

THE ECOSYSTEM

A Science Presentation

WHAT IS AN ECOSYSTEM?

The ecosystem is the structural and functional unit of ecology where the living organisms interact with each other and the surrounding environment.

An ecosystem is a chain of interactions between organisms and their environment.



TYPES OF ECOSYSTEM

An ecosystem can be as small as an oasis in a desert, or as big as an ocean, spanning thousands of miles.

1



Terrestrial

2



Aquatic

1 TERRESTRIAL ECOSYSTEM

A terrestrial ecosystem is a land-based community of organisms and the interactions of biotic and abiotic components in a given area. They are as follows:

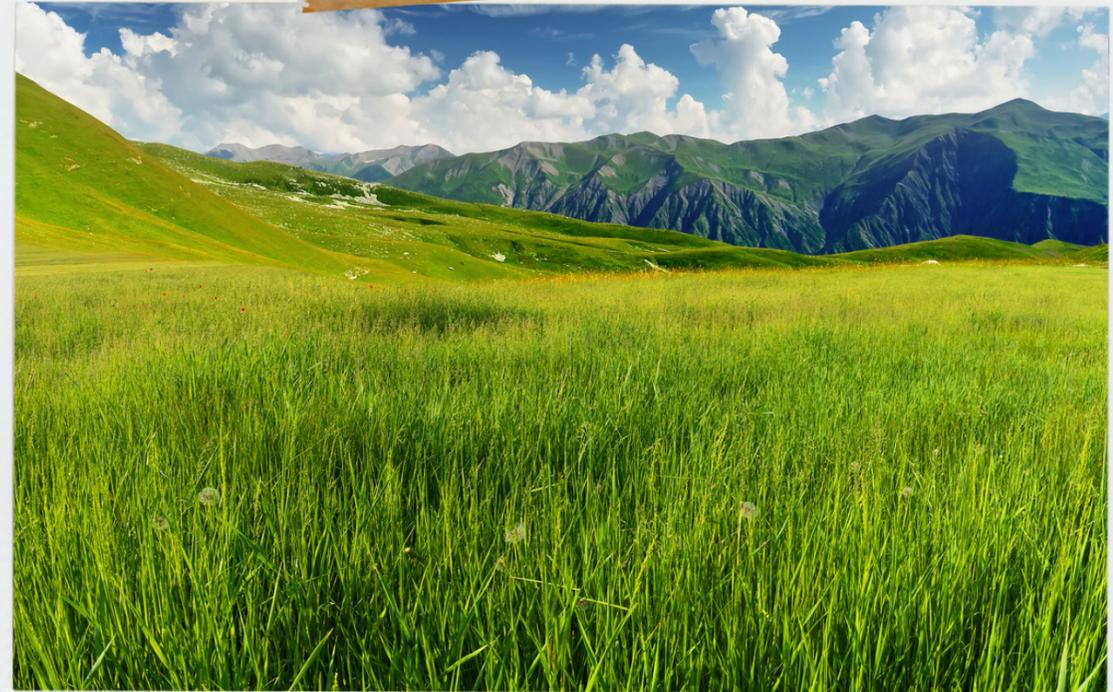
FOREST . GRASSLAND . TUNDRA . DESERT





Forest

A forest is an area of land dominated by trees and animals that live in coordination with the abiotic factors of the environment.



Grassland

In a grassland ecosystem, the vegetation is dominated by grasses and herbs.



Tundra

In physical geography, tundra is a type of biome where the tree growth is hindered by low temperatures and short growing seasons



Desert

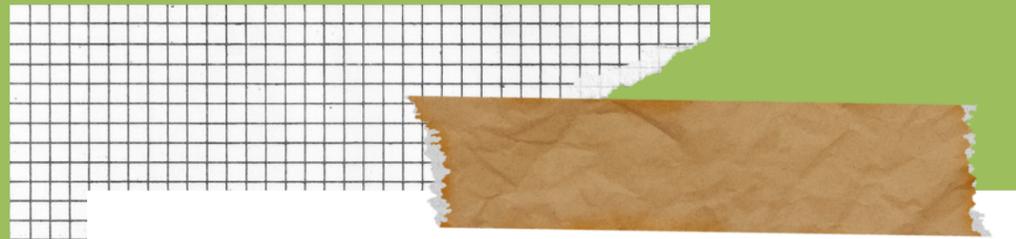
A desert is a barren area of landscape where little precipitation occurs and, consequently, living conditions are hostile for plant and animal life.

2 AQUATIC ECOSYSTEM

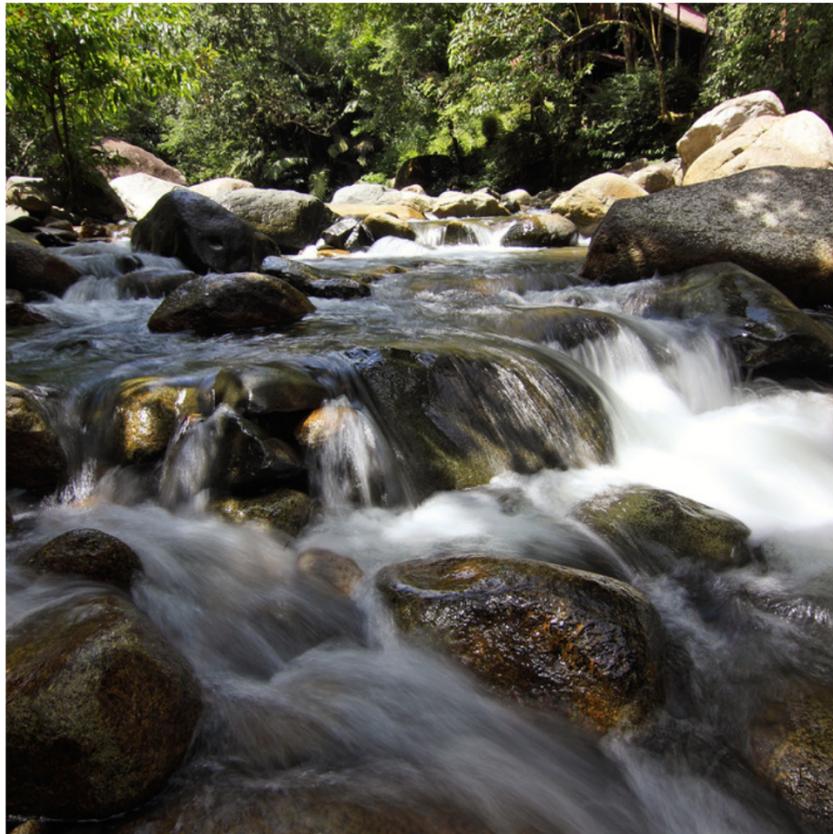
Aquatic ecosystems are ecosystems present in a body of water.
These can be further divided into two types, namely:

FRESHWATER & MARINE



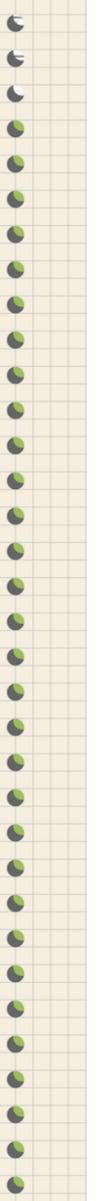


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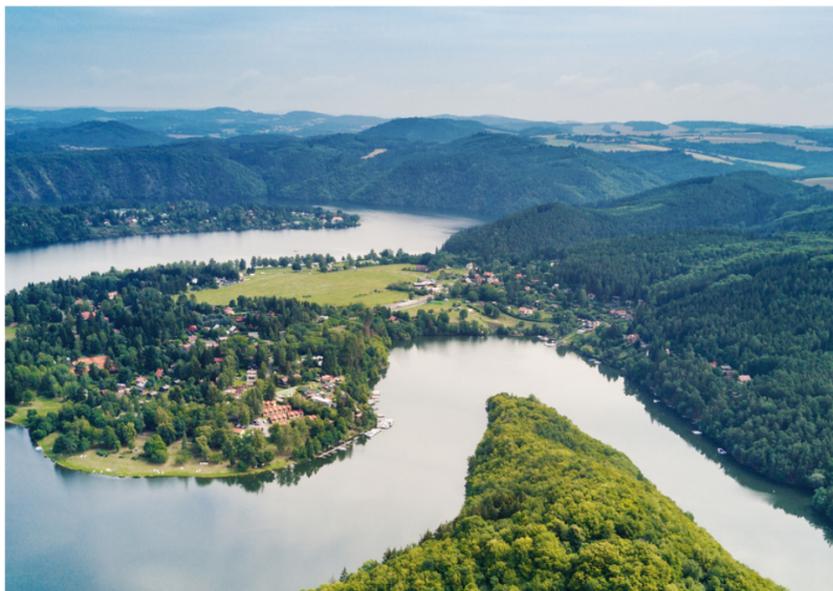


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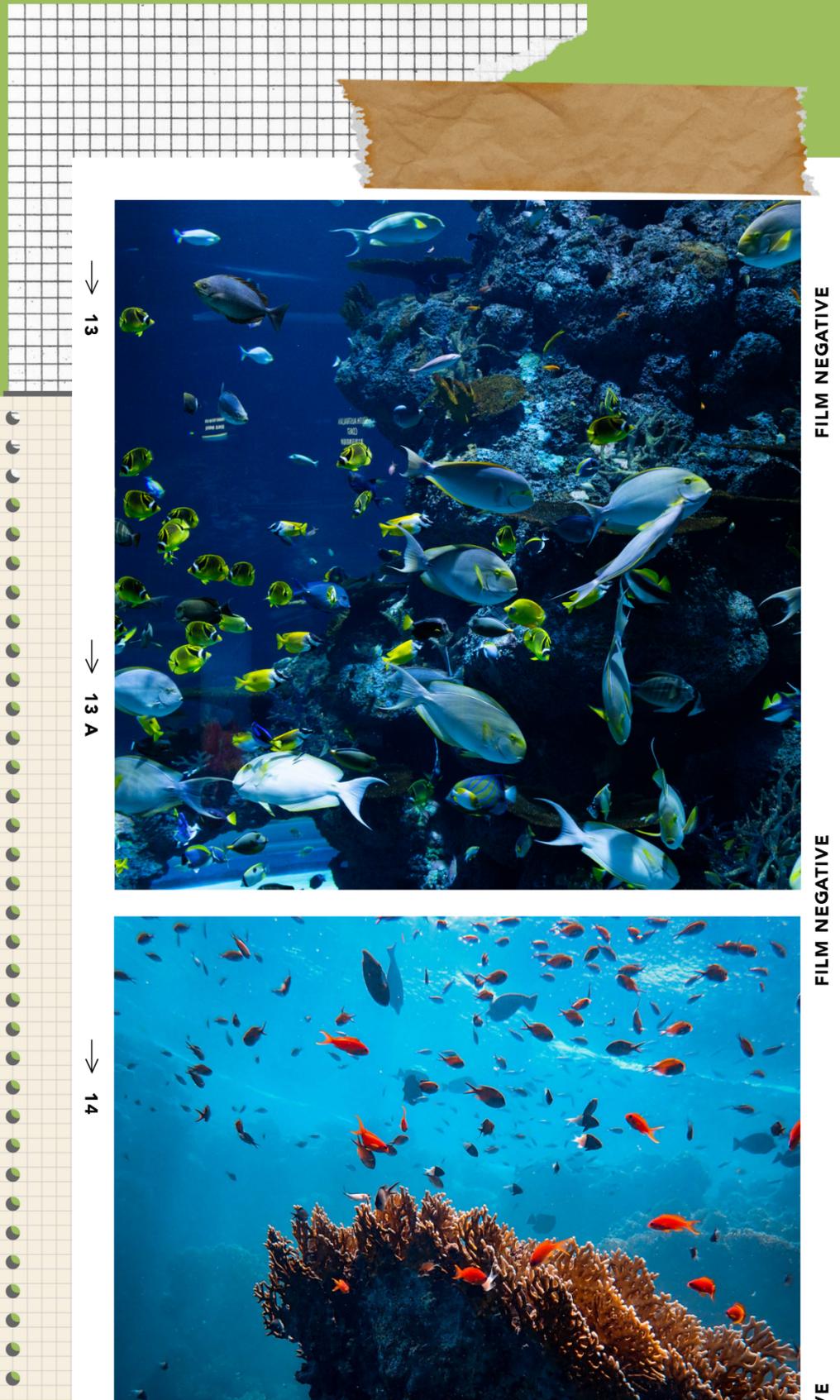
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FRESHWATER ECOSYSTEM

The freshwater ecosystem is an aquatic ecosystem that includes lakes, ponds, rivers, streams and wetlands. These have no salt content in contrast with the marine ecosystem.





MARINE ECOSYSTEM

The marine ecosystem includes seas and oceans. These have a more substantial salt content and greater biodiversity in comparison to the freshwater ecosystem.

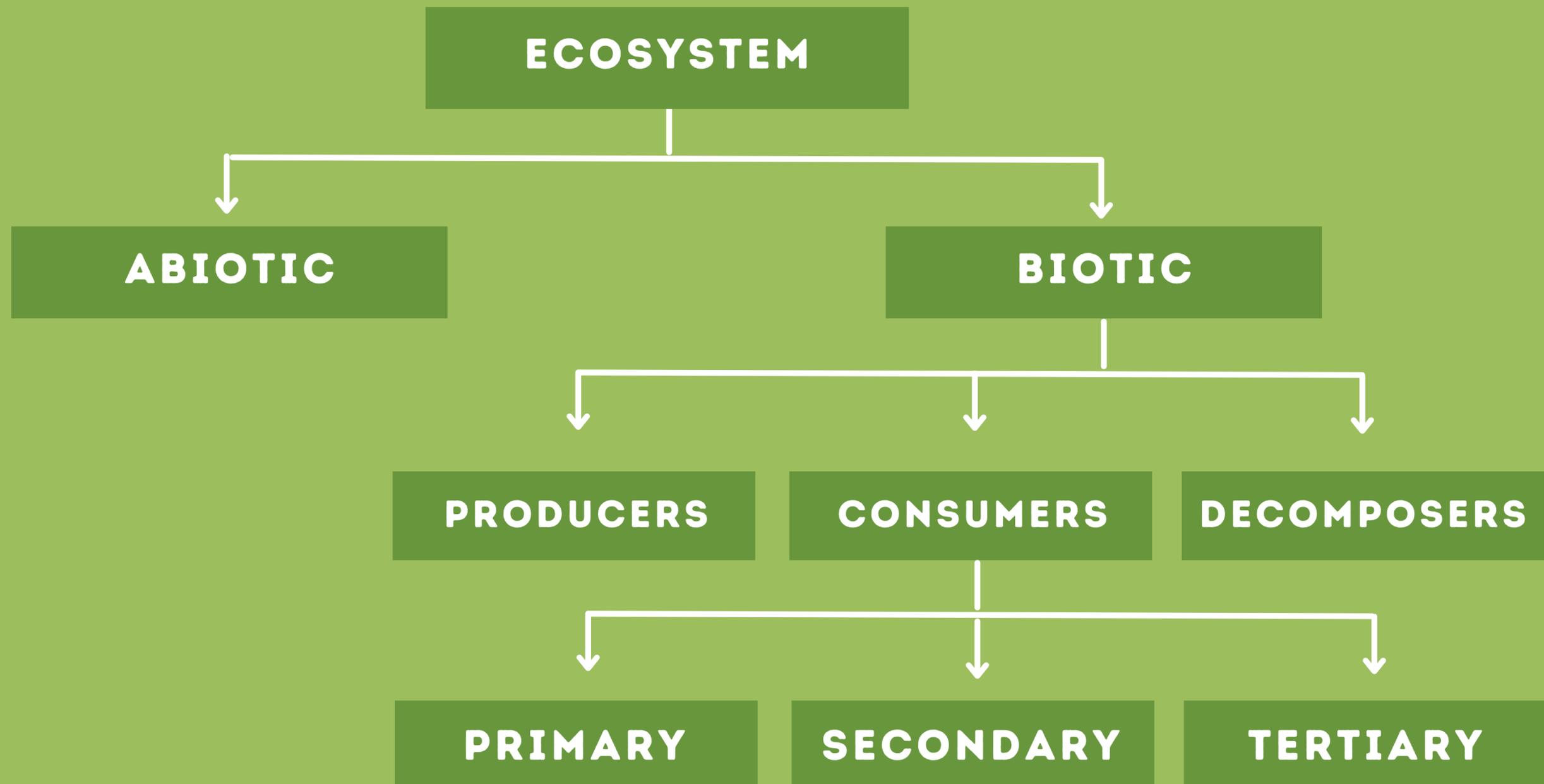


STRUCTURE OF THE ECOSYSTEM?

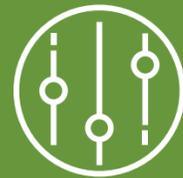
The structure of an ecosystem is characterised by the organisation of both biotic and abiotic components. This includes the distribution of energy in our environment. It also includes the climatic conditions prevailing in that particular environment.

BIOTIC COMPONENTS
ABIOTIC COMPONENTS





FUNCTIONS OF THE ECOSYSTEM



It regulates the essential ecological processes, supports life systems and renders stability.



It is also responsible for the cycling of nutrients between biotic and abiotic components.



It maintains a balance among the various trophic levels in the ecosystem.



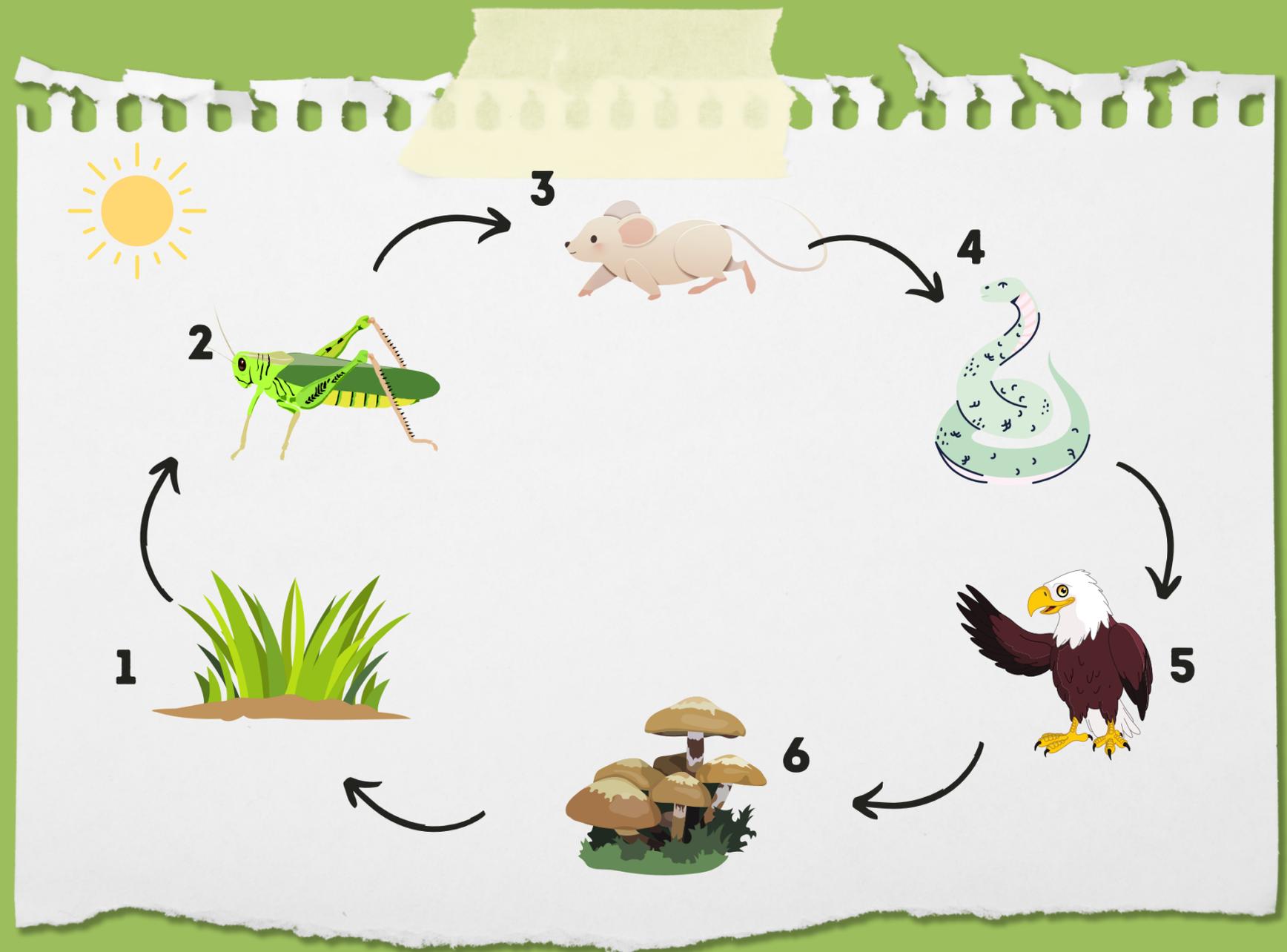
It cycles the minerals through the biosphere.



The abiotic components help in the synthesis of organic components that involves the exchange of energy.

THE FOOD CHAIN

During this biological process, light energy is converted into chemical energy and is passed on through successive levels. The flow of energy from a producer, to a consumer and eventually, to an apex predator or a detritivore is called the food chain.



- 1 - The grasshoppers eat the grass
- 2 - The mice eats the grasshoppers
- 3 - The snake eats the mice
- 4 - The eagle eats the snake

- 5 - When the hawk die, fungi breaks the bodies down and turns into nutrients
- 6 - The nutrients, along with sun and water, cause the grass to grow

THANK YOU!