



SNS COLLEGE OF TECHNOLOGY

Vazhiampalayam, Coimbatore-35

(An Autonomous institution)

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

Approved by **AICTE**, New Delhi & Affiliated to **Anna University**, Chennai



DEPARTMENT OF PHYSICS

**COURSE NAME : 23CHT103 ENVIRONMENTAL SCIENCE
AND SUSTAINABILITY**

I YEAR / I SEMESTER

UNIT : 1. ECO SYSTEM



BRAINSTORMING WITH RECAP

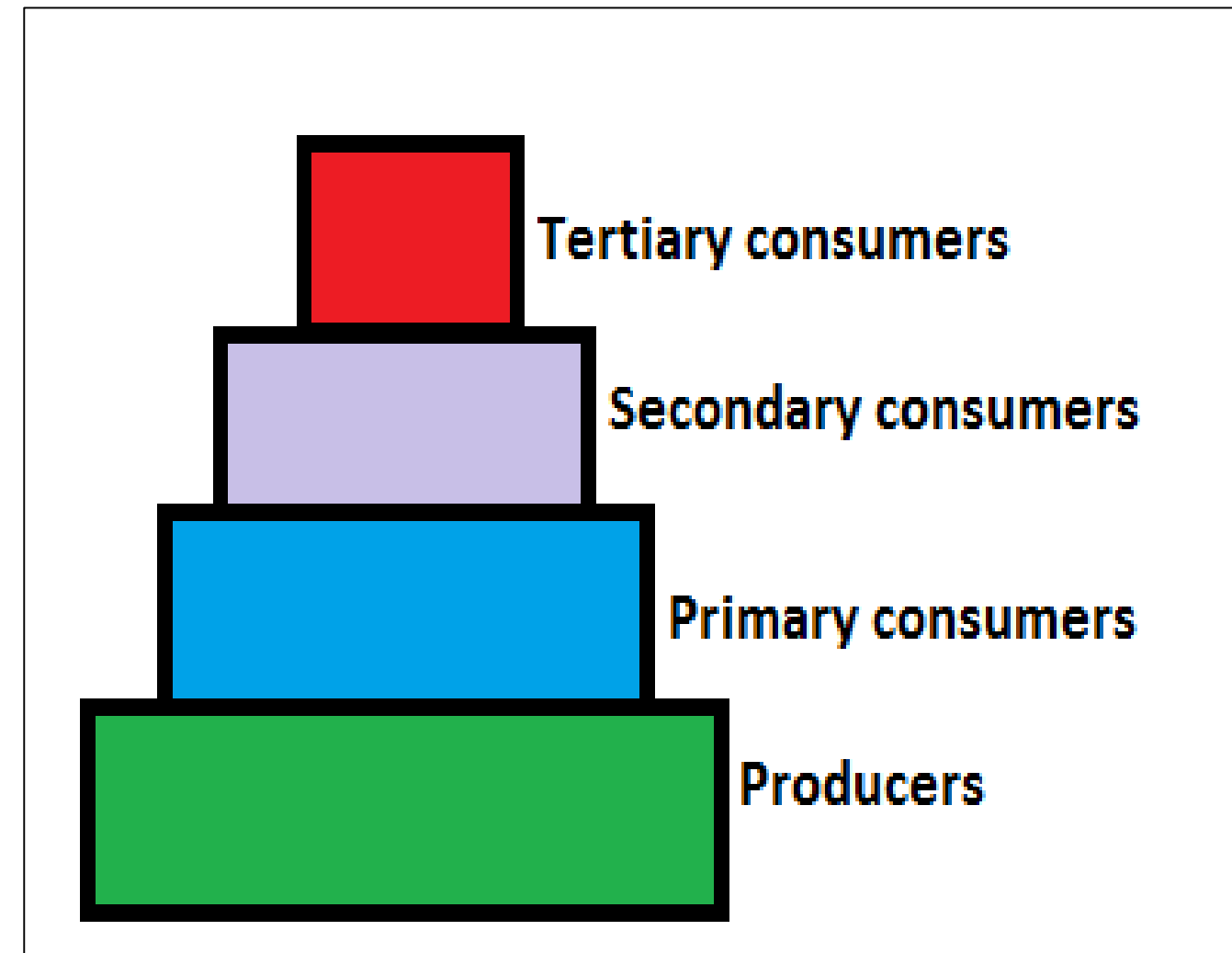




INTRODUCTION TO ECOLOGICAL PYRAMIDS

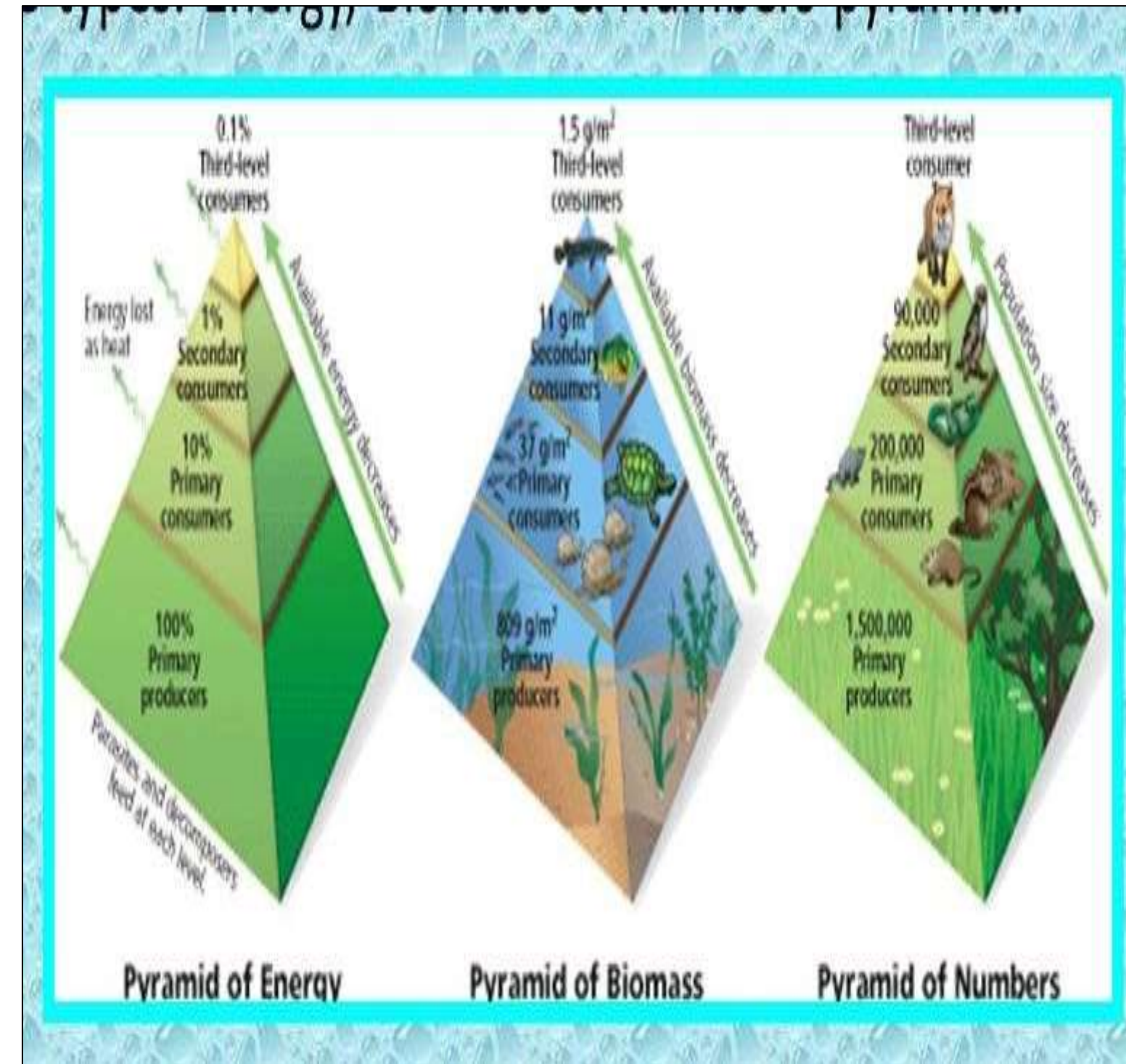
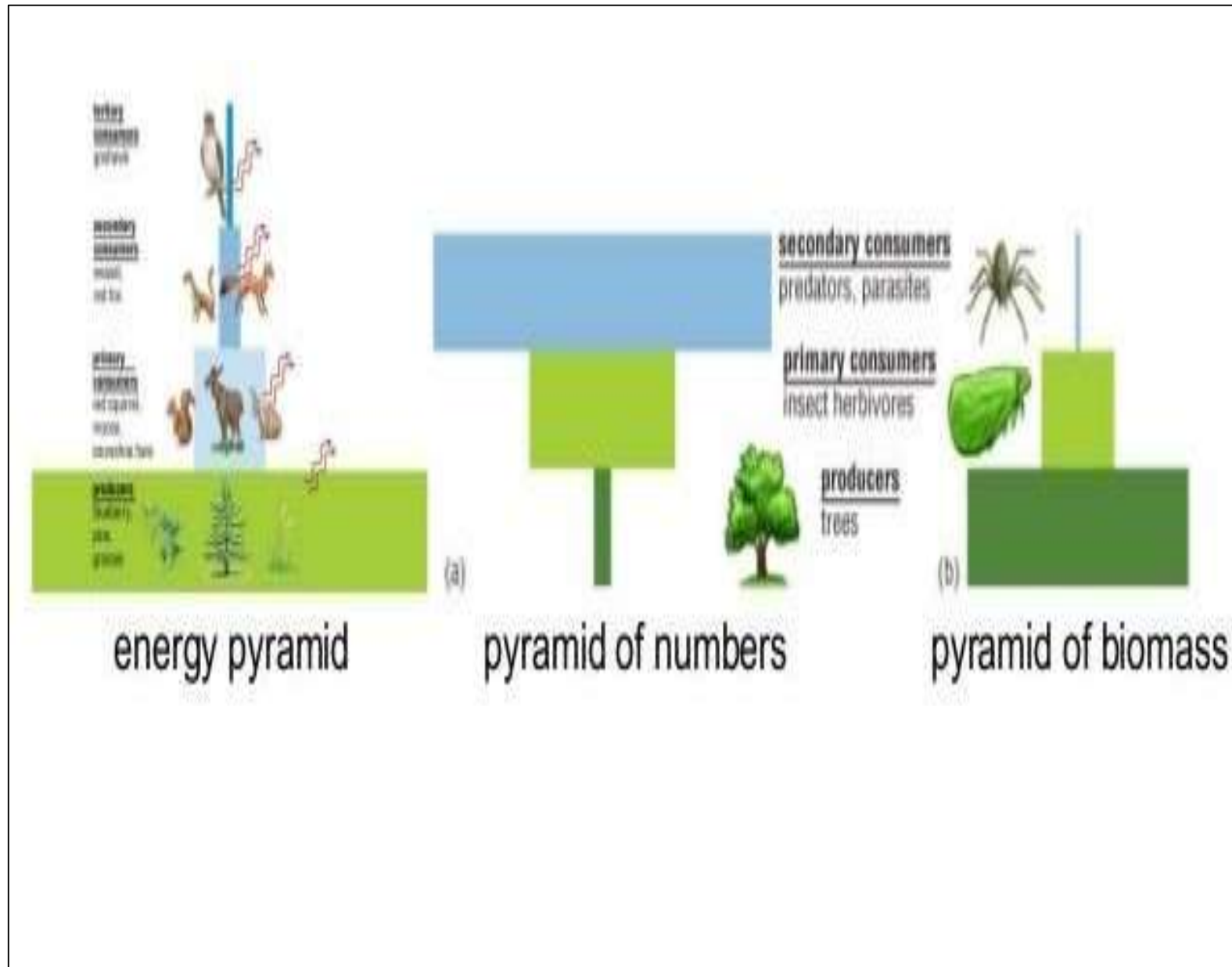


The graphical representation of structure and function of tropical level of an ecosystem





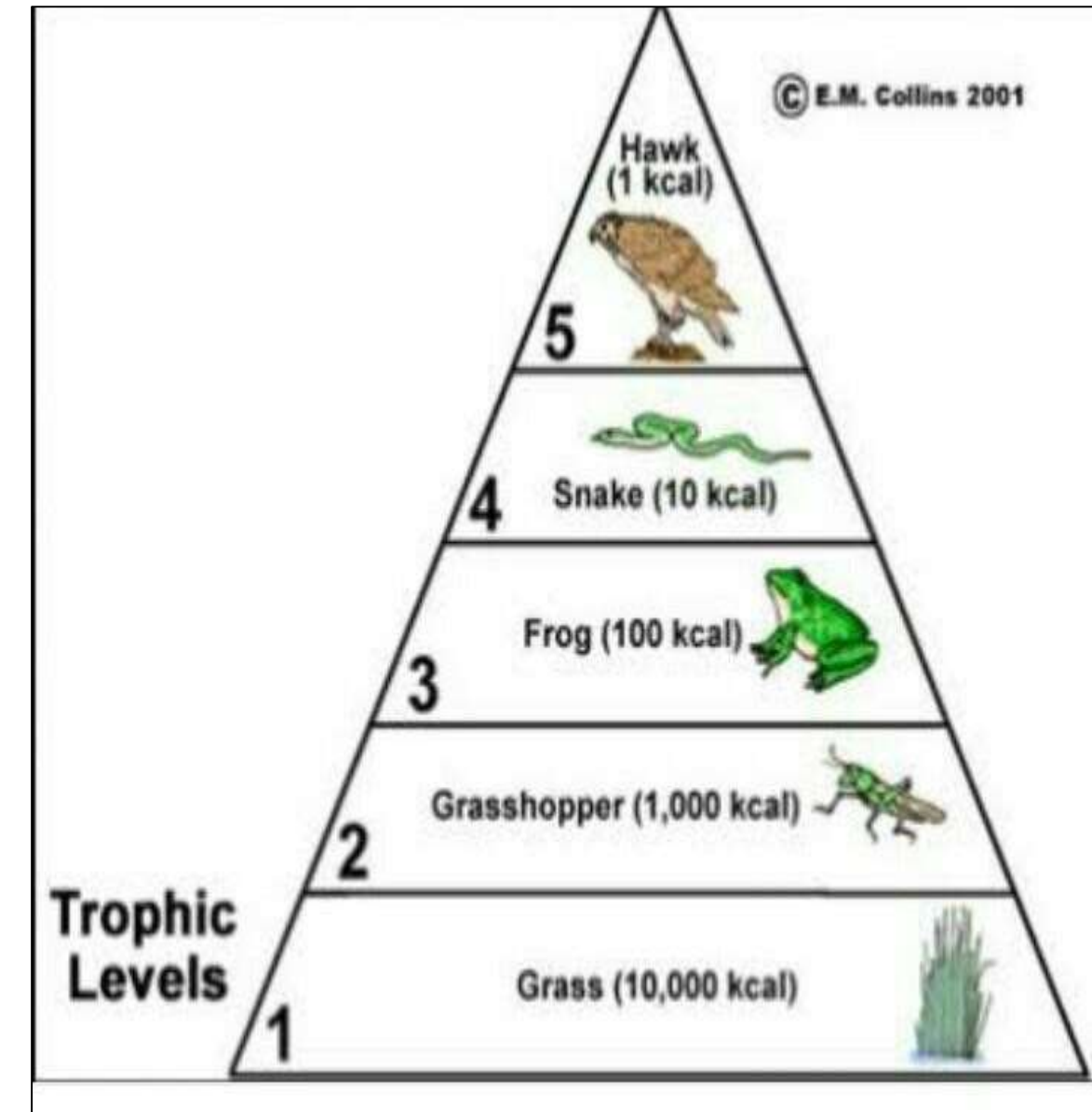
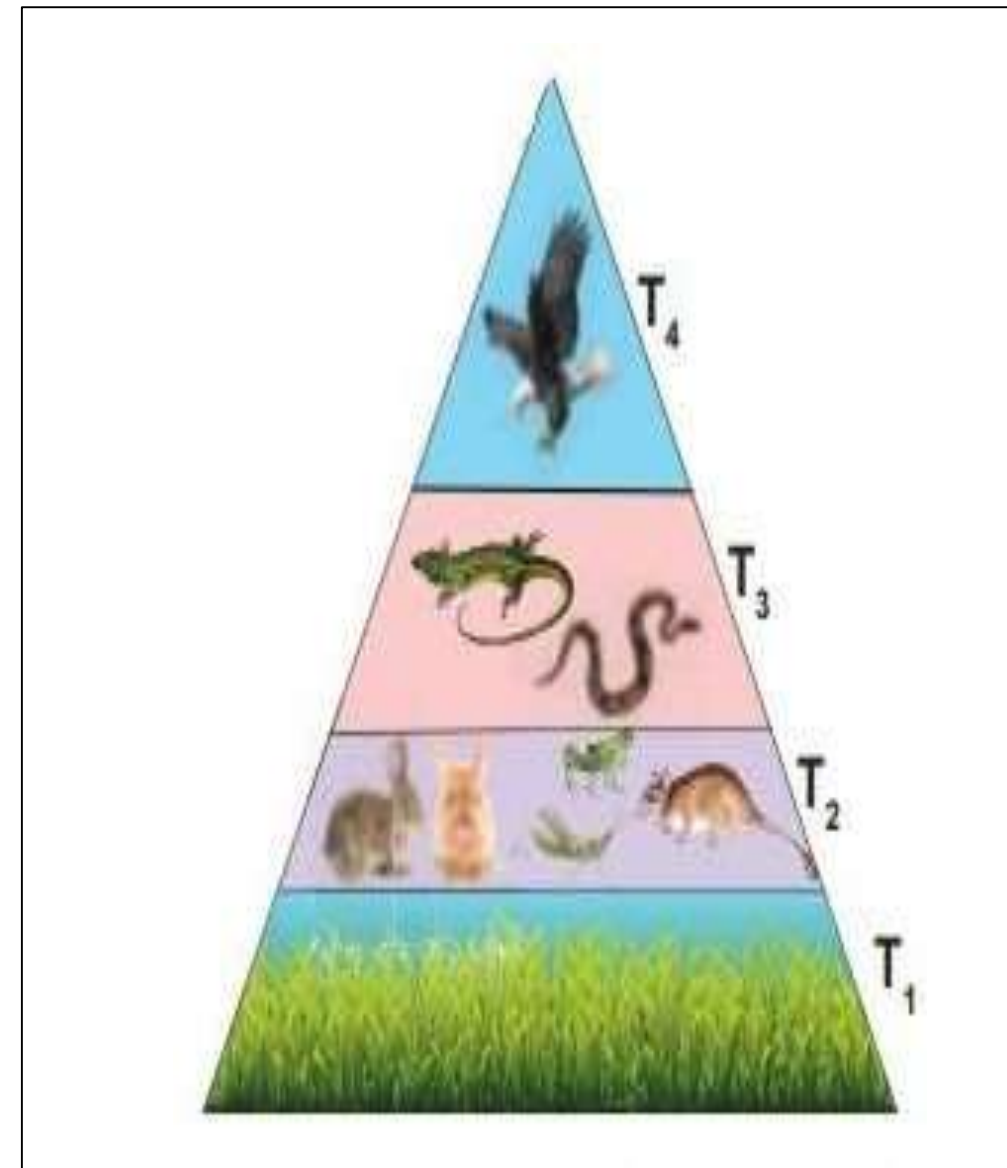
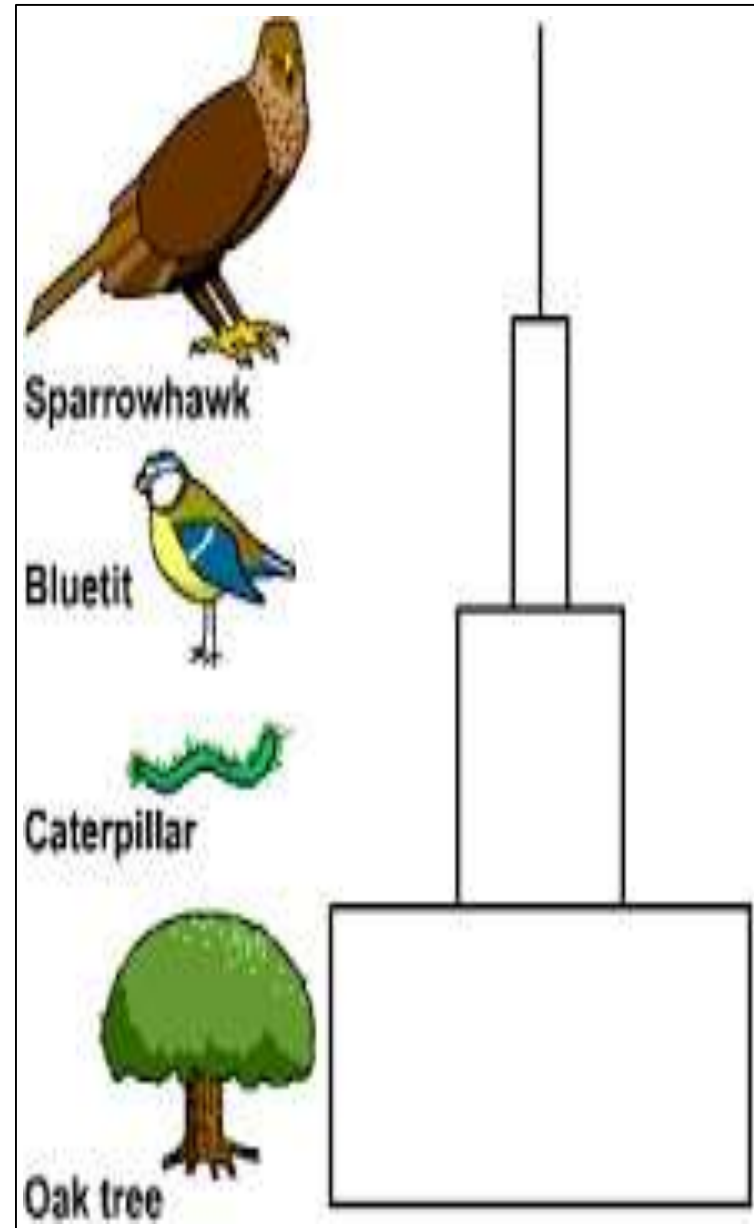
TYPES OF ECOLOGICAL PYRAMIDS





1. PYRAMID OF NUMBER

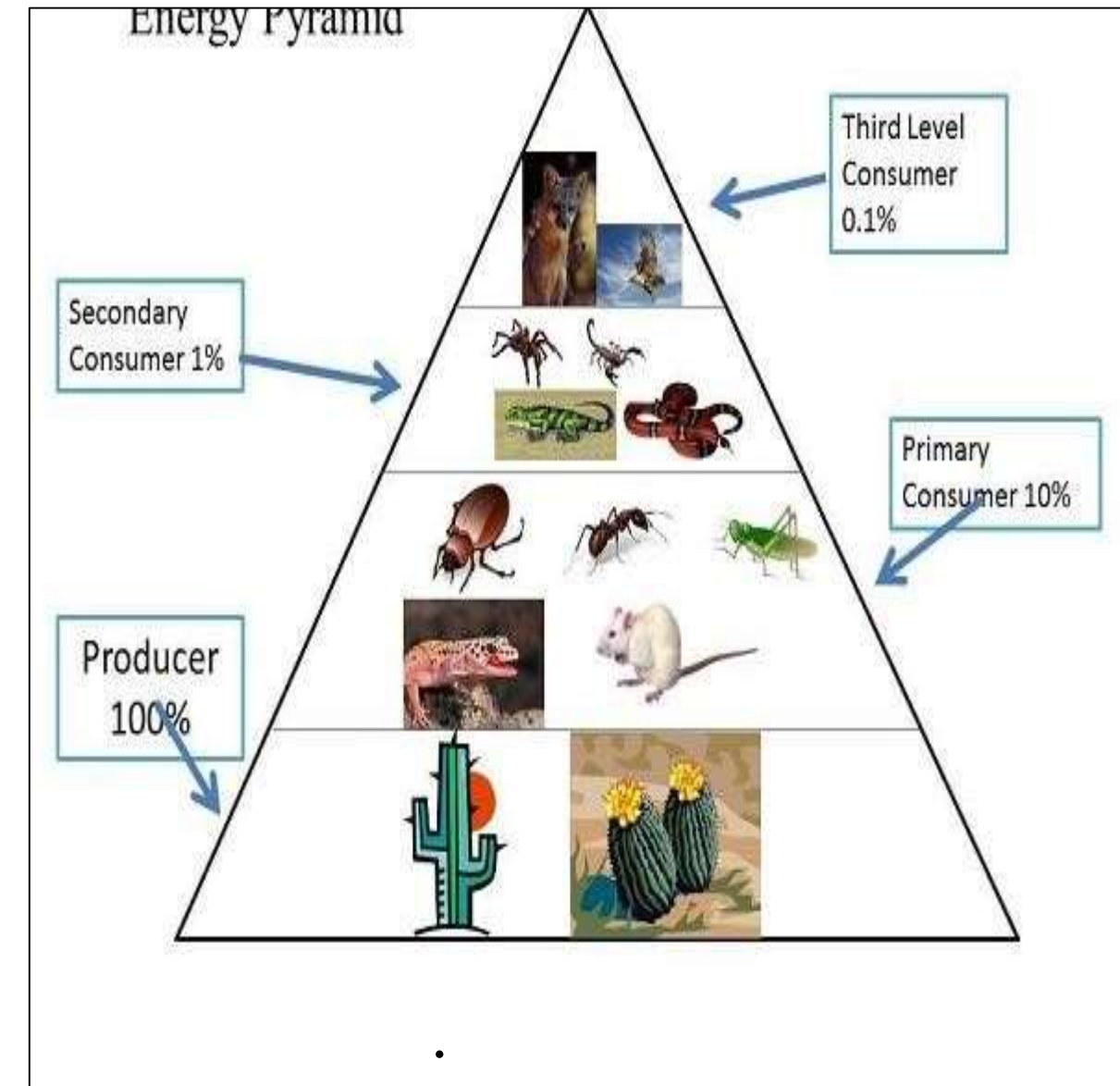
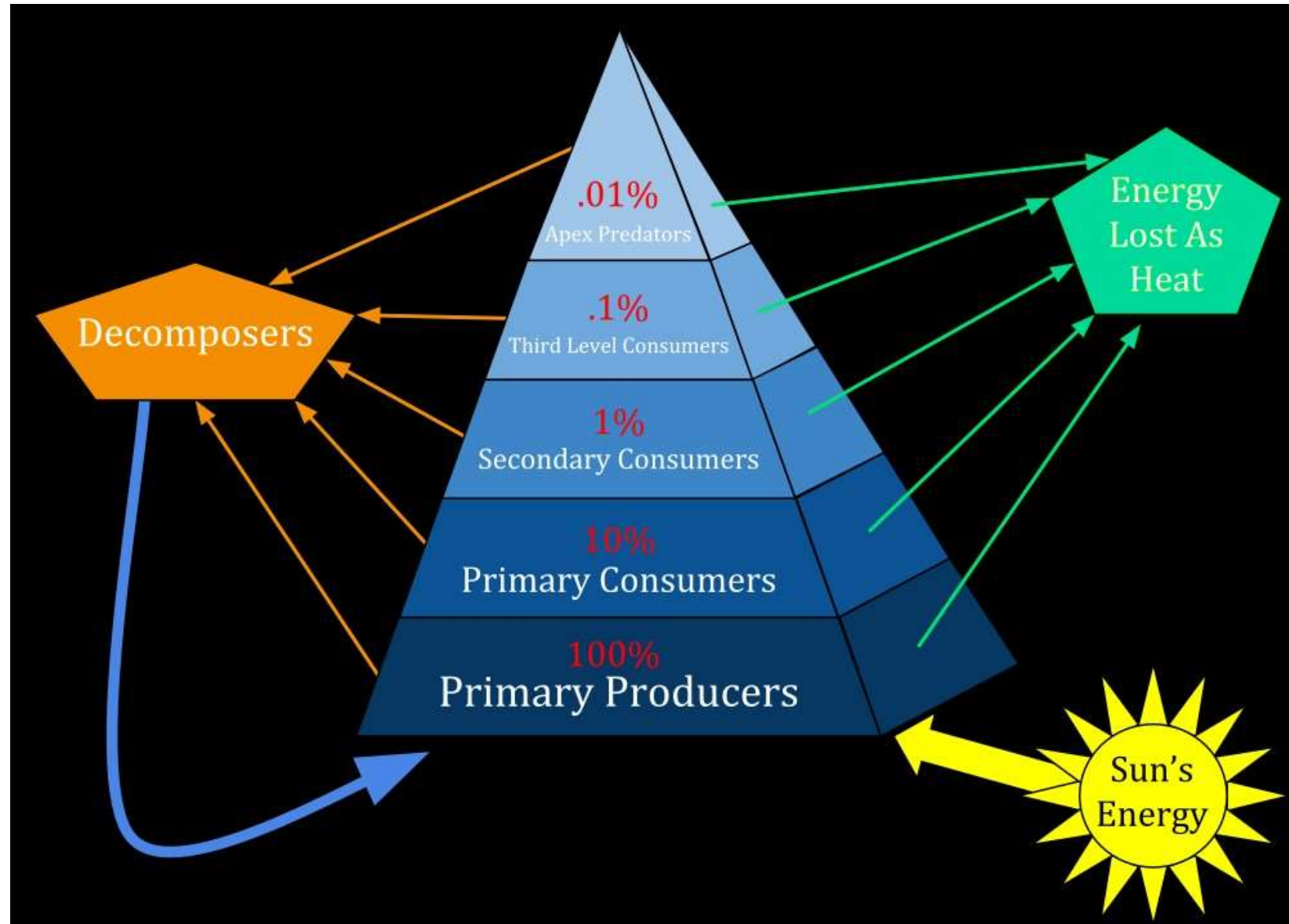
It represents the number of individual organisms present in the each trophic levels





2. PYRAMIDS OF ENERGY

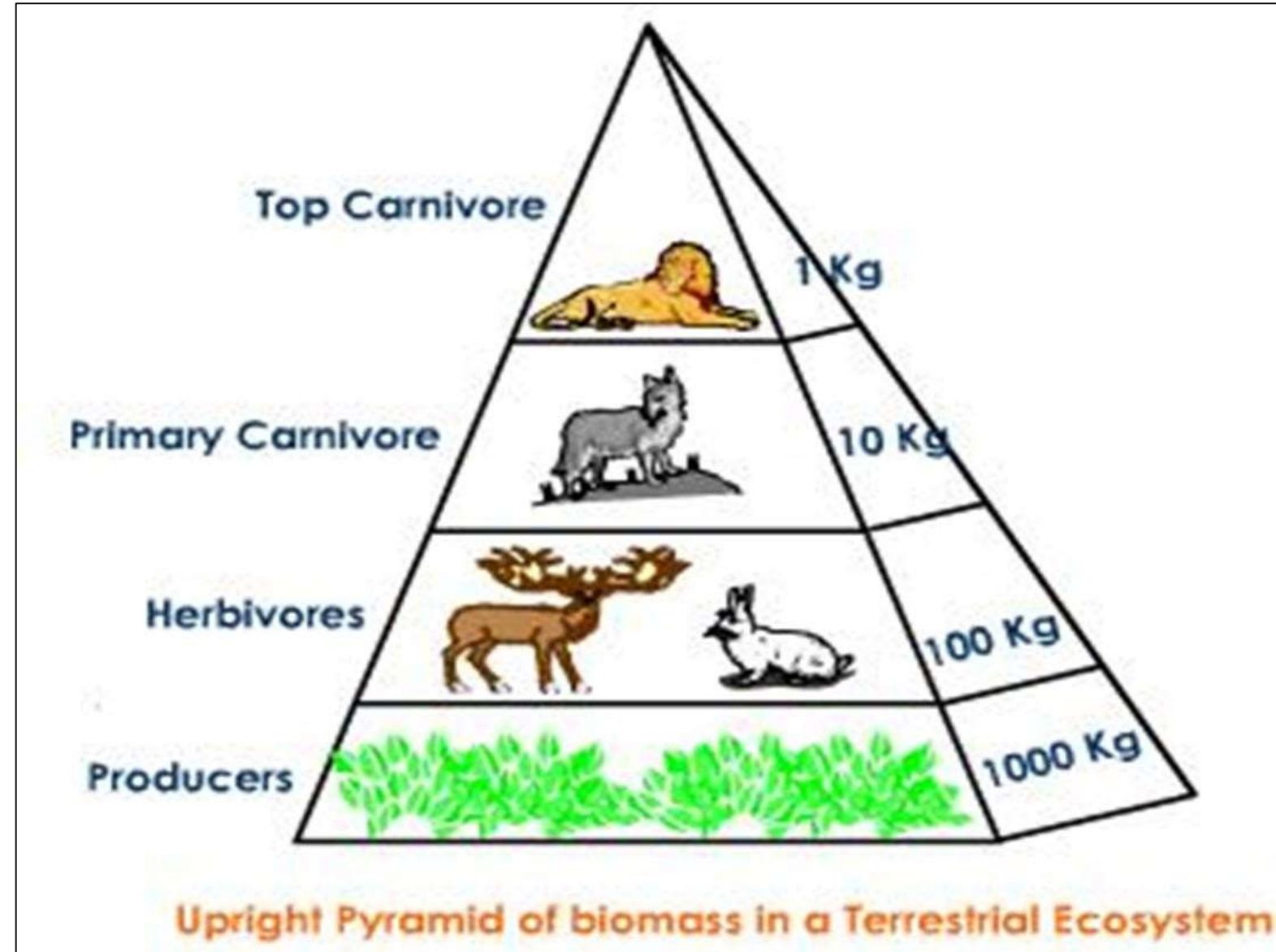
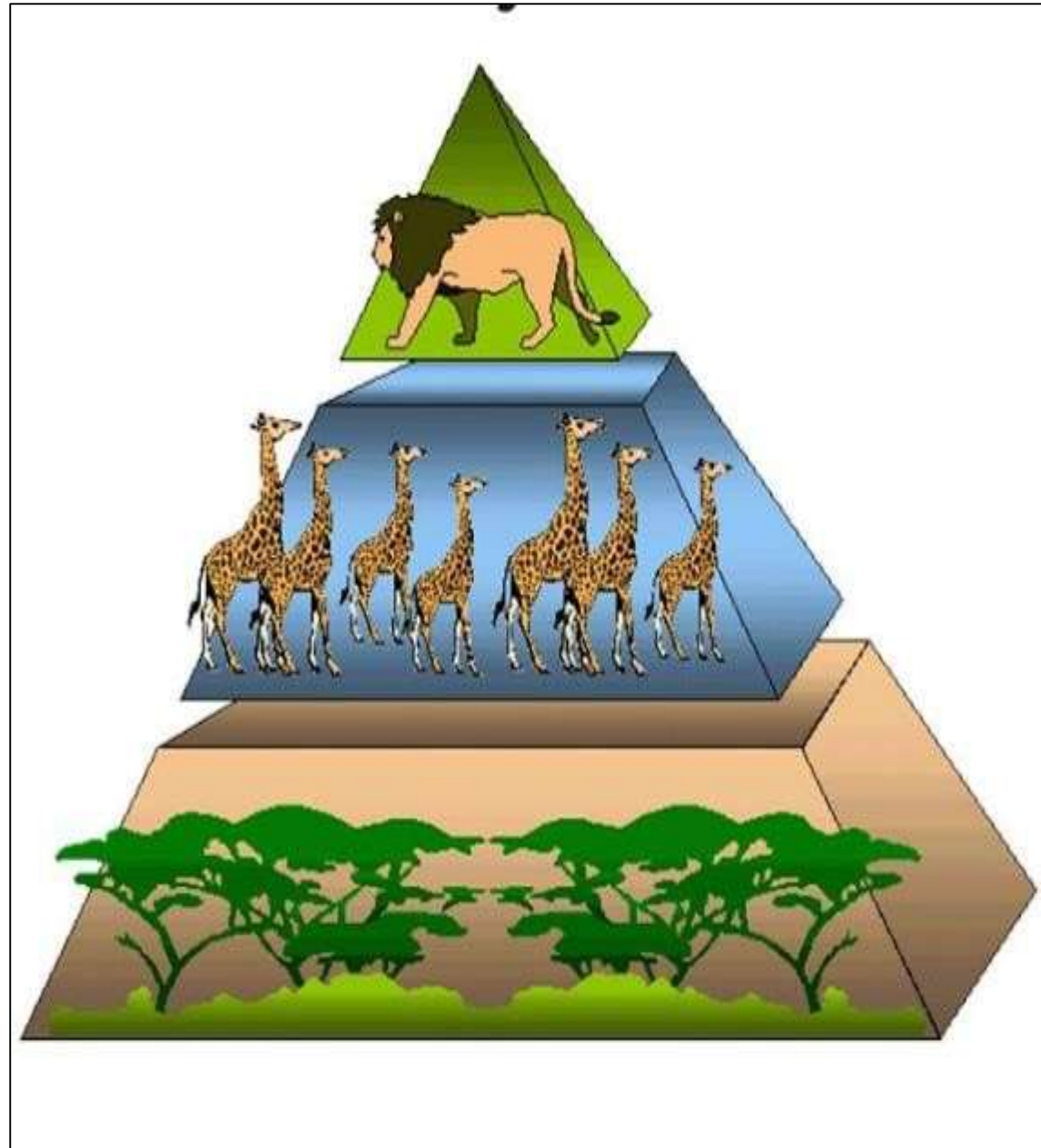
It represents amount of energy present in the each trophic levels





3. PYRAMIDS OF BIOMASS

It represents amount of livings present in the each tropical levels





Activity



Can you do this math Sudoku?

+		-			66
13			-		=
×			11		10
			+		-
:		+	×		:

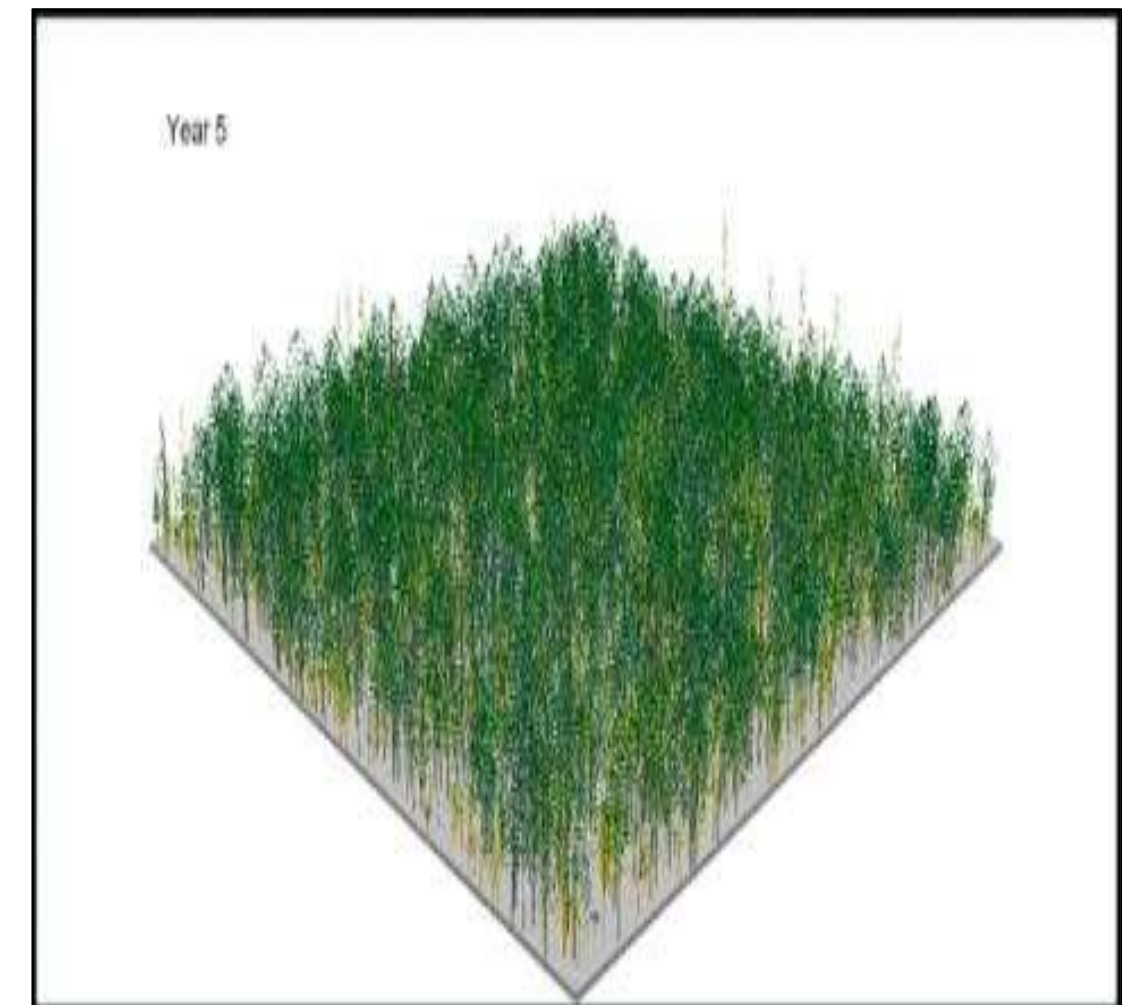
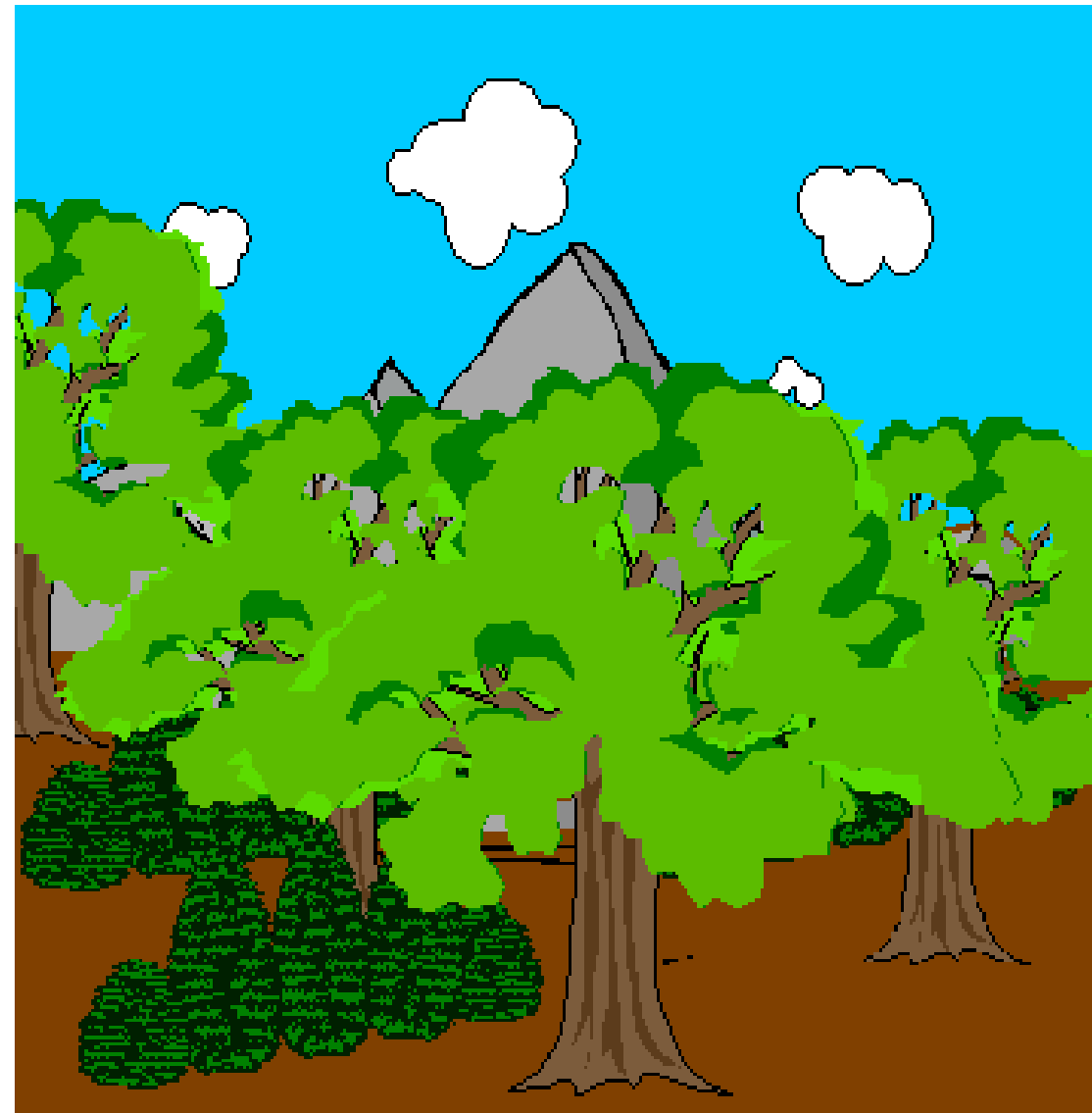
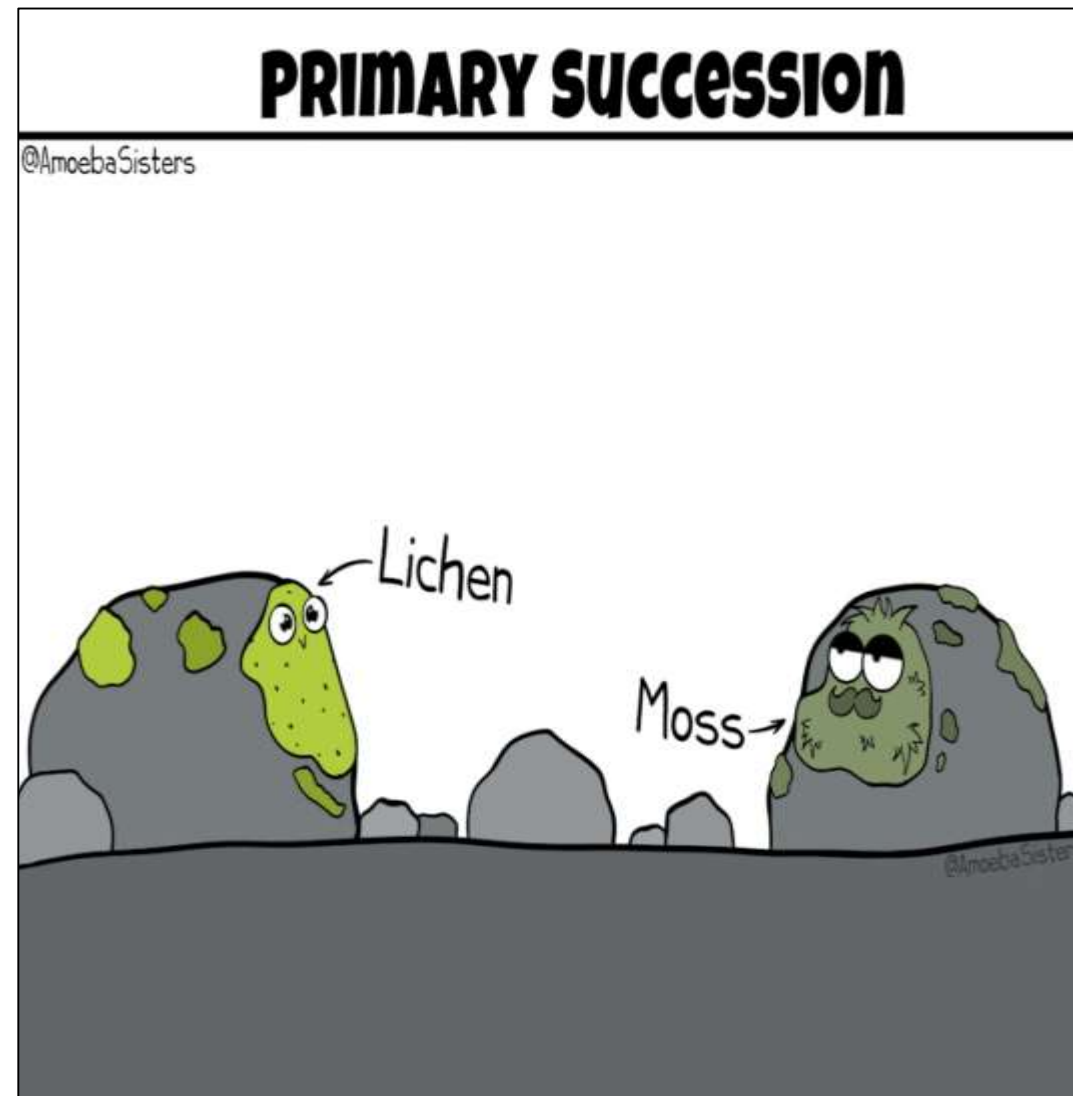
The answer is 66



ECOLOGICAL SUCCESSION



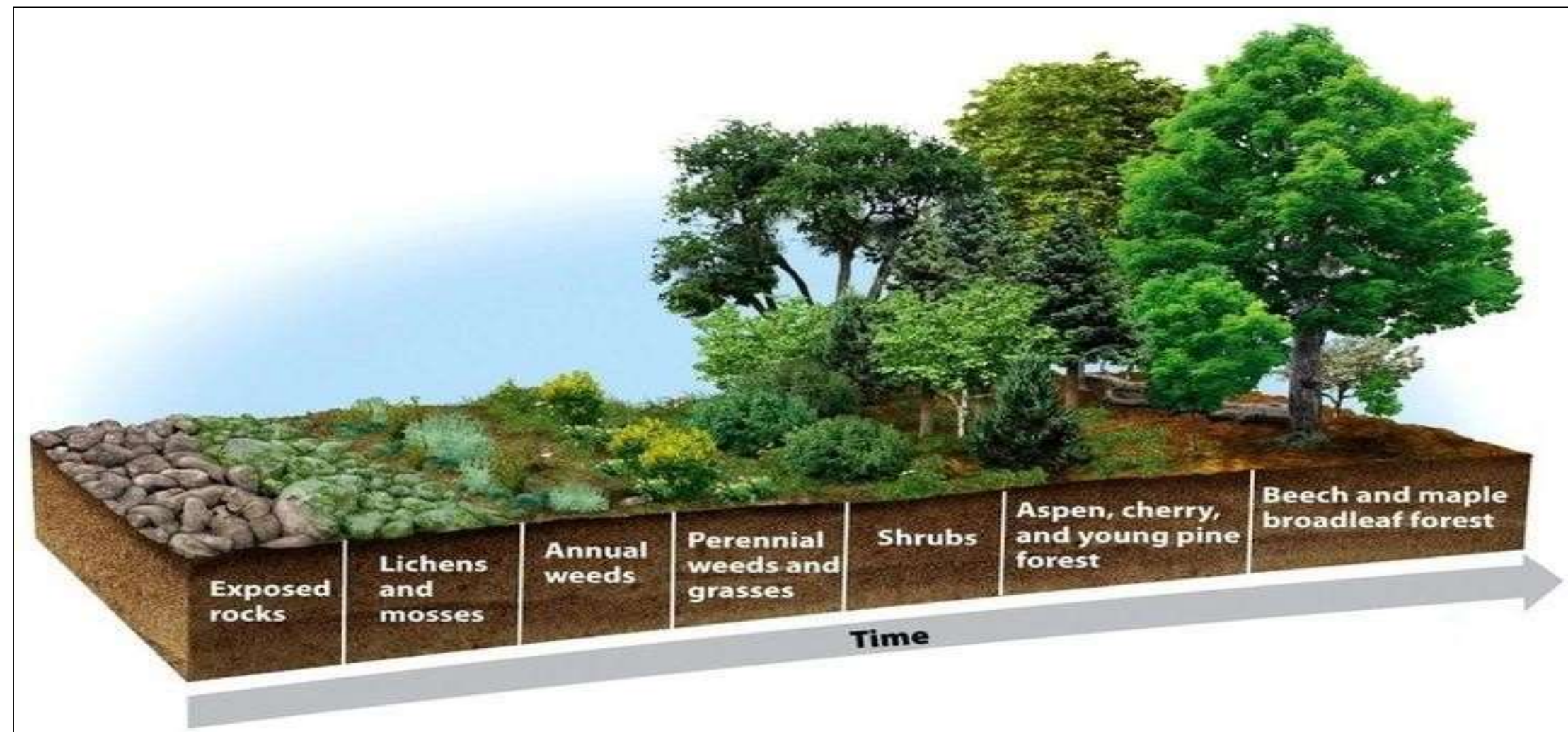
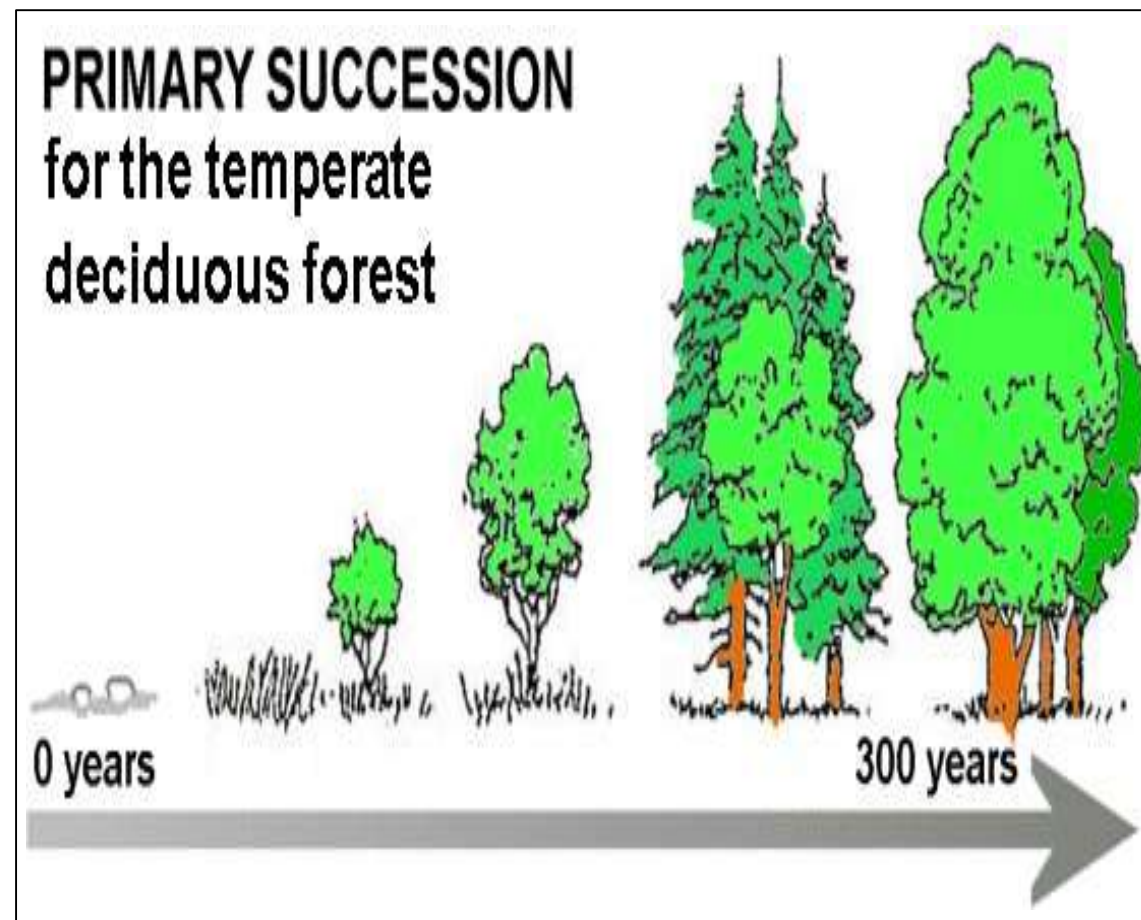
Continuous /progressive replacement of a community by another community till the stable community develops in a particular area.





PRIMARY SUCCESSION

- **Primary succession(Pioneer) : Gradual development of life on a lifeless/bare area**

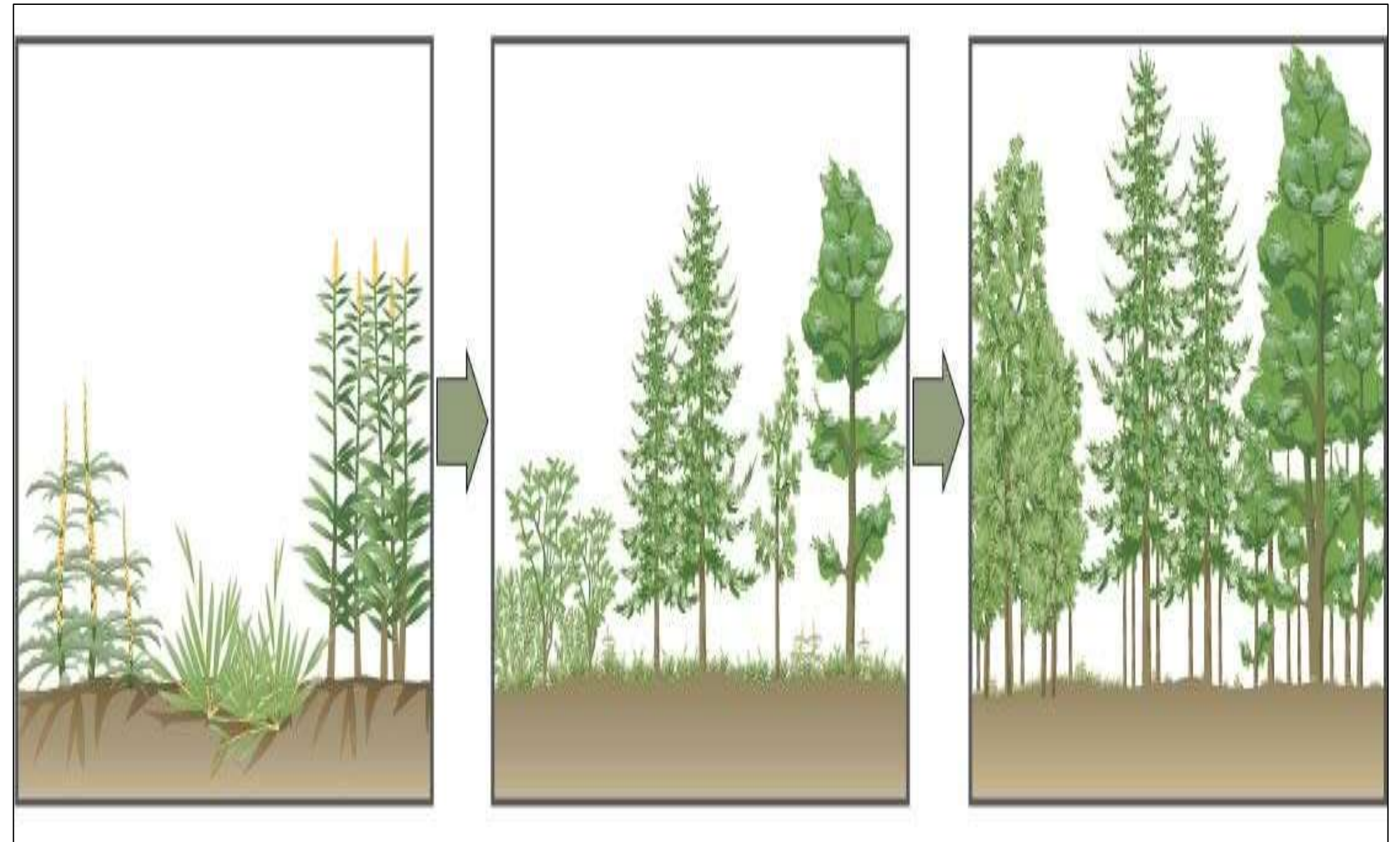
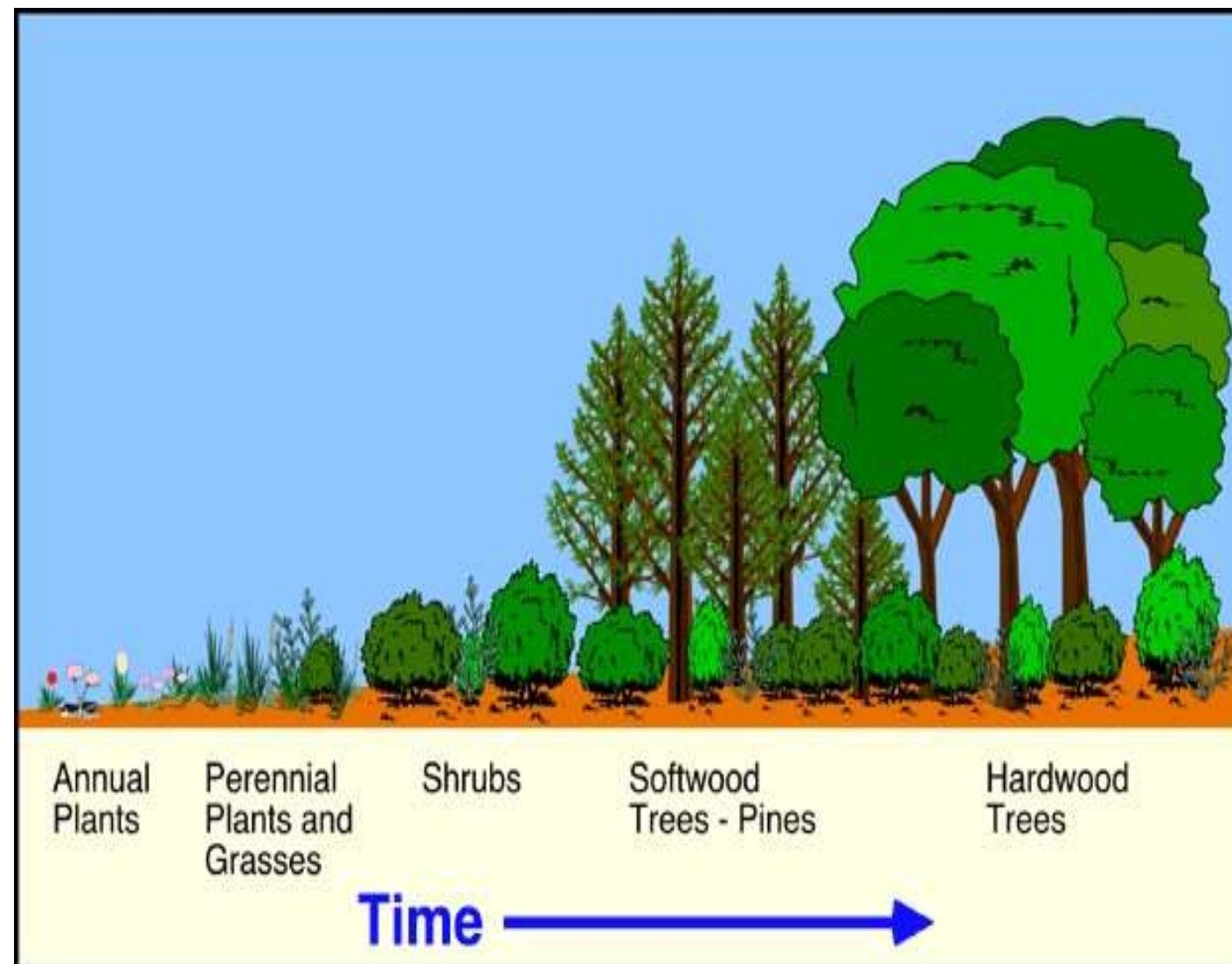


- **Hydrarch/Hydrosere-** Establishment starts from watery area.
- **Xerarch/Xerosere** - Establishment starts from dry area.



SECONDARY SUCCESSION

- **Secondary succession (Seres/Seral) :** Gradual development of life on a life area





ECOLOGICAL SUCCESSION PROCESS



1. **Nudation** – Development of bare area
2. **Invasion**- Establishment of one or more life by
Migration: seeds brought by wind water or birds
Establishment: seeds germination and grow of plants Leads to pioneer community
3. **Competition**- competition between same or different species for food, water and nutrients.
4. **Reaction** – The various development stage.
5. **Stabilization** – leads to stable community with environment.



ASSESSMENT



- **Draw the 3 types of ecological pyramid**

- **Draw the mind map for ecological succession**



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.