



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 CHEMISTRY

COURSE NAME : 19HST102- ENVIRONMENTAL SCIENCE

I YEAR / I SEMESTER

UNIT : 1. ECO SYSTEM

**TOPIC : 6. STRUCTURE & FUNCTION OF AQUATIC
ECO SYSTEM**



BRAINSTORMING WITH RECAP



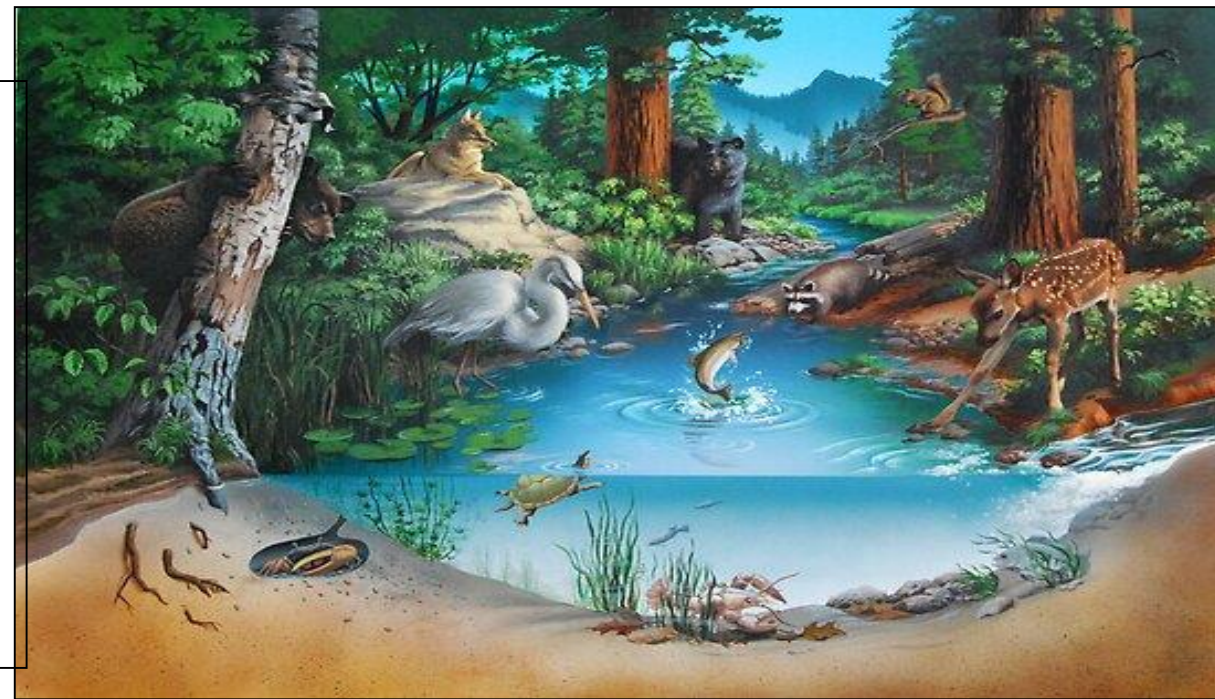


INTRO TO AQUATIC ECOSYSTEM



Fresh water life zone

- Pond
- Lake
- Stream
- River



Salt water life zone

- Ocean
- Estuaries





CHARACTERISTICS OF POND ECOSYSTEM

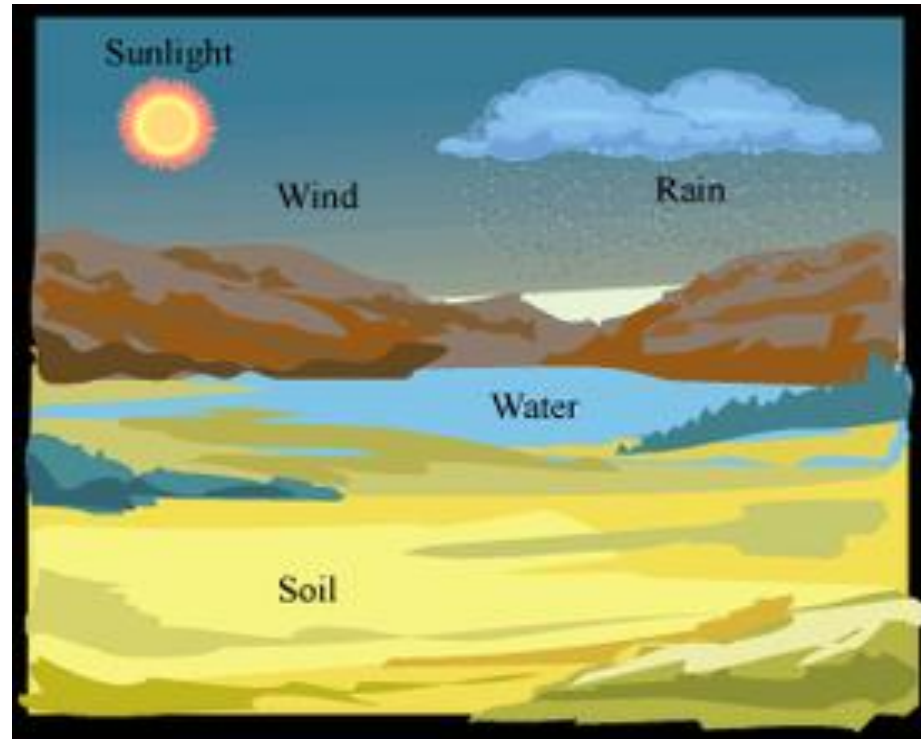


- temporary
- Only seasonal
- stagnant
- Easily polluted





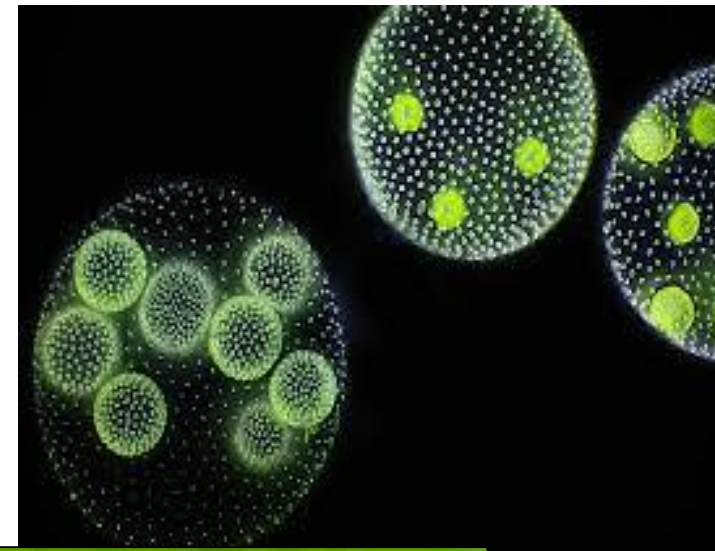
STRUCTURE & FUNCTION



1. Abiotic components:

Physical components found in soil, water & atmosphere

Example: Climatic factors & minerals



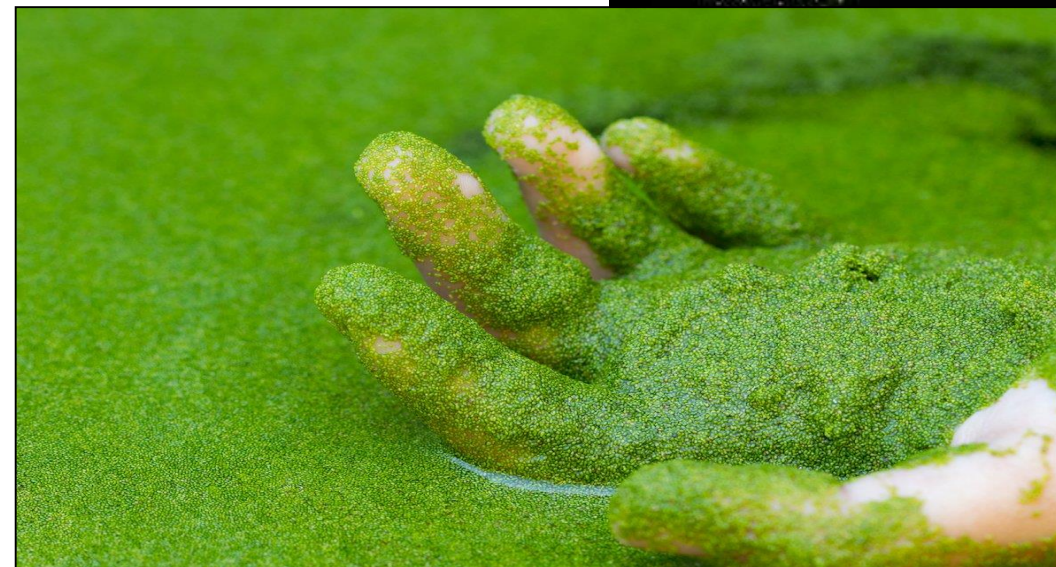
2. Biotic components:

1. Producers: Photosynthesis process

Example:

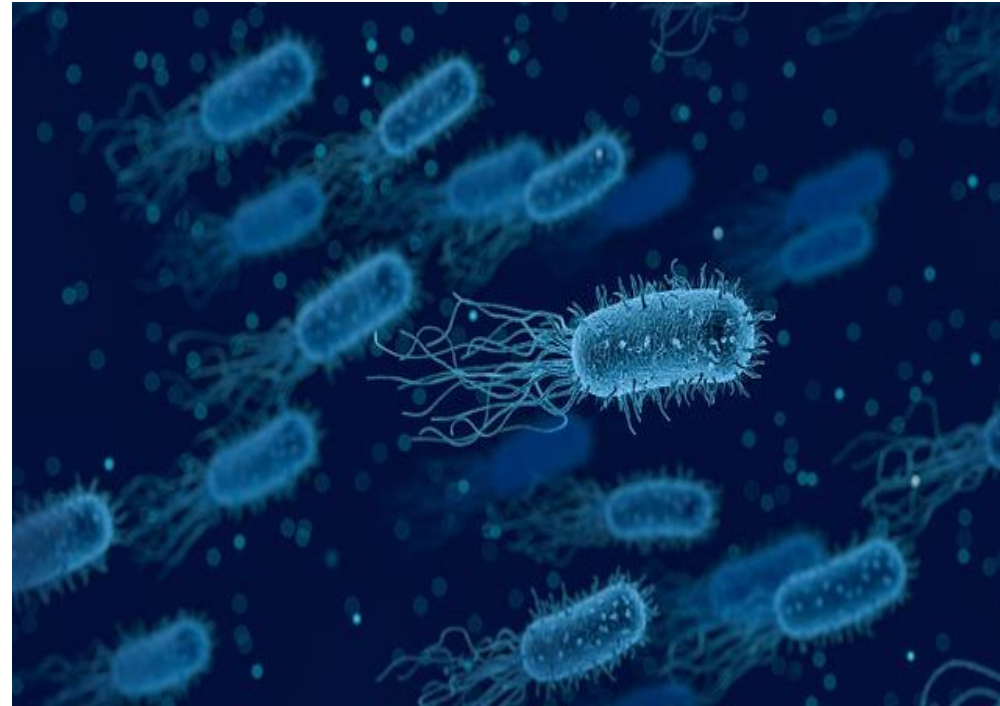
a. **Phytoplankton:** Algae, Volvox

b. **Microphytes:** wolfia, hydrilla





STRUCTURE & FUNCTION

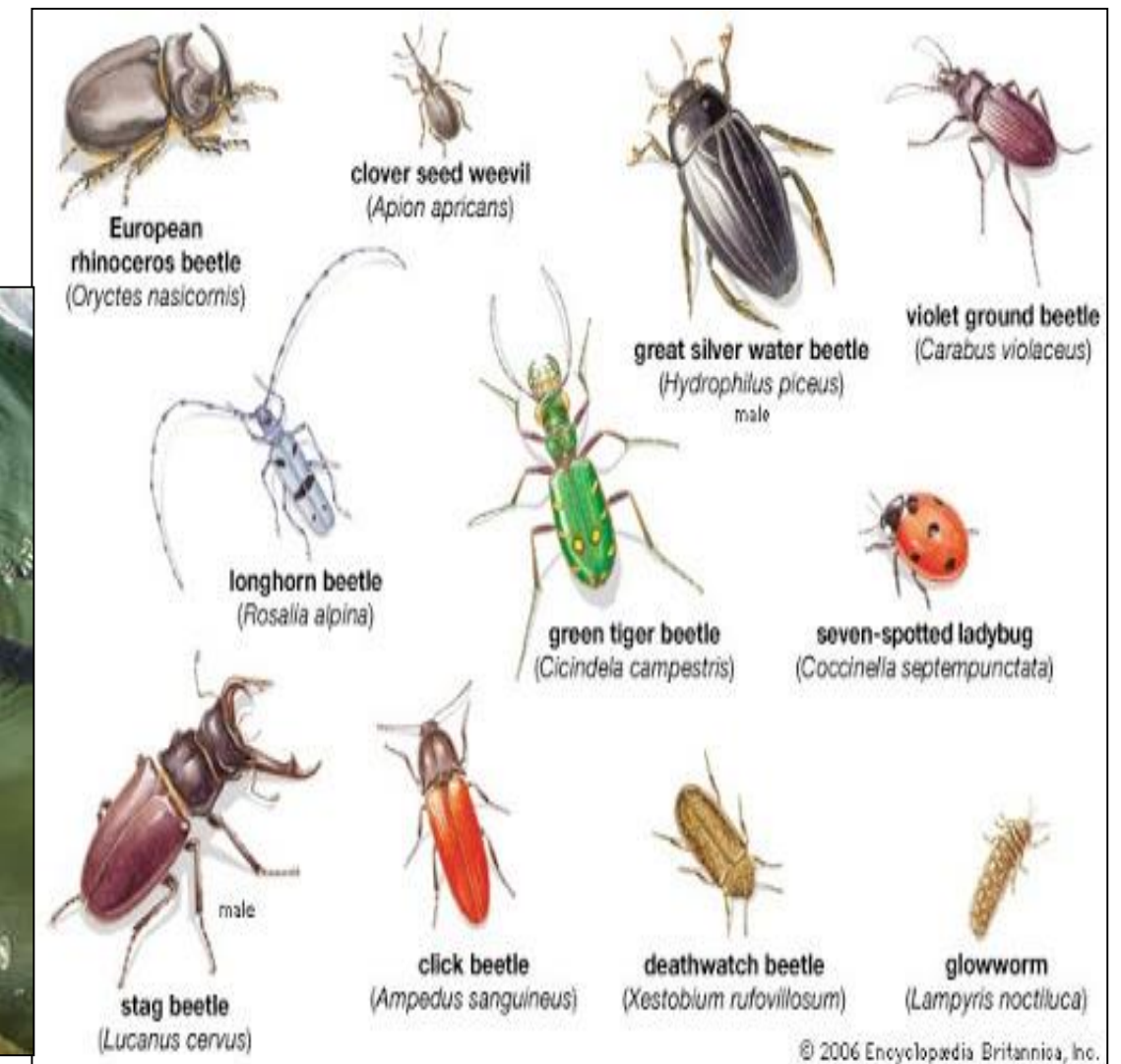


2. Consumers

a. Primary consumers(zooplankton):

Example: protozoa, very small fishes

b. secondary consumers (primary carnivore): depends zooplankton
Example: water beetle, small fishes





STRUCTURE & FUNCTION



c. Tertiary consumers (primary carnivore): depends primary carnivore
Example: large fish

4. Decomposers: decompose dead plant & animals
Example: Bacteria & fungi



The 6 Kingdoms

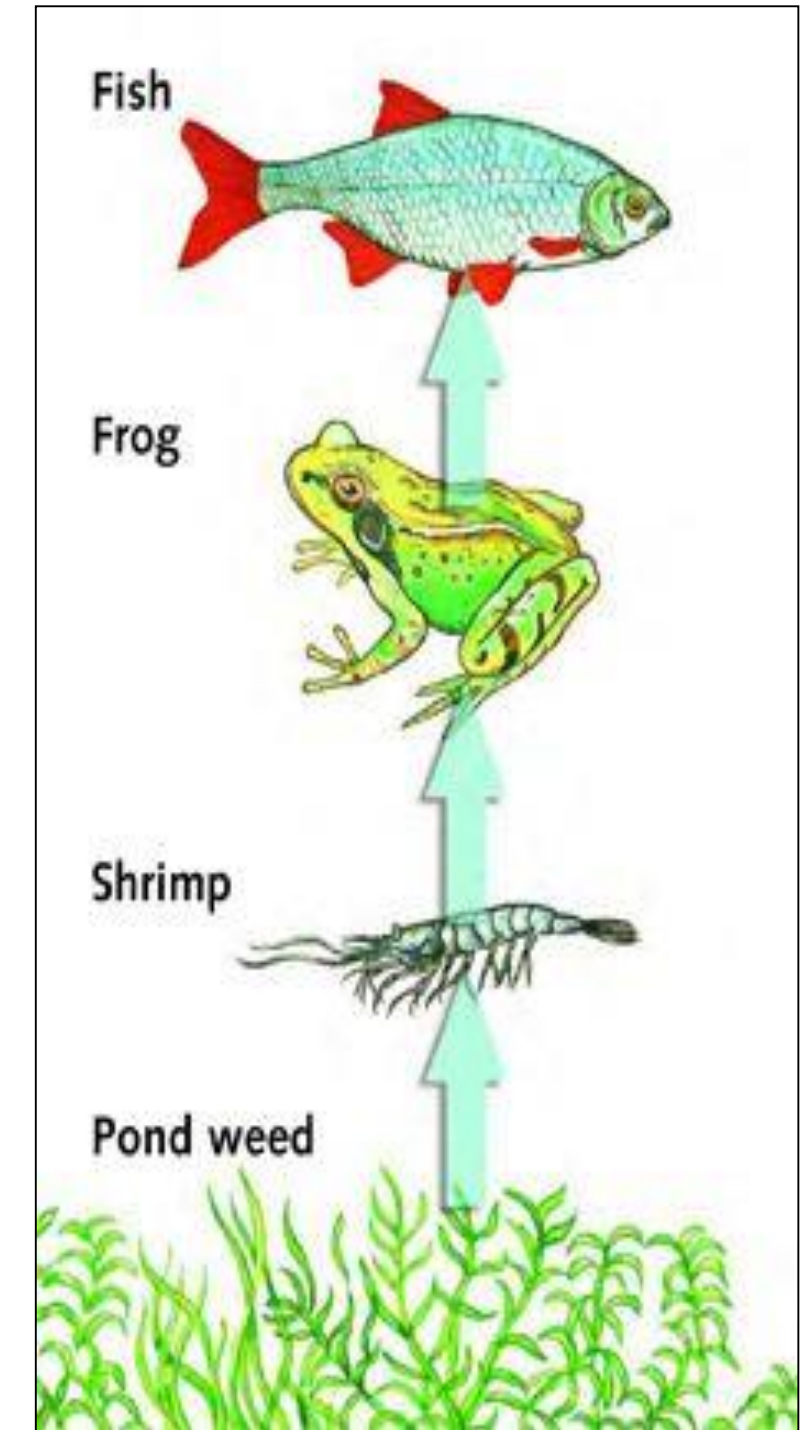
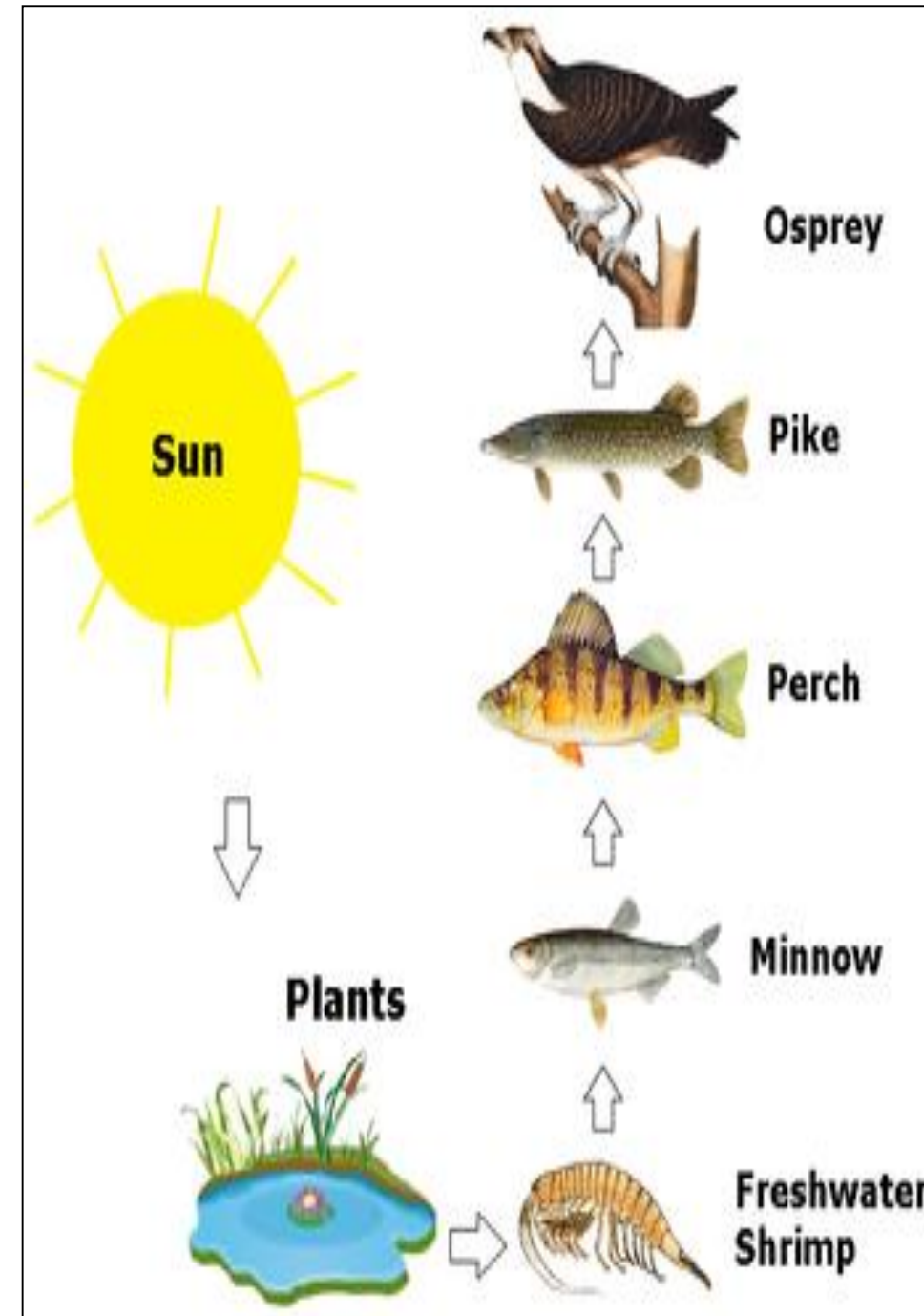
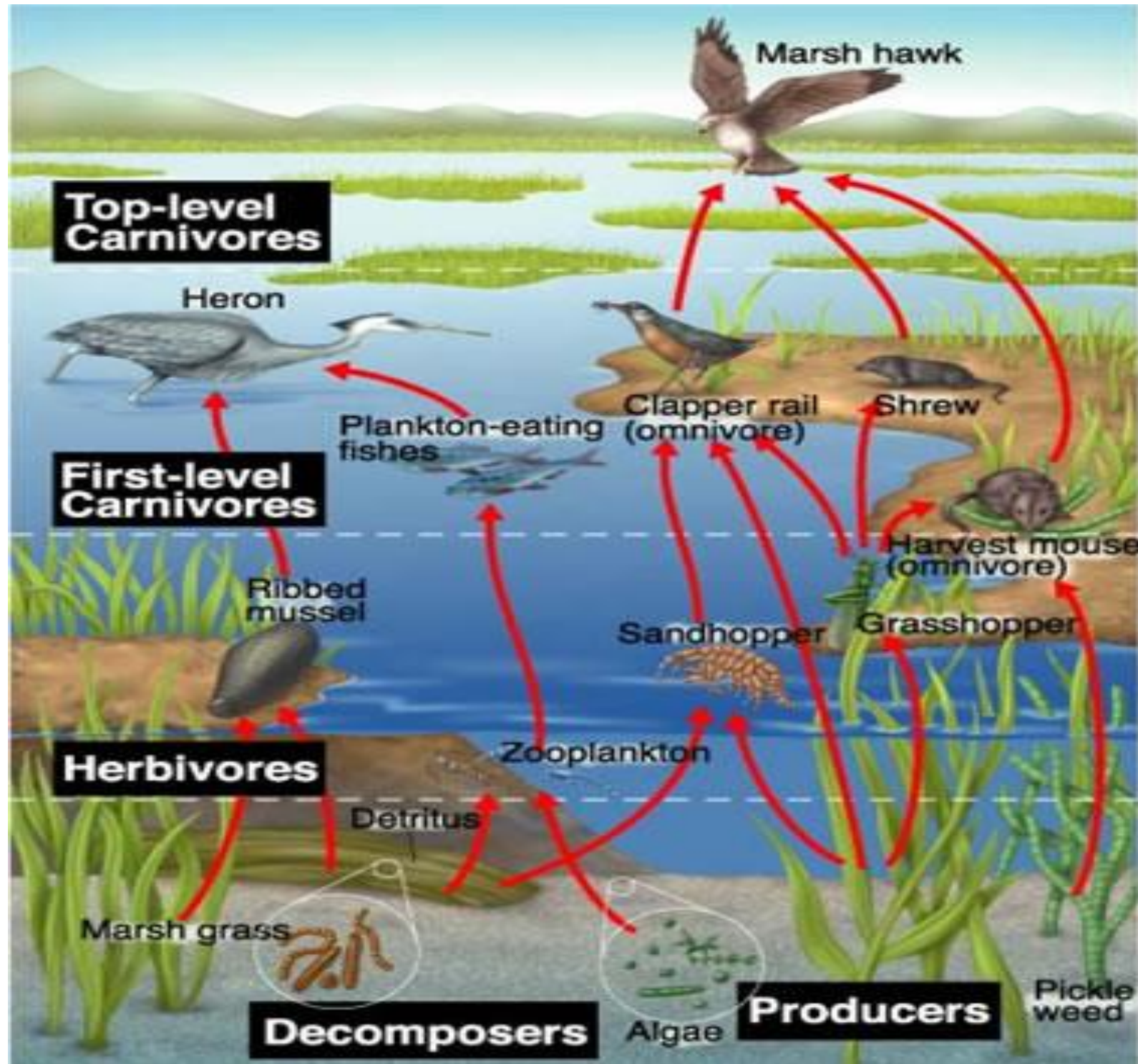
Archaeobacteria Prokaryote	Eubacteria Prokaryote	Protista Eukaryote
Fungi Eukaryote	Plantae Eukaryote	Animalia Eukaryote

#AmoebaGIFs

@AmoebaSisters



POND FOOD CHAIN & WEB

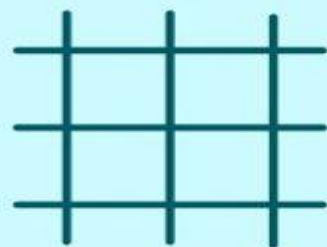




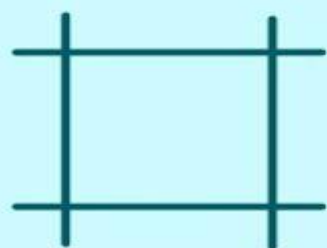
Activity



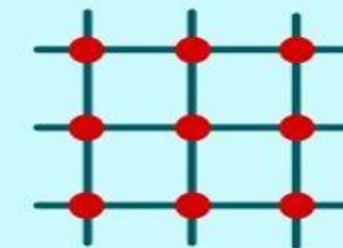
Insert
the missing number.

 $= 9$

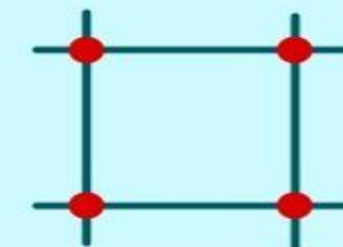
 $= 1$

 $= \textcircled{?}$

4. The numbers indicate
the number of crossed lines
in each shape.

 $= 9$

 $= 1$

 $= \textcircled{4}$



CHARACTERISTICS OF OCEAN ECOSYSTEM



- Covers $>2/3$ of earth
- Salt & minerals
- Sea products/drug
- Rich in biodiversity
- transport





STRUCTURE & FUNCTION



1. Abiotic components:

Physical components light, water & salt

Example: Climatic factors & minerals



2. Biotic components:

1. Producers: Photosynthesis process

Example: Phytoplankton





STRUCTURE & FUNCTION



2. Consumers

a. Primary consumers(herbivore):

Example: molluscs, small fishes

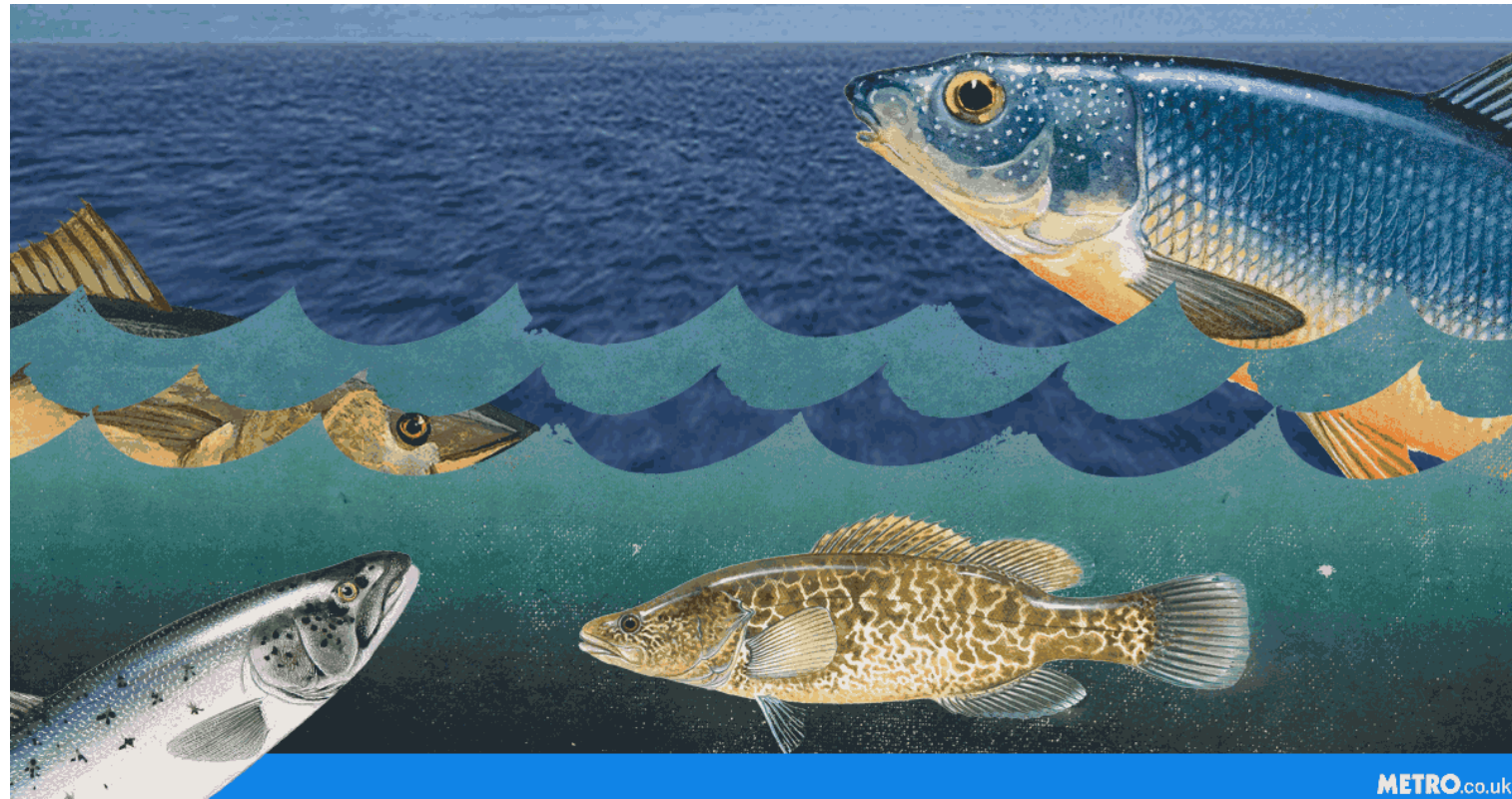
b. secondary consumers (primary carnivore): depends herbivore

Example: mackerel, fishes





STRUCTURE & FUNCTION



c. Tertiary consumers (primary carnivore): depends primary carnivore
Example: large fish, cod haddock

4. Decomposers: decompose dead plant & animals
Example: Bacteria & fungi



The 6 Kingdoms

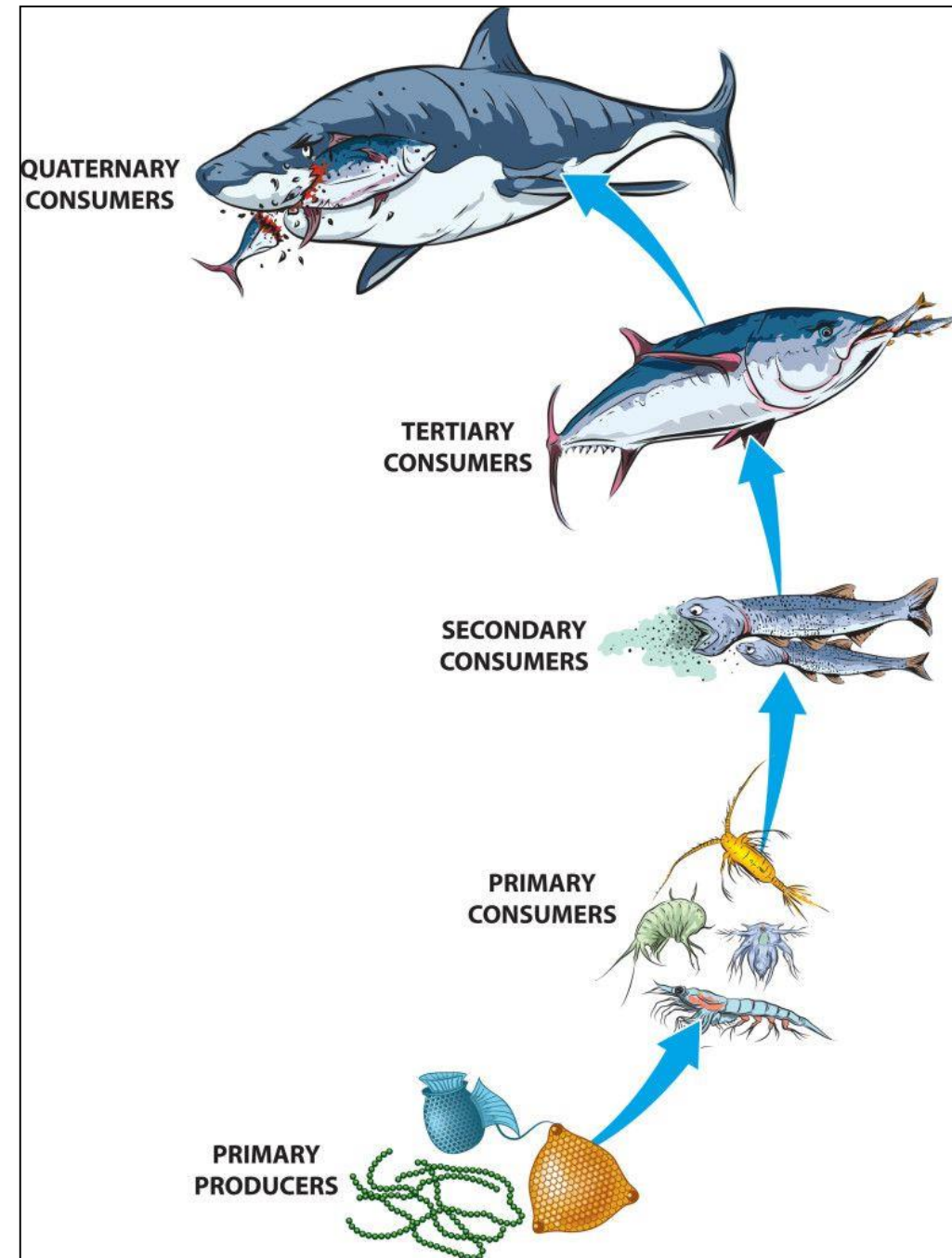
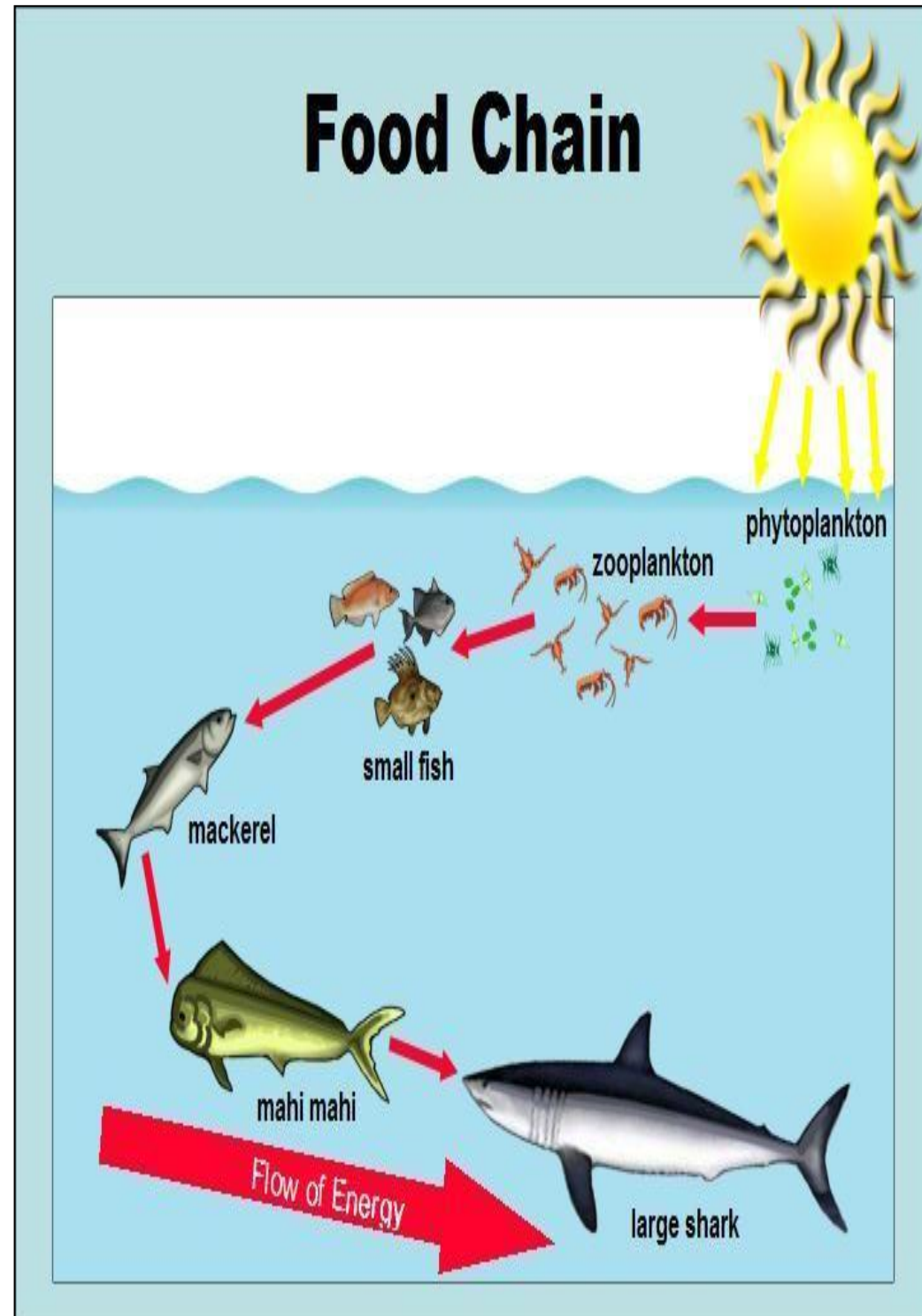
Archaeobacteria Prokaryote	Eubacteria Prokaryote	Protista Eukaryote
Fungi Eukaryote	Plantae Eukaryote	Animalia Eukaryote

#AmoebaGIFs

@AmoebaSisters



OCEAN FOOD CHAIN & WEB





ASSESSMENT



1. Draw the flow chart for aquatic 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.