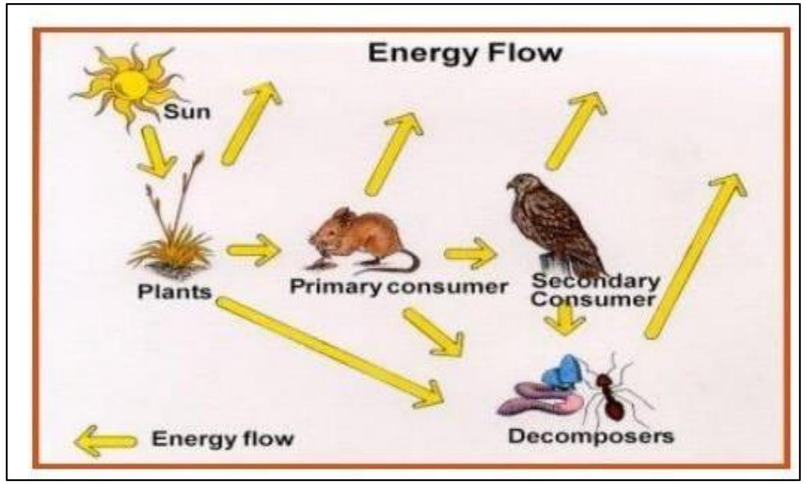
Example: solar energy to chemical energy

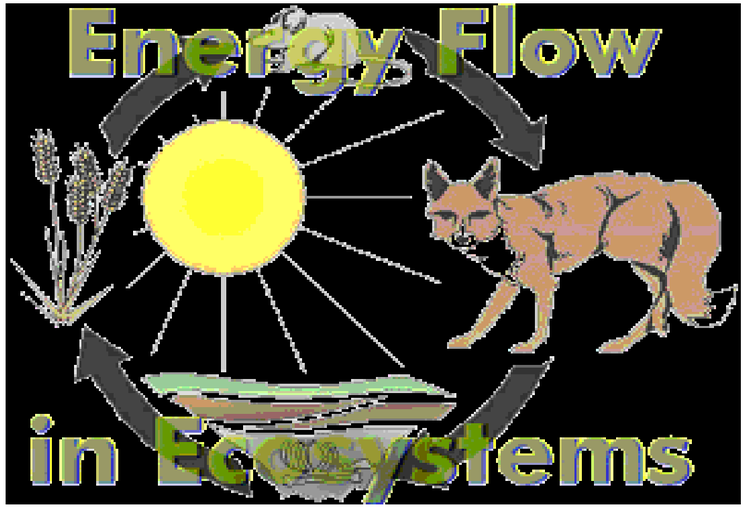
2. II law:

Whenever energy is transferred, there is a loss of energy through the release of heat

Example: Respiration







ASSESSMENT

1. **Draw flow chart for various components an ecosystem.**

2. **Mention the energy flow of an ecosystem.**

SUMMARY

REFERENCES

1. Dr. A.Ravikrishnan, Environmental science & Engineering" Srikrishna hitech Pub. Co. Ltd,2013.
2. G.Tayer Miller :Environmental Science", Cenage Learning India Pvt Ltd, 2011.
3. Benny joseph, "Environmental science & engineering" Tata McGraw-Hill.Pub.Co.Ltd. New Delhi.2009.