

# Interactions & Ecosystems Concept Map

## BASIC NEEDS of Living Things


Water      Food      Energy      Oxygen

Suitable Living Conditions (Shelter)

## ECOSYSTEMS

**BIOTIC**  
(Living Parts)  
Species  
Population  
Community

**ABIOTIC**  
(Non-living Parts)



**ADAPTATIONS**  
(Structural or Behavioral)

### PRODUCERS

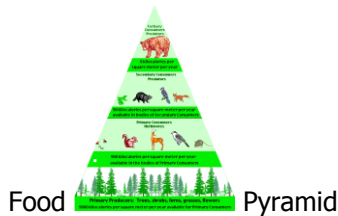
Plants  
(Photosynthesis)  
(Cellular Respiration)

### CONSUMERS

Carnivores  
Herbivores  
Omnivores

### DECOMPOSERS

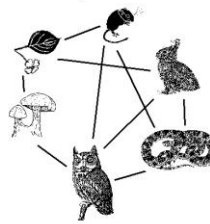
Scavengers  
Decomposers  
(bacteria, fungi, mould)



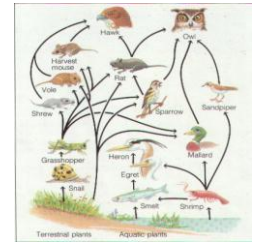
Helpful  
or  
Harmful

## FOOD CHAINS

A Simple Food Chain



## FOOD WEBS



Energy Flow

## Interdependence (**SYMBIOSIS**)

*Commensalism*  
One Benefits,  
the other is not  
affected

*Mutualism*  
Both benefit

*Parasitism*  
One benefits,  
the other is  
harmed



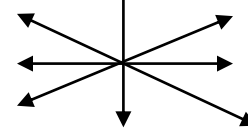
## Distribution of Living Things

Between  
Ecosystems

Competition

Within  
Ecosystems

Bioinvasion



Predation

Within  
Species

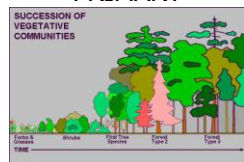
Resource  
Partitioning

Species  
Distribution

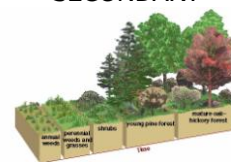
**NICHE**

## SUCCESSION

PRIMARY

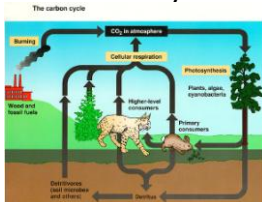


SECONDARY

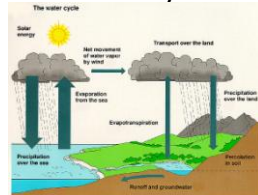


## Environmental CYCLES

Carbon Cycle



Water Cycle



Human **IMPACT** on the Environment

Pollution (DDT)

Habitat Destruction

Waste Disposal

Ecological Footprint

Status of Living Things - **COSEWIC**

*EXINCTION*  
*EXTIRPATION*  
*ENDANGERED*  
*THREATENED*  
*DECLINING*

**Intervention Programs:** Captive Breeding, Parks & Zoos, Biodiversity Banks, Wildlife Corridors,