

CONSUMERS

Heterotrophs

Directly - Herbivores
Indirectly - Carnivores

Macro consumers

phagotrophs

Holozoic

First ingestion than digest.

Predator

Scavenger

Primary consumer

Secondary producer

Directly feed → plants producer

(Herbivores)

eg → Rabbit, cow grazing cattle

⇒ Herbivore ecosystem

Secondary consumer

(Primary carnivore)
depend on primary consumer

eg - Dog, cat
Snake

Tertiary cons.

Top consumer

Depend on S.C. obtain food.

eg - Lion, predator
Shark, Man

Micro consumers

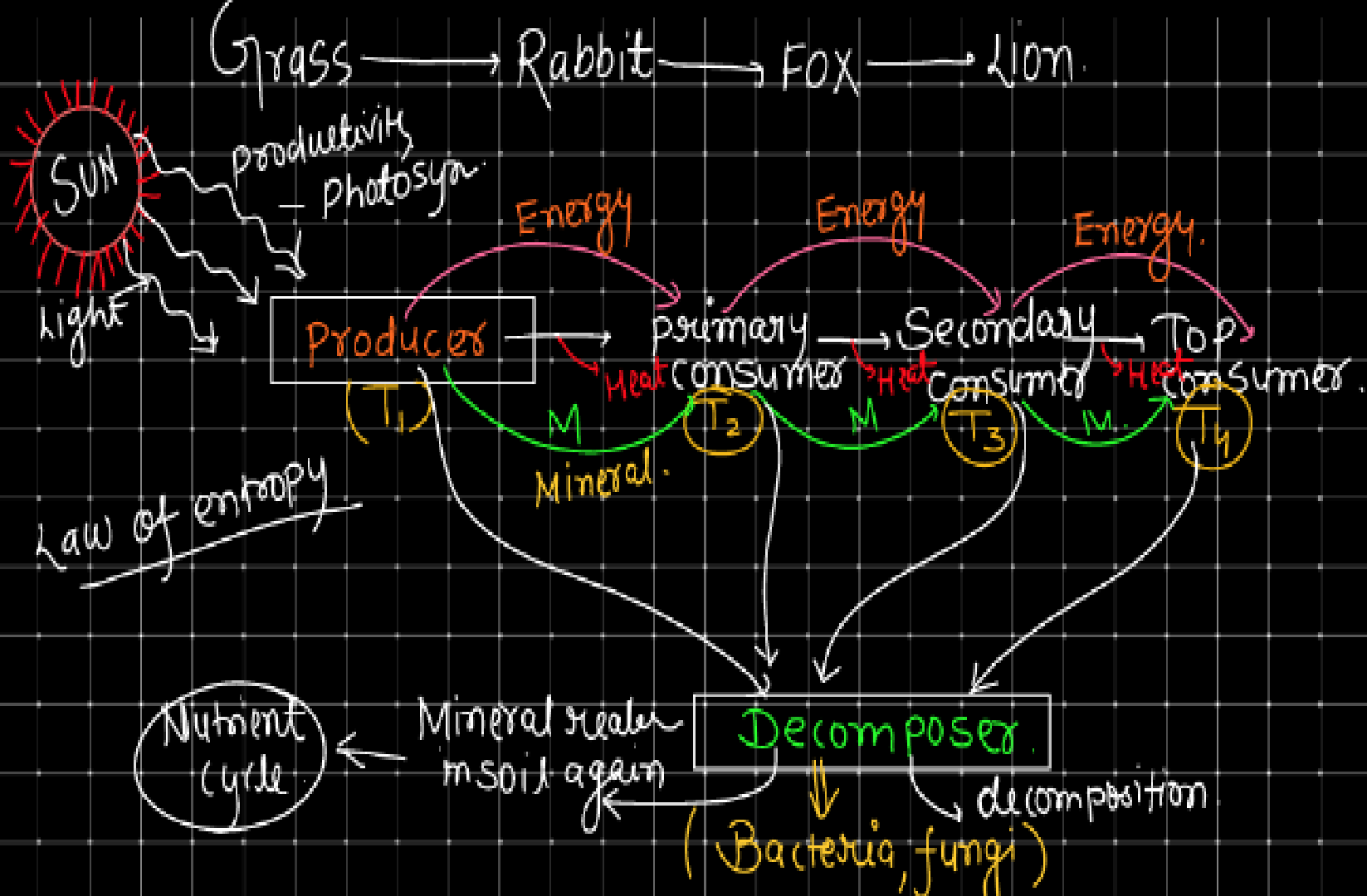
Decomposer S

Saprophytic D

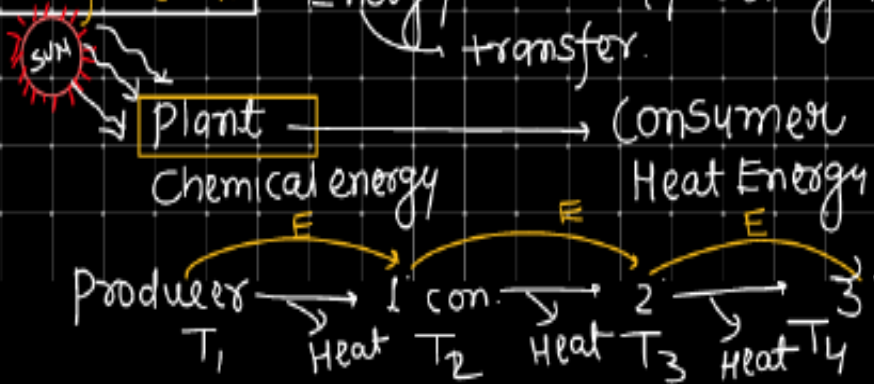
Osmotrophs M

eg - Bacteria
and
Fungi

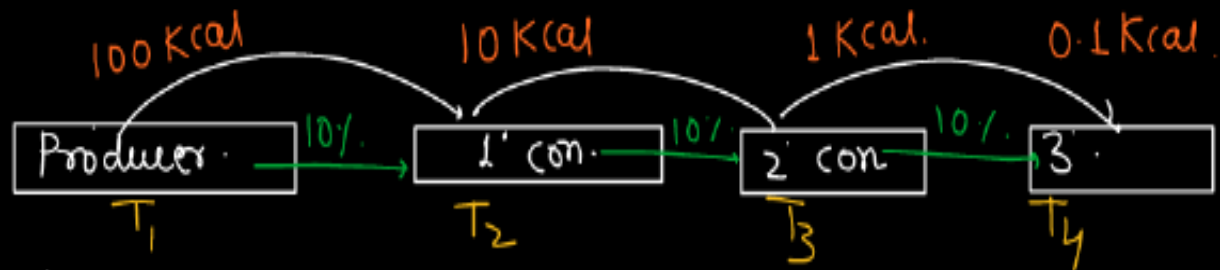
★ Mineral cycle



1st Law of Thermodynamics - Energy - Created / destroyed / transfer.



10% Energy Transfer. Lindman



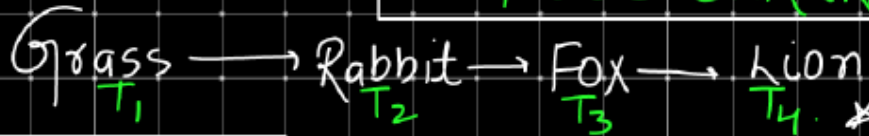
Amount of energy

100	10	1	0.1
20	30	60	

Biomass - individual $\Rightarrow \uparrow \uparrow$
 Trophic level = $\downarrow \downarrow$

FOOD CHAIN

- plant (producer)
- Herbivores
- Carnivores



* Unidirectional → Energy flow

TROPHIC LEVEL



First trophic level



Producers
primary producer

Second trophic level

primary consumer
secondary producer

Third trophic level

Secondary consumer

Fourth Trophic level

Tertiary consumer

T₅ Top consumer



TYPES OF FOOD CHAINS:

Grazing Food chain

or
predatory food chain

Terrestrial Ecosystem

Grassland Eco.

(Grass → Rabbit → Fox → Lion)

• phytoplankton
(T₁) (PP)

Producers

Grass
↓ (T₁)
Producers

Aquatic Food chain

zooplankton → Small fish → Large fish
(T₂) (ZP) (SE) (T₃) (T₄) (LF)

primary consumer

Secondary consumer

Top consumer

Rabbit → Fox → Lion
(T₂) (T₃) (T₄)
primary

Parasitic food chain

Saprophytic food chain

or
Detritus food chain